DEVELOPMENT PLAN
1966 - 1970

Twenty Shillings - 1966
DEVELOPMENT PLAN

For the Period 1965/66 to 1969/70
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MAPS—1 Rainfall and Population Density
2 Cash Crop Production by District
3 Tourist Facilities and Communications
INTRODUCTION BY THE PRESIDENT

Almost two years have passed since the Government published the Development Plan 1964-1970, which set forth guidelines for the country's development during its first six years of Independence. The Plan laid the framework for a large number of programmes and projects in all fields of the nation's economic and social life, but the time for preparation of the Plan was too short to permit details to be worked out for most of them.

The work on a revised and much more detailed Plan was therefore started as soon as the 1964-70 Plan was published, first under the guidance of the Minister for Finance and Economic Planning, and since the end of 1964 under the Minister for Economic Planning and Development. The revised Plan is not the result of one single Ministry's work, however. All Ministries, other Government departments and public and semi-public bodies as well as private organizations have taken part in this work. They have submitted their plans and have worked together to co-ordinate their own programmes with those of other Ministries and organizations, so that all of these form a comprehensive Plan whose implementation will raise the standard of living of our people as rapidly as possible.

The revised Five-Year Development Plan for 1966-1970 is based on the same principles as the previous Plan, but it has been possible to raise Plan targets considerably above what was thought feasible two years ago. More stress has been put on developing small-scale farming into a modern and productive economic activity which will ensure a better living for our millions of farmers, their family members and hired labour. In the course of the five years of the Plan, credits to farmers will be raised from under £6 million to £17 million. This will enable tens of thousands of farmers and pastoralists, as individuals or as members of co-operatives, to embark upon modern production methods, produce crops, milk and meat for the market, and earn cash to raise their own standard of living and pay for the education of their children. On the average, small farms and co-operatives should be able to deliver 18 per cent more crops and 10 per cent more livestock products for sale each year. This agrarian revolution will eventually transform the way of life of the majority of our people including the small farmers in densely populated districts and the herdsmen on the open plains.

To facilitate the agrarian revolution our programme for land consolidation and registration will be accelerated. Towards the end of the Plan period about 1,000,000 acres will be registered annually. The farmer who thus has a firm legal right to his land will be willing to improve and protect it. He will also have a better chance of obtaining loans to undertake development and improvements by offering his land as security.
An agrarian revolution cannot lead to the promised goals unless the people are determined to produce more and accept the necessary discipline and sacrifice. The door to prosperity is open for those who are willing to work hard and regularly, and follow the advice given by Government officers. For those who prefer to work two or three hours a day, the Government cannot promise anything. Both sacrifice of leisure and discipline in financial matters are necessary. For instance, a loan is not a gift—the Government itself must borrow money from abroad in order to lend it to farmers. Loans must be paid back, and be paid back on time. Only natural disasters beyond the control of man are a valid excuse for delaying the repayment of a loan. A man who receives a loan to improve his farm must be prepared to work hard to sell enough produce to meet his debt repayments. I have stressed the agrarian revolution because it represents the key to increased prosperity for the masses of our people. Almost four out of five adult men earn their living on the land today, and by 1970 more than three out of four will still do so.

Our country has enough rich soil and sufficient rainfall in normal years to enable us to build up a strong and prosperous agriculture. However, a developing country must also build up its industrial base, its trade and transport, so as to produce the manufactured goods and services which are indispensable parts of a modern economy. We all know that we need capital to pay for machinery, for motor vehicles, for roads and for airfields, but what is needed more than anything else, in all occupations—farming, industry and Government services—is trained and educated men and women. Under the Plan, education and training of Africans will be stepped up considerably in order not only to increase the supply of high-level and middle-level manpower needed for development but also to increase African participation in the economy. Although Africanization of the Civil Service has proceeded most satisfactorily, in industry, trade and banking there is still very little participation by Africans. It is therefore necessary to take specific and systematic measures to promote African participation in such sectors. This will not be possible, however, unless we can educate enough people both to join positions in existing firms and staff the new economic activities to be established under the Plan. Education and training have therefore been given very high priority in our Plan. The main emphasis is put on the secondary schools, which will have twice as many students in 1970 as in 1965. To reduce the burden on parents the Government will bear most—in the case of Government schools, all—of the schooling costs for students in the fifth and sixth forms. The number of students in Forms V and VI is expected to increase from 1,800 in 1965 to 4,800 in 1970. This will require us to increase the number of all secondary school teachers from 1,700 in 1965 to almost 3,000 by 1970. Although every effort will be made to train more local secondary school teachers, it will still be necessary to recruit teachers from abroad. The primary schools will also be expanded and strengthened, and the Government will do everything in its power to provide useful training and employment to primary school-leavers. Education is more than simply preparation for the university
or training for clerical jobs. Our farmers need education and so do the workers in industry, transport and trade. The school system must be broadened so as to create opportunities for specialized training in preparation for all types of tasks.

A well-educated population is a pre-condition for economic growth and human welfare, and so is a healthy population. Existing hospitals will be expanded and improved, and new ones built. The number of health centres will be increased from 160 to 270. Hospitals and health centres are of no use without trained staff, and strenuous efforts will be made to train more medical staff at all levels. Under the Plan a faculty of medicine will be established at the University College, Nairobi, and training of nurses will be expanded so that by 1970, 350 community nurses and 60 registered nurses will be trained each year as against almost none in 1965. The number of health inspectors working in the field will be raised from 117 to 350.

Our productive capacity outside agriculture will be increased substantially. Almost £45 million will be invested in new and expanding manufacturing firms, and industrial output should grow on the average by about 8 per cent per year. Tourism offers excellent prospects. Last year Kenya was visited by one-third more foreign visitors than the year before, and we expect that the inflow of tourists will grow by at least 15 per cent annually. To receive the tourists, new tourist lodges and new hotels will be built and old ones expanded and modernized. New and improved roads will make it easier to visit our game sanctuaries and new National Parks will be established. The transport system will be improved and expanded in all parts of the country. New roads will be built, including one that will give us a direct link with Addis Ababa, and railways and harbours will be further developed. The main airports in Nairobi and Mombasa, as well as many smaller airfields, will be expanded to handle the rapidly increasing traffic, and our own East African airline will continue to expand its capacity and operations.

The Plan will give a strong boost to the construction industry. New homes will be built in increasing numbers, and the many factories, hotels, office buildings, roads and airfields that will be built and expanded during the Plan period will ensure a revival of this industry leading to employment of at least another 30,000 people.

In this Plan it is expected that £325 million will be spent on capital formation, of which £145 million will flow through the Central Government and public organizations. The monetary domestic product, i.e. that part of our output which is produced for sale, should grow on average by 7 per cent annually, and the total Gross Domestic Product by 6.3 per cent. This means that the average family will have an income of £231 by 1970 compared with £192 in 1964. This increase will benefit many of the poorest of our people: farmers who previously had no significant cash income will start to grow all kinds of crops which can be sold; and jobs will be found for many unemployed
and for young people who have struggled through school with the help of their families. The very emphasis of the Plan on a fair distribution of the results of economic progress means that those of us who already have well-paid jobs in the modern sphere of the economy cannot expect our lot to be improved as rapidly as that of the less fortunate. Discipline and sacrifice, based on our traditional principle of mutual social responsibility, must apply to us all.

On one point in particular our revised Plan represents a tremendous improvement over the original one. A careful analysis of our potentialities has revealed not only that we can raise the target rate of economic growth by almost 1.5 per cent per year but also that we shall be able to provide employment for our growing population. No less than 340,000 new job opportunities should be created in the monetary economy: 190,000 in agriculture, forestry and mining, and 150,000 in other economic activities. Four out of five men who reach working age should find jobs as wage or salary earners, or as self-employed farmers, traders, industrialists, or craftsmen. The one out of five who will not find such opportunities will be absorbed in traditional agriculture, which today is the home and working place for two out of three men. We cannot expect to transform our economy from the stage of a subsistence economy, in which the great majority of the people live entirely on what they can get out of their own land, to a modern money economy in the course of five years. But to find jobs in the monetary economy for 80 per cent of the able-bodied men who enter working age will be a splendid achievement.

This Plan which the Government has prepared will remain a dead document if the people do not participate in making it a living reality. The spirit of Harambee must pervade all our activities. Already it is making a notable contribution to our development, through self-help activities. However, such efforts must be planned because schools, health centres and dispensaries are of little use unless teachers, doctors and nurses can be found to staff them and enough revenue secured to run them properly. So far self-help enthusiasm has been channelled mostly into education and health. There are other fields—water supply, improved housing in rural areas, and access roads—in which self-help can play a tremendous part in improving the living conditions of the people. The Plan implementation machinery now being established in Provinces and Districts will help in planning self-help projects and guiding this most valuable enthusiasm into useful channels.

Under this Plan determined efforts will be made to stimulate development in all areas of the Republic. In particular the planned programmes for fisheries, livestock, water development, irrigation and tourism will lead to more development in areas which now lag behind, partly because of scarcity of fertile land, and inadequate rainfall. These programmes will be undertaken not just so as to develop those areas but also in order to ensure that all the available resources of the country are used. Education and health programmes for all areas of the Republic will also ensure that benefits of development are spread evenly and that people in every area are given the knowledge and strength to develop the
resources available to them. What the Government cannot give them, however, is the will to move ahead. I must underline that in some areas the process of economic and social development is held back by the unwillingness of the people to accept new ways and the necessary discipline of planned and coordinated development. Needless to say, no real development will take place unless the people want it and are prepared to work for that development and accept the necessary changes. While we must maintain and promote our valuable traditions, notably mutual social responsibility and unfettered political democracy, we must also fight those prejudices and suspicions whose removal is a precondition for rapid development. It must be also remembered that rapid development will not be the result of big projects only. Nor will it be the result of Government efforts only. In fact, development of our country will largely depend on greater efforts by small farmers, traders and workers. For example, if each farmer planted an extra row of maize, worked an extra hour per day, planted the recommended seed and followed the advice of the agricultural officer, the result would be a substantial increase in our agricultural output.

By 1970 our country will have much greater resources for future development than it has today, but it will still be a poor country. The present Development Plan is therefore only an introduction to prolonged and determined efforts which are needed if our country is to reach the level of prosperity which our natural resources and the inherent abilities of our people permit. We must remember that countries which are today rich and powerful have gone through long periods of sacrifice and hard work, and we must be willing to do the same if we want to prove that Africa too can become a prosperous continent.

In order to mobilize the people for the long struggle against poverty, misery and disease, all organizations must take part. KANU has a great part to play in our development and must tackle development problems as energetically and devotedly as it struggled for Independence. In particular, the Party officials, Members of Parliament and Government servants must work together and in harmony. The Plan implementation machinery which I have already referred to and the recent reorganization of KANU establish a framework for that co-operation. Disagreement in details must not prevent us from pulling together to turn our policies and plans into realities. In both the Party and the Civil Service there is the same need for dedication and emotional involvement in our development effort.

Finally, I must stress the need to raise our national savings so that we can finance growing development programmes ourselves and gradually become less dependent on foreign aid. During the present Plan period the Government must finance, from domestic resources, about £30 million. This will only be possible if private and public savings can be greatly increased. More saving means less consumption. While we may rely to a large extent on the willingness of the citizens to consume less and save more, it will also be necessary
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to hold down the growth in consumption by raising taxes to pay for development and for the rising cost of Government services, such as schools and health services, which follow development. This does not mean that our standard of living will stagnate; on the contrary, the Plan foresees an annual growth of personal consumption per head of 2.5 per cent. Present-day needs will not be neglected in our efforts to strengthen the nation's economy and future well-being.

JOMO KENYATTA.
PREFACE BY THE MINISTER FOR ECONOMIC PLANNING AND DEVELOPMENT

The Government of Kenya and the Kenya African National Union (KANU) are dedicated to the creation in Kenya of a society based on the principles of African Socialism and to planning as a principal instrument for achieving that society. The Plan delineates the steps to be taken toward that society over the five years from 1966 to 1970. The size of the task imposes serious and large responsibilities on the Government, the Parliament, the Party and the People, and the dedicated co-operation of all will be required if the Plan is to be fully realized. I am confident that the necessary efforts will be made.

2. Our professional planners have a natural tendency to describe progress and achievements in terms of percentage rates of growth, volumes of output, values of exports and sources of funds. It is perhaps even more important to show that the realization of these planned magnitudes and the methods used to achieve them are consistent with the political philosophy of Government and will indeed lead towards the socialist society we are all seeking. The characteristics of African Socialism in Kenya have been fully delineated in Sessional Paper No. 10 of 1965 entitled "African Socialism and Its Application to Planning in Kenya" which is in turn an extension in detail of the 1963 KANU Election Manifesto and the Constitution of the Republic. These three documents together form the political philosophy of the Government and the basis on which economic, physical and social policies have been constructed through the medium of planning. This preface is a brief review of these principles and forms a setting against which to view the Development Plan.

Objectives of Government

3. The aims of the Government are clear—to achieve high and growing per capita incomes, equitably distributed, so that all are free from want, disease and exploitation, while at the same time ensuring and guaranteeing—

   (i) political equality in the full Kenyan traditional sense of a right which is independent of economic status and divorced from stern tests and discriminatory criteria;

   (ii) social justice;

   (iii) human dignity, including freedom of conscience; and

   (iv) equal opportunities, without discrimination by race, tribe or belief, but also without prejudice to remedying the inequalities inherited from the past.

The Plan takes account of these necessary conditions of progress at every crucial step.
Political Democracy and Mutual Social Responsibility

4. African Socialism in Kenya must draw on and vigorously extend the best of Kenya traditions, while simultaneously incorporating and adapting those aspects of other cultural systems appropriate to Kenya's needs and aspirations. This is, of course, the universal way in which any cultural system is improved, and while difficult to achieve, it is nevertheless attainable with unity, co-operation and determination. Two African traditions in particular are extended, nurtured and protected in the Plan as fundamental to African Socialism. These are political democracy and mutual social responsibility.

5. The equality of political rights for all mature citizens is clear enough but the nature of mutual social responsibility is perhaps less easily comprehended. Thorough understanding and appreciation of this characteristic is necessary, however, to the fulfilment of the Government's objectives. The basis of mutual social responsibility is our traditional extended family spirit. As the extended family system guaranteed security and promoted a feeling of belonging, each individual who contributed fully to the welfare of the family was assured that his efforts would be justly rewarded and his needs met by the family. This spirit pervades clans and tribes also and is being extended to the nation as a whole to provide an effective basis on which to build African Socialism. At the national level, this spirit implies a mutual responsibility between society and its members to do their very best for each other with the full knowledge and understanding that (i) if society prospers, its members will share in that prosperity, and (ii) society cannot prosper without the full participation and co-operation of its members. This Plan is based on this concept of our society.

Adaptability and Independence

6. The historical analysis of those practical economic systems throughout the world that have survived the test of time reveals that none of these systems have adhered blindly to any rigid, ideological conception of a system but instead have achieved viability by successfully adapting to changing circumstances and needs. But needs and circumstances in developing countries are changing both more rapidly and more drastically than was normally the case in those countries now relatively advanced. The systems adopted in developing countries must therefore be fully prepared not only to adapt to change but indeed to play a major role in initiating change.

7. In Kenya today rapid transition is the outstanding characteristic. Transitions are under way, imminent or recently completed: from colonialism to independence, from political subjugation to full political democracy, from a subsistence to a monetary economy, from peasant to modern agriculture, from primary to processed products, from an agricultural to an industrialized society, from excess capacity to full utilization of resources, from a low saving to a higher saving economy, from non-Kenyan to Kenyan skilled manpower, and from an uneducated to an educated population. Underlying and essential to these transitions are fundamental changes in social attitudes and traditions
and in the institutional framework for effecting change. Hard, productive work
is displacing idleness; and co-operatives, self-help organizations, Government
ownership and participation, and modern Kenyan financial institutions are
having a major impact on production and marketing. Even a casual survey
of the Plan will disclose that the whole organization of Government is being
gearied to the task of promoting development.

8. The fact that many of these changes and the problems they engender in
Kenya are in many ways peculiar to Kenya, being determined by its own
history and social, economic and physical inheritance, means that the system
employed in Kenya must differ in many respects from those found effective
elsewhere. Kenya will evolve her own economic system, suited to the needs
and aspirations of its people. This policy of economic non-alignment should
not, however, be interpreted to mean a policy of isolation any more than
political non-alignment implies a refusal to participate in world affairs. On
the contrary, Kenya is prepared, as the Plan discloses—

(i) to borrow technological knowledge and proven economic methods from
any country—without commitment;

(ii) to seek and accept technical and financial assistance from any source—
without strings; and

(iii) to participate fully in world trade—without political domination.

Ownership and Use of Resources

9. In Kenya the traditional view of property rights has been that no matter
who owned or managed property it was to be used, and used in the best
interests of society. This view of property was also applicable to income
derived from property. The Plan envisages that various forms of ownership
will be permitted and encouraged but in all cases the State retains the right
to plan and control the uses of resources and to limit the excessive accumula-
tion of wealth. Indeed, the planning and control of resource use are the
principal tools for managing the nation's economy.

10. Economic activities are varied in function, importance and purpose.
Some are directed towards satisfying the needs of society as a whole, others
are undertaken by the individual for himself and many others serve both
purposes in varying degrees. The measure of control needed for each of these
many activities differs from that needed for others. In order to control effect-
ively many types and degrees of control are needed, ranging from control
through influence and guidance, through the control of a few variables, such
as prices or quantities, to absolute control represented by State ownership
and operation. Price, wage, rent and output controls, import duties, income
taxes and subsidies can be used selectively and in combinations to direct the
uses of private property, limit profits, and influence the distribution of gains.
The Plan provides at various points for its implementation through the
selection of appropriate controls. What controls are appropriate and necessary
must, of course, be kept under constant review.
11. The use of a range of controls has as its counterpart the permission of varying degrees of private participation and initiative. The idea of mutual social responsibility presupposes a relation between society, its members and the State. It suggests that the State is a means by which people collectively impose on individual members behaviour that is more constructive socially than that which each would impose on himself. If an individual, a co-operative, a company or the State owns productive assets, society expects, and has a right to ensure, that these assets are used and used well. The holding of land for speculative purposes, the charging of exhorbitant or discriminatory prices, black-marketeering and profiteering, the abandonment of land and production or sale of shoddy merchandise are all examples of violations of the principle of mutual social responsibility.

**Institutions for Development**

12. While various forms of ownership are envisioned in the Plan, it does not follow that the institutional framework of the economy will develop without influence and guidance by the Government. Indeed, the modification of inherited institutions and the creation of new ones is an immediate and continuing task of the Government.

13. The Plan provides for an increasingly intensive use of the co-operative form of organization in both production and marketing where the functions to be performed and the people involved are adaptable to co-operative management. Co-operatives are particularly well suited to the needs of Kenya. They are firmly grounded in African traditions, spread ownership among those who produce, and generate domestic saving which is so urgently needed for development. The co-operative form of organization when applied to modern economic activities is, however, quite sophisticated and its promotion needs careful planning and trained personnel. The Plan contains a number of measures for the sound development of the co-operative movement in Kenya.

14. The objective of spreading the ownership of resources more widely among the people of Kenya will also be pursued by encouraging private companies to make shares available on a wider scale to their workers and the general public. A workers' investment trust will also be established to facilitate greater participation by the workers in the development of the economy.

15. Self-help is an important means of marshalling the nation's limited resources for the task of development. It is indeed a principal technique for promoting domestic saving and investment. Many of the needs of locations, districts, provinces and thus the nation can be met through planned self-help projects. This institution, too, is grounded in African traditions and we will make it effective in modern Kenya by properly planning and directing self-help activities and assisting them with necessary supplementary resources.
16. In addition to the Government’s ownership of various enterprises, the Plan envisages continued Government participation with private firms in the ownership and operation of productive resources. Moreover, the supplies of fundamental services must be conducive to the long-term development of the nation. Thus the Government’s participation will not be limited to the usual basic services of roads, railways, communications, power, airport and harbour facilities and transport; but will extend to establishment of selected industries basic to long-term development, construction and operation of some critically located tourist lodges and hotels, and provision of quality livestock and hybrid seed.

Classes

17. The problem of correcting past imbalances without endangering citizenship guarantees and rapid development is discussed fully in Chapter 4 of the Plan as well as in Sessional Paper No. 10. In correcting these imbalances, measures must also be taken to avoid the emergence of antagonistic classes among the Africans themselves as development proceeds. Differences in incomes will exist if only to reward special abilities. But differences in incomes need not breed antagonistic classes if all work together in the spirit of mutual social responsibility and in full appreciation of the contributions of others, and if unfettered political equality is upheld. What will not be condoned is differences in incomes based on unproductive, speculative or discriminatory activities. Further, differences in incomes will tend to narrow as education and training are extended to ensure that everyone’s latent ability is fully realized. Finally, progressive income, inheritance and capital gains taxes will limit the excessive accumulation or inheritance of wealth.

Recent Progress

18. Although Kenya has been independent for only two years, several important steps have already been taken toward building the foundation and creating the conditions necessary for the long-term economic and social development of the country. The establishment of national unity and the development of a strong sense of cohesion among the people of Kenya is perhaps the major achievement of the past two years. As a result the atmosphere of gloom, stagnation and lack of confidence which characterized the economy in the months prior to Independence has been replaced by expansion and confidence. The evidence that this is so can be found in the fact that the downward trends in gross capital formation and employment have been arrested and indeed reversed since Independence.

19. Another considerable achievement soon after Independence was the publication of a Six-Year Development Plan to guide the use of the nation’s resources with a view to decolonizing the economy and accelerating the rate of development. The Plan indicated to Kenyans and foreigners the practical measures the Government intended to take, and the policies to be pursued towards these two major objectives.
20. The reorganization of the Government to promote rapid development has proceeded on several fronts. First, the Government has established a number of new organizations, boards and corporations in various economic sectors and these are now ready to undertake major responsibilities in the development field. Second, with the achievement of Republican status the Ministry of Economic Planning and Development was created, thus emphasizing the important role that planning is expected to play in the development of this country. Finally, provincial and district administrations have been modified so that the Plan can be implemented quickly and effectively among the people in every locality.

21. Kenya’s relations with foreign countries have also changed substantially since Independence and these changes have already increased the development potential of the nation. In the development field the Government’s policy of non-alignment has meant a considerable increase in the number of countries from whom financial aid and technical assistance can be sought. Obviously the total amount of aid that Kenya can attract in support of development should be noticeably increased as a result. Similarly, the extension of trade to a larger number of countries should expand total trade and decrease Kenya’s relative dependence on markets in one or a few countries for both imports and exports.

22. Another major achievement of this short period has been the quick response of the people, through self-help, to the Government’s call for greater effort in accelerating our development. Many schools, health centres, access roads, and minor bridges have been built through self-help. No country can develop unless its people want to develop and are prepared to work for this development. Mass enthusiasm and support are now ensured, and will continue to be a driving force in our development.

23. The successful establishment of the National Youth Service is yet another significant achievement of considerable potential importance. Development is a great struggle and the energy and determination of the youth must be harnessed to tackle development problems especially in rural areas. The success of the National Youth Service in tackling these problems and in some major projects such as road construction justifies the expansion programme planned for it in this Plan.

24. Finally, and as will be evident in this Plan, many projects have been carefully prepared during the past two years and the Government is now seeking funds for their physical implementation. These projects form the core of this Plan, and they cover most of the sectors—from National Parks to irrigation; and from education and health to manufacturing industries and commerce. Preparation of feasible projects is perhaps the most crucial stage in the development planning process, especially in a country such as ours which has hopes of attracting substantial foreign capital to supplement her own domestic resources.
25. These broad and basic achievements should not obscure accomplishments in individual sectors. Very significant advances have been made in education, health, industry, agriculture and land settlement. However, what has been achieved so far is little compared with what we must achieve in order to create a modern advanced socialist State. It would be a serious error to think that the Government and the people can now relax expecting rapid and orderly development to follow as a matter of course. What we have done so far is to prepare and organize ourselves and our resources for the tremendous tasks ahead. This revised Development Plan is a reflection of the Government’s continuous appraisal of our problems, resources and opportunities. It sets out the strategy which we must follow, and it calls for even greater effort, discipline and determination. Our experience since Independence is a clear demonstration that rapid development for the benefit of all is a feasible objective. Accept the challenge, the responsibility and the opportunity.
CHAPTER I—PLANNING FUNCTIONS AND ORGANIZATION

The important aspects of planning are physical, social, financial and economic. Physical planning deals with land use and layout, and locational, transport and design problems in both rural and urban areas; social planning is concerned with welfare and social services, cultural development, the modification of traditional attitudes, the alleviation of social problems, self-help and community development; financial planning involves the determination of Government revenues, recurrent expenditures and capital budgeting and the planning and creation of financial institutions; and economic planning has the task of organizing all of the nation’s real and monetary resources into a concerted and co-ordinated development effort. None of these aspects of planning can be carried out without close co-ordination with the others even on apparently routine matters. Self-help schemes must be initiated and promoted in full co-ordination with the development plan; municipal and district projects must be incorporated in the development plan; and the mobilization of external funds must be designed to maximize the foreign aid possibilities open to Kenya, so that those suitable to Kenya’s needs can be readily identified and exploited. Planning, to be effective, must account for every important activity and must involve every important decision-maker.

2. The planning of education, for example, will not be successful unless it encompasses the physical aspect—location, water supplies, power availability, architectural plans, and provision for physical expansion; the social aspect—population density and movement, acceptance and participation by the people, and cultural and curricular needs; the financial aspect—sources of development funds and feasibility of meeting recurrent costs; and the economic aspect—manpower needs, teacher supply, allocation of graduates to jobs, foreign exchange requirements, debt burden and alternative uses of resources. The work of any executive ministry is dependent on the work of others and indeed on activities in the private sector as well. The plans of each must be co-ordinated with those of others in every phase.

3. The discipline of planning is not something to be accepted lightly or shrugged off as unnecessary. If planning itself is not to be a waste of resources, discipline must be firm and enforced. And discipline is not simply something that the Government imposes on the private sector. It is also a discipline that Government imposes on itself at every level and in every
ministry. With planning, no ministry is free to act as an undisciplined, unrestricted entrepreneur promoting funds and projects to maximize the status of the ministry. Instead all must accept the discipline of planning and join in maximizing the resources available for development, determining the best use for these resources, and ensuring that resources are in fact used as planned. If discipline is rejected, so is planning and with it—African Socialism.

The Formulation of Plans

4. An inventory of actual and potential resources available to the country is a necessary prerequisite of planning. Planners must also understand the objectives that the Government wishes to promote with these resources. The various ways in which resources can be transformed into desired results must also be known. Finally, the economic behaviour patterns of the people in response to rising incomes, changing prices and increased opportunities must be estimated. This material of planning is largely statistical in nature. A strong statistical organization is therefore necessary if planning is to be successful.

5. With this information feasible targets can be proposed as first steps toward ultimate objectives. Filling out these targets with specific projects, that is, the means for attaining targets, is essentially a responsibility of planning units in executive ministries and local authorities in continuous consultation with the planning ministry. Planning for the private sector requires close co-ordination with the important private organizations. Co-ordination is really the essence of planning at every level.

Implementation and Control

6. A useful plan provides for the full utilization of the nation’s scarce resources. Without firm adherence to the plan in practice, without the complete involvement of the people in the development planned and without adequate procedures for implementing the plan, planning is itself a waste of resources. If the plan has been carefully drawn, activities outside the plan can only be undertaken at the expense of those included. Unplanned health centres can be staffed only by taking medical personnel from planned centres, the recurrent costs of unplanned Harambee schools will reduce funds available for running planned schools; and wasteful expenditures can only reduce the total development effort.

7. Implementation is essentially a function to be performed by executive ministries but an essential ingredient of success is the careful co-ordination of these activities at every level of Government. It is also essential that knowledge of the plan be widely and continuously disseminated. Successful development demands the active and informed participation of all the people, each knowing and understanding the importance of his contribution.
Revision and Flexibility

8. Plans and planners are not infallible and procedures must exist for modifying the plan when errors appear. Mistakes must be identified early and recognized procedures established for remedying them. These and other aspects of planning organization are discussed fully in this chapter.

Planning Functions Summarized

9. The inter-related functions of planning can be summarized as follows:—

(i) **Develop Factual and Functional Knowledge of the Economy.**—To translate resources into national objectives, the objectives must be understood, an inventory of actual and potential resources, domestic and external, developed, and the available techniques for transforming resources into results known.

(ii) **Specify and Analyse Targets.**—Aggregate, sectoral, district and project targets must be established for the period of the plan, not as ultimate aims, but as steps toward the achievement of the nation's long run objectives. Proposed targets must be analysed for consistency and feasibility and one among the many feasible sets of targets must be selected as that most likely to further national aims.

(iii) **Formulate and Evaluate Plans, Policies and Projects.**—The achievement of targets requires a blueprint for economic actions, a plan for mobilizing resources and guiding their use. The public segment of this plan can be stated in considerable detail; the private segment will be less concrete but equal care must be devoted to its preparation.

(iv) **Co-ordinate and Communicate Plans.**—Throughout the planning process the co-operation of local authorities, ministries and public and private enterprises is essential to success. Planning activity must involve a reciprocal flow of information and analysis so that all parts of the plan be co-ordinated with the plans of neighbouring countries.

(v) **Implement the Plan and Evaluate its Operation.**—The various parts of the plan must be assigned to specific authorities in ministries, provinces and districts, who are responsible for carrying them out. Information must be reported back continuously so that variations of actual events from planned events can be quickly identified and analysed.

(vi) **Promote Revision and Flexibility.**—No plan will be perfect and those responsible for planning must be prepared to modify their judgments when events prove them wrong. On the other hand, adequate controls must exist so that when events fall short of reasonable targets measures can be taken to improve the situation. Such considerations suggest that continuous planning is to be preferred to periodic planning.
The Development Plan

10. This Development Plan for the period 1966-1970 is a revision of the Development Plan 1964-1970 which was published in June of 1964. It is both more extensive and more detailed than its predecessor, which was prepared with limited staff and over a short period of time. The present Plan contains a more careful analysis of domestic and foreign sources of funds, manpower needs and limitations and foreign exchange needs. It also incorporates to a greater extent planning for self-help schemes, for districts, provinces and municipalities, and for the private sector. In addition plans for most ministries are given in more detail. Finally, estimates of gross capital formation have been more carefully constructed.

11. Nevertheless, this Plan, too, has limitations which it has not been possible to overcome in the short period since its predecessor was published. The structural analysis of the economy, the reconstruction of national output data at market prices and by expenditure groups, and various analyses of expenditure behaviour have yet to be completed. District targets have not been specified as fully as desired and Plan implementation procedures require further elaboration and testing. While this Plan is an improvement in most respects over its earlier version, much work remains to be done. It is expected that work on a further revision will be undertaken at once with a view to publishing a Plan covering the period 1968-1973 in about two years’ time.

12. The planning functions just described imply certain essential characteristics of a successful planning organization:—

(i) The planning unit must have direct access and influence upon the statistical data which form the basis for all planning. The kind of data collected and the analysis to which they are subjected determine the validity of the targets established, and the nature of the survey work undertaken is of crucial importance to the evaluation of new projects and programmes.

(ii) Planning must be comprehensive in nature, dealing in particular with the economic, financial, physical and social aspects of development. If planning fails to comprehend any of these, it is unlikely to yield realistic and feasible results. It must consider economic factors to ensure full use of all resources, financial limitations and possibilities to compose a reasonable frame for the plan, physical limitations and needs to ensure proper land use and building design, and social elements to determine the acceptability of projects to the people and to induce their full co-operation.

(iii) The planning organization must co-ordinate the planning and implementation activities of all ministries to ensure that development proceeds in a rapid and orderly fashion. Close co-operation with economic ministries in particular is an essential ingredient of successful planning.
(iv) The organization must provide for close co-ordination of planning and implementation at provincial and district levels of government. Co-ordination at the top alone cannot suffice. It must extend to every area of active development if the many related activities are to be appropriately synchronized and a genuine feeling of participation is to be encouraged among the people.

(v) The planning unit must provide for frequent consultation with those in the private sector—commerce, industry and agriculture—if planning for that sector is to be effective.

(vi) Planning in Kenya must be co-ordinated as closely as possible with the planning for development in neighbouring countries. Kenya always must look beyond its borders and make every effort to achieve closer economic co-operation in development planning.

Development Committee of the Cabinet

13. The establishment of planning and development policies is the responsibility of the Cabinet upon the recommendation of the Development Committee. This Committee, chaired by the Minister for Economic Planning and Development with the Minister for Finance as Vice-Chairman, includes in its membership all Ministers whose portfolios are closely related to economic development; all other Ministers are free to attend at any time. The structure of this and other committees related to planning is given in the appendix to this chapter. Secretariat duties are shared by the President’s Office and the Ministry of Economic Planning and Development. The Committee meets as frequently as needed. All Government proposals for new development are considered by this Committee for recommendation to the Cabinet. Upon approval by the Cabinet, the recommendations of the Committee become Government policy to be implemented by the ministries responsible.

14. The Committee’s tasks include—

(i) the review of development plans for both the public and private sector;

(ii) the consideration of new proposals in relation to works and administrative capacity, availability of skilled manpower, sources of funds, and social benefits and costs;

(iii) the assignment of priorities among proposed projects to ensure that the nation’s limited resources are used most constructively;

(iv) the review of progress in implementing approved plans; and

(v) the recommendation of modifications in plans and methods for implementing plans.

Ministry of Economic Planning and Development

15. The Ministry of Economic Planning and Development was created on 12th December 1964 to assume the functions handled since 1st July 1964 by
the Directorate of Planning in the Ministry of Finance and Economic Planning. An organization chart of the new Ministry is shown in Fig. 1. The organization is at present built around three principal units—the Administrative Division, the Statistics Division and the Planning Division. Another division to deal with plan implementation will shortly be established.

16. The principal functions of the Administrative Division, in addition to the usual duties, are to manage technical assistance, to liaise with Parliament and the public, to co-ordinate international economic matters, and to maintain close co-operation with the Ministries of Finance and Foreign Affairs and the President’s Office. The liaison with Finance is especially important because the Development Plan cannot succeed without finance, and, conversely, finance from external sources depends largely on having a sound plan for orderly development. Further, the limitation of domestic finance is a crucial one and a realistic plan cannot be constructed without advance planning of the tax structure and recurrent expenditures. Once the financial frame of the Plan has been agreed, annual budgeting, a function of financial administration, must accord with and provide for the needs for development. The need for close co-ordination should not, however, lead to any confusion of the distinct functions of planning and finance. Planning is concerned mainly with the real resources of the nation over long periods of time; financial administration is concerned with monetary resources with emphasis on the more immediate future. To the planner the financial resources obtained by the Government are essentially a means for acquiring real resources for development, the private sector and self-help being examples of other sources and means.

17. The Statistics Division is responsible for the collection, correlation, analysis and publication of all statistical data gathered by the Kenya Government. The data now being collected and published in Kenya compare favourably with those elsewhere in Africa. However, the considerable gaps that do exist inhibit the effectiveness of the planning operation and efforts to fill these gaps are being given a high priority. Much basic information has been gathered on the structure and activities of large-scale enterprises in agriculture, commerce and industry, but more people with advanced statistical training are needed to analyse these data before their full value for planning and implementation purposes can be realized. Among the most urgent needs to which the Division is turning increased attention are expenditure and savings patterns of consumers and business firms, input-output analysis of the economy, improved balance of payments data, and inventory of the economy’s resources, sizes of and fluctuations in stocks, marketing and pricing structures, particularly in agriculture, the analysis of Government activities with particular regard to local and municipal governments, data on small-scale enterprises in commerce, industry and agriculture, means to evaluate new projects in economic development, the development of data on social attitudes, customs and aspirations, and vital statistics.
18. The responsibility for some of these expanded statistical efforts is being shared with the ministries directly concerned. Thus, the Division works closely with the Ministry of Agriculture, and indeed has an Agricultural Statistics Unit located in that Ministry, the Ministry of Education, the Ministry of Health, on vital statistics, the Ministry of Housing and Social Services, on social attitudes, and the Ministry of Lands and Settlement, on land settlement and data for physical planning. The Field Survey Unit of the Division is being expanded to gather data on small enterprises in industry and commerce and to establish methods for evaluating new or expanded development projects, such as the cotton loan scheme and the intensified efforts on land consolidation and registration. The Division will continue its publication of the Economic Survey on an annual basis supplemented by shorter quarterly reports.

19. The major burden for planning and the co-ordination of implementation falls on the Chief Planning Officer and his regular professional staff. The Planning Division advises the Minister for Economic Planning and Development and the Development Committee on the strategy for economic development and within this framework is responsible for setting sectoral and district targets in both physical and value terms. The Division ensures that ministries, in planning for the sectors for which they are responsible, work toward those targets and provide for the desired geographical distribution of development. Planning officers within the Division are in constant touch with the ministries to guide and assist them at each stage of the planning operation. Where the need arises the Division will obtain planning staff for secondment to other ministries. The Planning Division will work closely with the provinces and districts on matters of planning and implementation, not only through the ministries and the President’s Office but more directly through Provincial Planning Officers.

20. As already mentioned, a new Division to deal with plan implementation will shortly be established. Mere formulation of plans does not contribute to a country’s development unless those plans are implemented. The new Division will ensure that implementation of various planned projects is undertaken on time and any difficulties or deviations from planned development are detected early and promptly reported for appropriate action. The Division will also maintain up-to-date records and progress reports on major projects, and in close contact with the Planning and Statistics Divisions report on the impact of the Plan on the economic and social development in general.

Planning Organization in the Ministries

21. Effective planning requires not only co-ordination of the activities of ministries and local government but also the development by these agencies of Government of sound projects that contribute to the realization of the planned strategy. The proposal and preparation of such projects depends upon an intimate knowledge of the sector involved and its relationship to the overall
development of the economy. It is mandatory, therefore, that the closest possible co-operation be continuously maintained between the economic ministries and the Ministry of Economic Planning and Development, and in addition that selected ministries assign planning responsibility to high officials within the ministries, and in cases where the magnitude of the task is large, develop planning units of their own. Planning officers have been appointed or planning responsibilities definitely assigned in all ministries. It is expected that planning units will be constructed around the planning officer in many of the ministries and such units now exist in some ministries.

22. Physical planning is now handled by the Town Planning Department in the Ministry of Lands and Settlement. Its work to date has been concentrated largely on urban planning. It is planned to enlarge this department to extend physical planning to the provinces and districts although the regions physically planned may not coincide with political boundaries. Regional teams will supplement the work of the departmental staff located in Nairobi. Means for co-ordinating the activities of physical and economic planners exist and are being strengthened and extended. Plans for land use and building design are necessary ingredients of any economic plan. Regional teams will be closely associated with Provincial Development Committees explained in a later section.

23. Social planning is mainly the responsibility of the Department of Community Development in the Ministry of Housing and Social Services. Co-operation with economic planning is already effective in the Central Government and methods have been worked out to carry this co-operation through the provinces and districts. The Community Development Committees have been made subcommittees of Provincial Development Advisory Committees.

Planning Organization at the Local Levels

24. Development activities at the provincial, district and municipal levels must be carefully planned, co-ordinated and implemented. In addition to the appointment of Provincial Planning Officers, various committees will be established to ensure that co-ordination and participation are fully effective down to the site of every project. The provincial, district and municipal administrations, concerned during the colonial era with tax collection and the maintenance of law and order, must now make economic and social development their principal function. As a step in this direction each province, district and municipality is expected to establish a development committee composed of officials with a Provincial Planning Officer as secretary and a development advisory committee including in its membership various political leaders and prominent local citizens. Where the activities of a particular ministry require more concentrated attention at the local level than can be provided by the development advisory committees, appropriate smaller working committees, usually subcommittees, will be established.
Co-operation of the Private Sector

25. Development in industry, commerce, finance and agriculture requires the wholehearted co-operation of the private sector. To achieve this co-operation and to make it effective the private sector must be fully informed of the objectives of the Government and of the priorities it places on alternative developments. In broad outlines this is accomplished through Government pronouncements and policy speeches by the President and his economic Ministers. Informal contacts between economic ministries and business, finance and farm organizations are also important in the co-ordination of development efforts. These methods of communication will be supplemented where necessary by the organization of committees of leading citizens to advise economic ministries on plans in the private sector and to explain Government policies to those active in private development. In addition the Investment Protection Act accords guarantees to firms given approved status. The criteria for approved status are, of course, a responsibility of the Government. The patterns of protection through tariffs, duty drawbacks and other forms of subsidy or industrial assistance accorded firms in various industries is a responsibility of the Industrial Protection Committee.

Role of the University

26. The University is expected to play a part in planning activities largely through its research and advisory contributions. In particular, the Institute of Development Studies of University College, Nairobi, is expected to contribute in an important way to the analyses of data necessary to the planning operation and will advise the Ministry of Economic Planning and Development and other ministries on selected policy problems. The projected Faculty of Building, Design and Development will be of special value to the Town Planning Department in its physical planning activities.

Co-operation with other Countries

27. The countries of East Africa have already achieved a degree of economic co-operation which in many ways is regarded as a model by other countries throughout the world. The East African Common Services Organization administers taxes in the three countries, provides for the co-ordination of industrial location and tariff policies, operates common railway, harbour, post and telecommunication systems, and undertakes research on common problems. The relatively free movement of labour, capital and goods among the three countries, together with the common external tariff, provides an effective common market. The University of East Africa achieves economies that could not be realized with an independent university system. The Government of Kenya considers it desirable to strengthen these sectors of co-operation and to extend co-operation to other sectors and other countries. Kenya will make every effort to co-operate with other African countries, and, in particular, welcomes the opportunity to participate in the proposed Economic Community for Eastern Africa.
FIGURE 1—PLANNING ORGANIZATION

CABINET

CABINET DEVELOPMENT COMMITTEE

MINISTER FOR ECONOMIC PLANNING AND DEVELOPMENT

Assistant Minister, E.P. & D.

Permanent Secretary, M.E.P. & D.

PLANNING DIVISION

Chief Planning Officer

- Senior Planning Officer
  - 6 Provincial Planning Officers
    - 2 Planning Officers
      - Manpower Planning
      - Social Planning
    - 4 Planning Officers
      - Agriculture Land Settlement
      - Co-operatives
  - Planning Officer
    - General Economic Statistics
      - 7 Economist/Statisticians
  - Planning Officer
    - Agriculture Section
      - Sen. Economist/Statistician
      - 3 Economist/Statisticians
  - Planning Officer
    - Financial Analysis
      - 2 Economist/Statisticians

ADMINISTRATIVE DIVISION

Under Secretary

- Assistant Secretary
  - Assistant Secretary
  - Assistant Secretary

PLAN IMPLEMENTATION DIVISION

Under Secretary

- Assistant Secretary
  - Assistant Secretary

STATISTICS DIVISION

Chief Statistician

- Chief Statistician
  - Statistical Survey Unit
    - Sen. Economist/Statistician
    - 2 Economist/Statisticians
APPENDIX

STRUCTURE OF COMMITTEES IN THE PLANNING ORGANIZATION

DEVELOPMENT COMMITTEE OF THE CABINET*

Members:†
Minister for Economic Planning and Development—Chairman.
Minister for Finance—Vice-Chairman.
Minister for Agriculture and Animal Husbandry.
Minister for Commerce, Industry and Co-operative Development.
Minister for Works, Communications and Power.
Minister for Labour.
Minister for Information and Broadcasting.
Minister for Lands and Settlement.
Minister for Natural Resources, Wildlife and Tourism.
Minister for Housing and Social Services.

Secretariat:
Ministry of Economic Planning and Development.
Office of the President (Cabinet Office).

PROVINCIAL DEVELOPMENT COMMITTEE‡
(For Each Province)

Provincial Commissioner—Chairman.
Provincial Planning Officer—Secretary.
Provincial Agricultural Officer.
Provincial Veterinary Officer.
Provincial Education Officer.
Provincial Medical Officer.
Provincial Community Development Officer.
Provincial Engineer.
Provincial Co-operative Officer.
Provincial Trade Development Officer.

* In addition to this Cabinet Committee close liaison is maintained with other Cabinet Committees, such as the Manpower and Training Committee and the Ministerial Scholarships Committee on matters relevant to planning. At the official level co-ordination will be maintained through the Interministerial Committee on Manpower Utilization and the Careers Bureau.

† All Members of the Cabinet are entitled to attend if they wish.

‡ Other Provincial Officers may attend and will be expected to attend when matters related to their duties are being discussed.
PROVINCIAL DEVELOPMENT ADVISORY COMMITTEE  
(For Each Province)

Provincial Commissioner—Chairman.
All Members of the Provincial Development Committee.
One Member of Parliament from each District (the M.P. to be selected by the M.P.s in the District).
Senators from the Province.
The Chairman of the Provincial Advisory Committee.
Two Provincial Advisory Committee Members (to be selected by the Committee).
Two leading citizens to be nominated by the Provincial Commissioner in consultation with the Provincial Development Committee.

DISTRICT DEVELOPMENT COMMITTEE*
(For Each District)

District Commissioner—Chairman.
Provincial Planning Officer—Secretary.
District Community Development Officer.
District Agricultural Officer.
District Veterinary Officer.
District Medical Officer.
District Education Officer.
District representative of the Ministry of Works, Communications and Power.
Chief Administrative Officer of the Local Authority.
District Co-operative Officer.

DISTRICT DEVELOPMENT ADVISORY COMMITTEE
(For Each District)

All Members of the District Development Committee.
All Members of Parliament and the Senator from the District.
The Chairman of the County Council.
The Members of the County Council to be selected by the County Council.
The Chairman of the KANU District Branch.
Two or three eminent citizens to be selected by the District Commissioner in consultation with the District Development Committee.

* Other District Heads of Departments may attend and will be expected to attend when matters related to their duties are being discussed.
CHAPTER 2—GROWTH OF THE ECONOMY, 1954-64

An analysis of economic performance in the recent past can be helpful in assessing and establishing targets for the near future. However, as the essence of growth is change, past achievements can be seriously misleading if plans are based too heavily on simple projections of old patterns. This is particularly true for Kenya during the period under consideration. The ten years from 1954 to 1964 were marked by a number of extraordinary events which will not be repeated in similar combination again: political unrest, famines and floods, the transition from colonial to independent government, and the achievement of a Republic and a single party organization. With Independence and a popularly elected, stable Government, this chain of events is ended and projections of future performance based solely on the past have reduced validity.

Nevertheless, the base from which the economy must grow during the Plan period is the one established during the 1954-64 period. The resources now available for future growth have been inherited from that period and the present structure of industry, commerce and agriculture, and the composition of output are products of that period. Policies established since Independence are only now beginning to have a real impact on the structure and operation of the economy. Clearly an analysis of past economic performance and current economic structure is essential for realistic planning.

Per Capita Income and Product

3. One measure of a nation’s well-being and how it progresses over time is per capita income at constant prices. Some of the data needed to assess approximate changes in per capita income over the period 1954-64 are presented in Table 1. It is estimated that the population of Kenya grew over this period at the rate of 3 per cent per annum. The larger population at the end of the period would have to share a real national income that has grown by more than 3 per cent per annum if real income per person were to rise over the period. Data on national income are not available, but the changes in the Gross Domestic Product (i.e. the sum of the contribution of all productive sectors of the economy to the national income) can be used as an indicator for what has happened to the national income. (To arrive at a figure for national income, depreciation would have to be deducted as well as the income, mostly capital income, that accrued to non-residents.) Gross Domestic Product grew at the rate of 6 per cent per annum over the ten-year period but the prices that people had to pay to convert their incomes into goods and services, as measured by the Nairobi Cost of Living Index,* rose by 2.5 per cent per annum. This would suggest that the real value of domestic income increased by 3.5 per cent per annum so that real income per capita grew by only 0.5 per cent per year. It is likely, however, that the Nairobi Cost of Living Index, drawn up for consumers who buy more imported goods than the population as a whole, overstates the rise in prices which occurred. If the rate of increase in the
Nairobi Wage Earners' Index of 1.4 per cent per annum from 1959 to 1964 is applied to the whole period 1954-64, real per capita income would be shown to have risen by 1.6 per cent per annum. The preceding calculations suggest that real domestic income per capita has probably risen over the ten-year period by between 0.5 and 1.5 per cent per annum, not an acceptable rate of growth on which to base future plans. Similar calculations for the monetary economy, which excludes the subsistence sector, suggest that real per capita income in that sector has grown between 1 and 2 per cent per annum.

**TABLE 1—RATES OF GROWTH IN REAL PER CAPITA INCOME**

<table>
<thead>
<tr>
<th></th>
<th>Amounts</th>
<th>Annual Rates of Growth, Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1954</td>
<td>1959</td>
</tr>
<tr>
<td>Population, Mid-year (000)</td>
<td>6,783</td>
<td>7,880</td>
</tr>
<tr>
<td>Gross Domestic Product (£m)</td>
<td>158.0</td>
<td>214.8</td>
</tr>
<tr>
<td>Nairobi Cost of Living Index (1939 = 100)</td>
<td>253.0</td>
<td>289.0</td>
</tr>
<tr>
<td>Indicator for Real Domestic Income (G.D.P. in 1964—purchasing power) (£m)</td>
<td>201.1</td>
<td>239.3</td>
</tr>
<tr>
<td>Indicator for Real Per Capita Income (1964—purchasing power) (£)</td>
<td>29.6</td>
<td>30.4</td>
</tr>
<tr>
<td>Monetary Gross Domestic Product (£m)</td>
<td>112.5</td>
<td>161.8</td>
</tr>
<tr>
<td>Indicator for Real Monetary Income (Monetary G.D.P. in 1964 purchasing power) (£m)</td>
<td>143.2</td>
<td>180.3</td>
</tr>
<tr>
<td>Indicator for Real Per Capita Monetary Income (1964—purchasing power) (£)</td>
<td>21.1</td>
<td>22.9</td>
</tr>
</tbody>
</table>

*A cost of living index is not an appropriate measure for price changes relating to expenditure on the Gross Domestic Product, which also includes public consumption expenditure and investments. But it is the only index available, and since private consumption represents a high proportion of the G.D.P. the use of the cost of living index is defendable.

4. These computations show the annual rate of growth in the purchasing power of per capita incomes and do not reflect the rate of change in physical product produced per person. In a country like Kenya that trades extensively abroad a larger production of goods and services need not imply a larger supply of goods and services for consumption and investment unless the larger output can be exchanged for more imported goods than were obtained before. In particular, if the prices of imports rise faster than prices of exports, more goods must be exported to maintain imports at the same level. Many developing countries find themselves in the unenviable position of running ever faster but nevertheless really standing still.
5. To estimate changes in physical product produced, Gross Domestic Product must be deflated by an index of the prices of goods produced instead of by an index of the prices of goods purchased with incomes originating from the G.D.P. As nearly 40 per cent of the supply of goods in Kenya are imported and about 35 per cent of the goods produced are exported, the two indices can move quite differently. In the period under consideration, export prices fell substantially while import prices rose. Thus a significant increase in physical product produced *per capita* was necessary simply to maintain the purchasing power of *per capita* income. If export and import prices in 1964 had been the same as in 1954, available statistics suggest that Kenya's income from exporting goods outside East Africa could have bought imported goods worth £12-£13 million more than it actually did. This figure suggests that the "physical product" between 1954 and 1964 increased about 5 per cent faster than the "real domestic income" or by about 0.4 per cent per year.

6. The tentative character of the preceding calculations of the growth in "real income", "real income *per capita*" and "physical product" should be stressed. But they serve to show that:

(i) During the decade 1954 to 1964 the domestic income per head in Kenya increased only very slowly; the figures suggest 0.5-1.5 per cent per year for the economy as a whole and 1-2 per cent for the monetary economy.

(ii) Based on the changes in exports and import prices and the loss in national income caused by an unfavourable change in the terms of trade it appears that the physical output in Kenya rose by about 0.4 per cent more annually than the income. That is, the rate of growth of the total national income per head would have been somewhat higher if prices ruling in foreign trade had not changed, but the increase would still have been modest.

(iii) The registered difference in rate of growth between the first and second five-year period of the decade was so small that no firm conclusion can be drawn as to the comparative rate of growth during the two periods. But as shown in the following paragraphs the structure of growth changed considerably between the late 1950's and the early 1960's.

**Sectoral Growth**

7. The various industrial sectors of the economy have grown at substantially different rates. To some extent changes in relative prices distort the picture, but the differences are sufficiently large to permit firm conclusions. This fact is made abundantly clear in Table 2 where it can be noted that the range of annual rates of growth for individual sectors extends from −6.2 to 12.5 per cent for the ten-year period, from −11.6 to 20.2 per cent for the 1954-59 period and from −11.2 to 9.7 per cent for
the 1959-64 period. The five most rapidly growing sectors over the ten-year period have been banking, insurance and real estate; electricity and water; Government services; services; and transport, storage and communications. Except for the domestic servant element in the services sector all of these are basic to the growth of an economy becoming increasingly dependent on the market and monetary transactions. It should also be noted that agriculture (excluding livestock) has grown more rapidly in the recent five-year period than in the earlier one.

8. The state of the economy in recent years has not been entirely healthy. The most telling indication of this fact is the rapid decline in construction, and the closely related mining and quarrying sector, and the slow rate of growth of livestock. The decline in the first two reflects partly the uncertainty that accompanied the transition to independence, partly the substantial excess capacity that has existed in many sectors over the last several years, and to a lesser degree the stoppage of trade with South Africa. The slow increase in output in livestock and dairy products is a result of the changing structure of the industry and hesitance on the part of some European farmers to build up herds. Unlike many sectors in which the identification of suitable markets is a problem, the market for these products is strong and requires only the increased production of quality output to be exploited.

9. As indicated in Table 2, the four principal sectors of the economy are agriculture (including livestock), wholesale and retail trade, Government services and manufacturing. Tables 3, 4 and 5 contain data on the rates of growth of important components of three of these sectors—agriculture, manufacturing and central Government services, respectively. Trends in agriculture must be observed with care because many kinds of agricultural production respond slowly to changes in demand and nearly all agricultural products are subject to substantial price fluctuations. Thus coffee and sisal show large increases over the period, but current evidence suggests that both may be in danger of overexpansion. The decline in pyrethrum production shown for the recent five years is entirely attributable to the drastic fall in output that occurred in 1963 and 1964. Table 3 also reveals that the cash output of small farms has increased at the average rate of 8.8 per cent per annum over the period as compared with a rate of 4.2 per cent for the large farm sector. The patterns of growth in the two sectors have also differed considerably. The important small farm products whose outputs have grown more rapidly are coffee, tea and cattle and calves, while large farms have been characterized by the rapid growth of outputs of sugar, tea and sisal.

10. The period covered in Table 4 differs from that in other tables because the Census of Industrial Production is not conducted on an annual basis. The general pattern of growth in the manufacturing sector has been one of rapid growth in those industries producing consumer goods with
considerably less progress shown by the more basic industries with the exception of metals and associated industries. A number of factors have affected this pattern in recent years such as the stoppage of trade with South Africa, the imposition of trade restrictions in the Common Market under the Kampala Agreement and the severe reduction in construction activity. The fact remains, however, that there are few signs in the period under review of a rapidly growing investment goods industry. Yet capital formation in Kenya has a high import content and is therefore costly in terms of foreign exchange. No Census of Industrial Production was conducted in 1964, but the provisional quantity index of manufacturing shows that the volume of industrial output rose by 12.8 per cent between 1963 and 1964. Almost two-thirds of this increase was due to the oil refinery in Mombasa which came on stream at the end of 1963. Thus the growth of other industries was less than 5 per cent, or considerably slower than during the preceding two years. Part of this slowdown was caused by slower growth in the food, beverage and tobacco industries and by a fall in the output of the metal industries. On the other hand the output of textiles, clothing and footwear, and wood and paper products continued to expand rapidly, and expansion occurred again in the non-metallic minerals industries (notably cement).

Table 2—Rates of Change in Contributions to Monetary Gross Domestic Product by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Contribution to Monetary Gross Domestic Product (£ million)</th>
<th>Share of Monetary Gross Domestic Product</th>
<th>Annual Rates of Growth Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking, Insurance and Real Estate</td>
<td>1.38</td>
<td>3.46</td>
<td>4.49</td>
</tr>
<tr>
<td>Electricity and Water</td>
<td>1.24</td>
<td>2.56</td>
<td>3.47</td>
</tr>
<tr>
<td>Government Services</td>
<td>13.94</td>
<td>21.53</td>
<td>34.11</td>
</tr>
<tr>
<td>Services</td>
<td>7.90</td>
<td>14.38</td>
<td>18.50</td>
</tr>
<tr>
<td>Transport, Storage and</td>
<td>11.84</td>
<td>19.03</td>
<td>26.30</td>
</tr>
<tr>
<td>Communications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14.14</td>
<td>20.23</td>
<td>29.38</td>
</tr>
<tr>
<td>Rents</td>
<td>4.83</td>
<td>8.05</td>
<td>9.54</td>
</tr>
<tr>
<td>Monetary Economy</td>
<td>112.45</td>
<td>161.75</td>
<td>212.79</td>
</tr>
<tr>
<td>Agriculture</td>
<td>19.82</td>
<td>25.32</td>
<td>36.72</td>
</tr>
<tr>
<td>Forestry</td>
<td>0.55</td>
<td>0.79</td>
<td>0.92</td>
</tr>
<tr>
<td>Wholesale and Retail Trade</td>
<td>21.59</td>
<td>27.68</td>
<td>34.06</td>
</tr>
<tr>
<td>Livestock</td>
<td>6.37</td>
<td>8.57</td>
<td>9.50</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>0.89</td>
<td>1.12</td>
<td>0.75</td>
</tr>
<tr>
<td>Construction</td>
<td>6.31</td>
<td>7.94</td>
<td>4.38</td>
</tr>
<tr>
<td>Fishing and Hunting</td>
<td>1.65</td>
<td>0.89</td>
<td>0.87</td>
</tr>
</tbody>
</table>
### Table 3—Rates of Change in Gross Value of Marketed Agricultural and Livestock Produce by Product and Type of Farming

<table>
<thead>
<tr>
<th>Product or Type of Farming</th>
<th>£ million</th>
<th>Share of Gross Value of Marketed Produce</th>
<th>Annual Rates of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar</td>
<td>0.28</td>
<td>0.72</td>
<td>1.18</td>
</tr>
<tr>
<td>Tea</td>
<td>2.06</td>
<td>4.43</td>
<td>7.72</td>
</tr>
<tr>
<td>Sisal</td>
<td>2.24</td>
<td>3.71</td>
<td>7.16</td>
</tr>
<tr>
<td>Coffee</td>
<td>5.46</td>
<td>9.53</td>
<td>14.99</td>
</tr>
<tr>
<td>Cattle and calves for slaughter</td>
<td>2.24</td>
<td>4.26</td>
<td>4.80</td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>33.31</td>
<td>42.29</td>
<td>55.15</td>
</tr>
</tbody>
</table>

*1959–64

### Table 4—Rates of Change in Net Outputs by Manufacturing Industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Net Output £ million</th>
<th>Share of Total Manufacturing Output Per Cent</th>
<th>Annual Rates of Growth Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles, Clothing, Footwear and Leather</td>
<td>0.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beverage and Tobacco</td>
<td>1.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metals and Associated Industries</td>
<td>2.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Food Products</td>
<td>1.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat, Dairy and Canned Products</td>
<td>0.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber and Chemicals</td>
<td>2.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood, Paper and Printing</td>
<td>2.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Metallic Products</td>
<td>1.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1959–63*
11. Data in Table 5 illustrate the growth in, and the changing structure of selected Central Government outlays on recurrent account. Throughout the period under consideration, even after adjustment for price changes, substantive Government expenditures have increased more sharply than population, indicating an improvement in per capita Government services. The structure of expenditure conveys some idea of the objectives to which the Government has assigned high priority in the recent past. Expenditures have in general increased most rapidly where their direct and immediate effect on the productivity of the economy is greatest—specifically in other social services (largely community development and self-help); water works; tourism, mines, surveys; commerce and industry; and agriculture. The apparent decline in expenditure on education and the relatively low rate of increase in that on health during 1959/60-1964/65 can be attributed to the transfer of a substantial part of these services to local authorities.

<table>
<thead>
<tr>
<th>Type of Recurrent Expenditure, Excluding Financial Obligations, Emergency and Settlement</th>
<th>Amoun ts</th>
<th>Share of Listed Government Expenditures</th>
<th>Annual Rates of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ million</td>
<td>Per Cent</td>
<td>Per Cent</td>
</tr>
<tr>
<td>54/55</td>
<td>59/60</td>
<td>64/65</td>
<td>64/65</td>
</tr>
<tr>
<td>Other Social Services</td>
<td>0.37</td>
<td>0.79</td>
<td>1.97</td>
</tr>
<tr>
<td>Water Works</td>
<td>0.28</td>
<td>0.66</td>
<td>1.07</td>
</tr>
<tr>
<td>General Services</td>
<td>7.36</td>
<td>13.11</td>
<td>16.65</td>
</tr>
<tr>
<td>Tourism, Mines, Surveys, Commerce and Industry</td>
<td>0.54</td>
<td>0.68</td>
<td>1.14</td>
</tr>
<tr>
<td>Agriculture, Forestry and Game</td>
<td>2.81</td>
<td>3.44</td>
<td>5.46</td>
</tr>
<tr>
<td>TOTAL, excluding Financial Obligations, Emergency and Settlement</td>
<td>21.01</td>
<td>32.56</td>
<td>40.41</td>
</tr>
<tr>
<td>Health</td>
<td>1.80</td>
<td>2.76</td>
<td>3.01</td>
</tr>
<tr>
<td>Education*</td>
<td>3.61</td>
<td>6.31</td>
<td>5.94</td>
</tr>
<tr>
<td>Transport and Communications</td>
<td>1.34</td>
<td>1.94</td>
<td>1.75</td>
</tr>
<tr>
<td>Other Expenditures</td>
<td>2.90</td>
<td>2.87</td>
<td>3.42</td>
</tr>
</tbody>
</table>

* As already mentioned in the text, the apparent decline in recurrent Central Government expenditure on education is largely the result of transfer of primary education to local authorities in 1964. The temporary transfer of secondary education to the Regions also contributed to the decline. Actually, total recurrent expenditure on education (Central Government plus Regions plus local authorities) increased substantially during 1959/60-1964/65.
International Trade

12. The behaviour of exports over the period 1954-64 has been generally encouraging with respect to the balance of trade and in the last few years the deterioration in the terms of trade has lessened somewhat. Tables 6 and 7 indicate the general movements that have taken place. It must be emphasized that the balance shown in Table 6 refers to the balance of visible trade and does not take into account invisible items such as receipts from tourism and dividends remitted abroad. Total exports, including those to Uganda and Tanzania, as a percentage of monetary gross domestic product have risen from 23.2 in 1954 to 34.9 in 1964, while total imports have fallen from 56.2 to 38.9. As a consequence the overall visible trade deficit has been reduced from 33.0 per cent of monetary output to 4.0 per cent. This favourable trend has been effected despite a 14 per cent decline in export prices over the period indicating that a very substantial increase in quantities exported has been achieved.

Table 6—Trends in Kenya's External and Interterritorial Trade

<table>
<thead>
<tr>
<th></th>
<th>Amounts</th>
<th>Annual Rates of Change</th>
<th>Amounts as Per Cent of Monetary Gross Domestic Product</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ million</td>
<td>(Per Cent)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1954</td>
<td>1964</td>
<td>54-64</td>
</tr>
<tr>
<td><strong>EXTERNAL TRADE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Exports</td>
<td>20.26</td>
<td>47.11</td>
<td>8.79</td>
</tr>
<tr>
<td>Retained Imports</td>
<td>57.82</td>
<td>70.16</td>
<td>1.95</td>
</tr>
<tr>
<td><strong>Trade Balance</strong></td>
<td>-37.56</td>
<td>-23.05</td>
<td></td>
</tr>
<tr>
<td><strong>INTERTERRITORIAL TRADE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>5.81</td>
<td>25.88</td>
<td>16.12</td>
</tr>
<tr>
<td>Imports</td>
<td>5.32</td>
<td>11.35</td>
<td>7.88</td>
</tr>
<tr>
<td><strong>Trade Balance</strong></td>
<td>0.49</td>
<td>14.53</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL TRADE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic Exports</td>
<td>26.07</td>
<td>72.99</td>
<td>10.84</td>
</tr>
<tr>
<td>Retained Imports</td>
<td>63.14</td>
<td>81.51</td>
<td>2.59</td>
</tr>
<tr>
<td><strong>Trade Balance</strong></td>
<td>-37.07</td>
<td>-8.52</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 7—KENYA'S TERMS OF TRADE  
(External Trade Only)

<table>
<thead>
<tr>
<th>Year</th>
<th>Import Price Index</th>
<th>Export Price Index</th>
<th>Terms of Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>...</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1955</td>
<td>...</td>
<td>103</td>
<td>95</td>
</tr>
<tr>
<td>1956</td>
<td>...</td>
<td>108</td>
<td>95</td>
</tr>
<tr>
<td>1957</td>
<td>...</td>
<td>110</td>
<td>92</td>
</tr>
<tr>
<td>1958</td>
<td>...</td>
<td>106</td>
<td>85</td>
</tr>
<tr>
<td>1959</td>
<td>...</td>
<td>107</td>
<td>88</td>
</tr>
<tr>
<td>1960</td>
<td>...</td>
<td>110</td>
<td>88</td>
</tr>
<tr>
<td>1961</td>
<td>...</td>
<td>100</td>
<td>84</td>
</tr>
<tr>
<td>1962</td>
<td>...</td>
<td>104</td>
<td>82</td>
</tr>
<tr>
<td>1963</td>
<td>...</td>
<td>110</td>
<td>85</td>
</tr>
<tr>
<td>1964</td>
<td>...</td>
<td>110</td>
<td>86</td>
</tr>
</tbody>
</table>

13. The improvement in the trade balance is not entirely a blessing, however, for some of it has resulted from the recent decrease in capital formation much of which is necessarily imported. Yet the trend remains even after adjustment for the low level of investment in 1964 and the abnormally high level of imports in 1954. The decline in imports as a proportion of monetary output has a significance beyond its favourable direct effect on the balance of payments, namely to strengthen the secondary effects on domestic income of any primary increase in the demand for domestically produced goods and services. A larger proportion of the spending of newly employed people, for example, is now directed toward domestic goods than was the case in 1954. As a result, the economy has become more sensitive to changes in demand, reacting more strongly to both increases and decreases.

14. Kenya's past success in increasing the proportion of its output sold abroad has also made prosperity at home heavily dependent on economic conditions in other countries. The hazards of this dependence on non-Kenya markets are obviously increased if foreign sales are concentrated in a few commodities and a few countries. Table 8 indicates the distribution of foreign sales in 1964 by commodities and the rates of growth in these sales over the ten-year period. While the three principal exports, coffee, tea and sisal, continue to account for nearly 40 per cent of total exports, there are also some encouraging signs of diversification. Four important products, petroleum products, cement, soaps, and plates and sheets, which were not exported at all in 1954, now account for 11.8 per cent of total exports, and most of the rapidly growing exports still represent a small proportion of foreign sales. Nevertheless, the data indicate clearly the need for greater diversification in products sold abroad.
<table>
<thead>
<tr>
<th>Commodities</th>
<th>Value £ million</th>
<th>Share of Total Value of Exports Per Cent</th>
<th>Annual Rates of Growth Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1954</td>
<td>1959</td>
<td>1964</td>
</tr>
<tr>
<td>Clothing</td>
<td>0.2</td>
<td>0.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Pulp and Paperboard</td>
<td>0.1</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Soaps and Cleansing Preparations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarettes</td>
<td>0·3</td>
<td>1·6</td>
<td>1·6</td>
</tr>
<tr>
<td>Meat and Meat Preparations</td>
<td>0·5</td>
<td>2·3</td>
<td>2.5</td>
</tr>
<tr>
<td>Footwear</td>
<td>0·3</td>
<td>0·6</td>
<td>1·4</td>
</tr>
<tr>
<td>Wheat, Meat and Flour</td>
<td>0·3</td>
<td>0·8</td>
<td>1·1</td>
</tr>
<tr>
<td>Pyrethrum Extract</td>
<td>0·6</td>
<td>1·9</td>
<td>2·2</td>
</tr>
<tr>
<td>Cement</td>
<td></td>
<td>0·9</td>
<td>1·7</td>
</tr>
<tr>
<td>Pineapples (Tinned)</td>
<td>0·3</td>
<td>0·5</td>
<td>0·9</td>
</tr>
<tr>
<td>Sisal</td>
<td>2·0</td>
<td>3·5</td>
<td>6·0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>26·1</td>
<td>45·6</td>
<td>73·0</td>
</tr>
<tr>
<td>Coffee not Roasted</td>
<td>5·7</td>
<td>10·6</td>
<td>15·4</td>
</tr>
<tr>
<td>All Other Commodities</td>
<td>6·7</td>
<td>9·6</td>
<td>17·6</td>
</tr>
<tr>
<td>Tea</td>
<td>2·5</td>
<td>4·2</td>
<td>6·5</td>
</tr>
<tr>
<td>Beer</td>
<td>0·6</td>
<td>0·5</td>
<td>1·0</td>
</tr>
<tr>
<td>Butter (including Ghee)</td>
<td>0·8</td>
<td>1·1</td>
<td>1·2</td>
</tr>
<tr>
<td>Cereals, Unmilled (including Maize)</td>
<td>1·0</td>
<td>1·8</td>
<td>1·2</td>
</tr>
<tr>
<td>Hides, Skins and Furskins Undressed</td>
<td>1·4</td>
<td>1·6</td>
<td>1·3</td>
</tr>
<tr>
<td>Soda Ash</td>
<td>1·1</td>
<td>1·7</td>
<td>0·7</td>
</tr>
<tr>
<td>Peattle Bark Extract</td>
<td>1·7</td>
<td>1·0</td>
<td>0·9</td>
</tr>
<tr>
<td>Petroleum Products</td>
<td></td>
<td></td>
<td>4·6</td>
</tr>
<tr>
<td>Wates and Sheets Coated (Iron)</td>
<td></td>
<td></td>
<td>0·8</td>
</tr>
</tbody>
</table>

*1959-64
15. Tables 9 and 10 indicate the distribution of Kenya's exports and imports among the countries participating in trade. The heavy and rapidly growing reliance on interterritorial trade is a mixed blessing. It suggests the growing interdependence of these countries and the possibilities for the three countries to achieve further gains from increased economic co-operation. On the other hand, to depend on one source of demand for the sale of nearly one-third of Kenya's exports involves obvious hazards. With the exception of interterritorial exports, however, Kenya's sales abroad have become more diversified. Sales to the United Kingdom, which accounted for over 23 per cent of total exports in 1954, now represent only 14.2 per cent, and none of Kenya's non-African customers with whom trade is growing more rapidly than average is a dominant one. It is also worthy of note that as African countries have severed their colonial ties, trade with Africa has increased at a rapid rate. Thus between 1960 and 1964 Kenya's exports to African countries excluding East and South Africa have increased by more than 19 per cent per annum while imports from these countries have grown at an annual rate in excess of 22 per cent.

**Table 9—Rates of Change in Value of Exports and Re-exports by Principal Countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>1954 £'000</th>
<th>1960 £'000</th>
<th>1964 £'000</th>
<th>1964 Per Cent</th>
<th>54–60 Per Cent</th>
<th>60–64 Per Cent</th>
<th>54–64 Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>93</td>
<td>492</td>
<td>1,466</td>
<td>1.8</td>
<td>32.0</td>
<td>31.5</td>
<td>31.8</td>
</tr>
<tr>
<td>Japan</td>
<td>292</td>
<td>2,044</td>
<td>1,648</td>
<td>2.1</td>
<td>38.3</td>
<td>-5.3</td>
<td>18.9</td>
</tr>
<tr>
<td>Interterritorial</td>
<td>5,808</td>
<td>13,771</td>
<td>25,880</td>
<td>32.6</td>
<td>15.5</td>
<td>17.1</td>
<td>16.1</td>
</tr>
<tr>
<td>All Others, External</td>
<td>2,243</td>
<td>3,908</td>
<td>8,803</td>
<td>11.1</td>
<td>9.7</td>
<td>22.5</td>
<td>14.7</td>
</tr>
<tr>
<td>France</td>
<td>323</td>
<td>648</td>
<td>1,000</td>
<td>1.3</td>
<td>12.3</td>
<td>11.5</td>
<td>12.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>704</td>
<td>1,268</td>
<td>2,091</td>
<td>2.6</td>
<td>10.3</td>
<td>13.3</td>
<td>11.5</td>
</tr>
<tr>
<td>Belgium</td>
<td>210</td>
<td>467</td>
<td>618</td>
<td>0.8</td>
<td>14.3</td>
<td>7.2</td>
<td>11.4</td>
</tr>
<tr>
<td>United States</td>
<td>1,672</td>
<td>4,004</td>
<td>4,870</td>
<td>6.1</td>
<td>15.7</td>
<td>5.0</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>28,577</td>
<td>53,968</td>
<td>79,428</td>
<td>100.0</td>
<td>11.2</td>
<td>10.2</td>
<td>10.8</td>
</tr>
<tr>
<td>Other African Countries (excluding S. Africa)</td>
<td>2,128</td>
<td>2,828</td>
<td>5,872</td>
<td>7.2</td>
<td>4.8</td>
<td>19.3</td>
<td>10.4</td>
</tr>
<tr>
<td>West Germany</td>
<td>3,252</td>
<td>6,535</td>
<td>7,282</td>
<td>9.2</td>
<td>12.3</td>
<td>2.8</td>
<td>8.4</td>
</tr>
<tr>
<td>Italy</td>
<td>524</td>
<td>1,579</td>
<td>1,146</td>
<td>1.4</td>
<td>20.2</td>
<td>-7.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Commonwealth Countries (except U.K. and Africa)</td>
<td>3,752</td>
<td>5,262</td>
<td>7,455</td>
<td>9.4</td>
<td>5.8</td>
<td>9.1</td>
<td>7.1</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6,619</td>
<td>9,635</td>
<td>11,272</td>
<td>14.2</td>
<td>6.5</td>
<td>4.0</td>
<td>5.5</td>
</tr>
<tr>
<td>South Africa</td>
<td>957</td>
<td>1,532</td>
<td>185</td>
<td>0.2</td>
<td>8.2</td>
<td>-41.1</td>
<td>-15.2</td>
</tr>
</tbody>
</table>
TABLE 10—RATES OF CHANGE IN VALUE OF NET IMPORTS BY PRINCIPAL COUNTRIES

<table>
<thead>
<tr>
<th>Country</th>
<th>Value £'000</th>
<th>Share of Total Net Imports Per Cent</th>
<th>Annual Rates of Growth Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1954</td>
<td>1960</td>
<td>1964</td>
</tr>
<tr>
<td>Japan</td>
<td>. . . . . .</td>
<td>539</td>
<td>5,078</td>
</tr>
<tr>
<td>Other African Countries (excluding S. Africa)</td>
<td>. . . . . .</td>
<td>661</td>
<td>882</td>
</tr>
<tr>
<td>United States</td>
<td>. . . . . .</td>
<td>1,670</td>
<td>4,218</td>
</tr>
<tr>
<td>West Germany</td>
<td>. . . . . .</td>
<td>3,020</td>
<td>5,094</td>
</tr>
<tr>
<td>Sweden</td>
<td>. . . . . .</td>
<td>542</td>
<td>953</td>
</tr>
<tr>
<td>Interterritorial</td>
<td>. . . . . .</td>
<td>5,319</td>
<td>6,995</td>
</tr>
<tr>
<td>Netherlands</td>
<td>. . . . . .</td>
<td>1,225</td>
<td>2,055</td>
</tr>
<tr>
<td>Total</td>
<td>. . . . . .</td>
<td>65,649</td>
<td>77,064</td>
</tr>
<tr>
<td>All Others, External</td>
<td>. . . . . .</td>
<td>8,897</td>
<td>7,036</td>
</tr>
<tr>
<td>France</td>
<td>. . . . . .</td>
<td>1,863</td>
<td>2,783</td>
</tr>
<tr>
<td>Italy</td>
<td>. . . . . .</td>
<td>2,087</td>
<td>1,703</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>. . . . . .</td>
<td>26,909</td>
<td>24,187</td>
</tr>
<tr>
<td>Sterling Area Countries (except U.K. and Africa)</td>
<td>. . . . . .</td>
<td>9,202</td>
<td>5,647</td>
</tr>
<tr>
<td>Belgium</td>
<td>. . . . . .</td>
<td>1,993</td>
<td>1,612</td>
</tr>
<tr>
<td>Iran</td>
<td>. . . . . .</td>
<td>. .</td>
<td>5,183</td>
</tr>
<tr>
<td>South Africa</td>
<td>. . . . . .</td>
<td>1,902</td>
<td>3,618</td>
</tr>
<tr>
<td>Kuwait</td>
<td>. . . . . .</td>
<td>. .</td>
<td>5,043</td>
</tr>
</tbody>
</table>

*1960-64

Capital Formation

16. The limited achievements in the decade under examination have been accompanied by and in part related to the size and instability of capital formation which can be noted in Table 11. Gross capital formation has averaged 21.7 per cent of gross cash domestic product over this period, but this percentage has varied from a high of 32.5 per cent in 1955 to a low of 15.9 per cent in 1963. Clearly the performance in recent years has been less promising than in the years before the uncertainties that followed the Lancaster House Conference. Indeed, if gross capital formation in 1964 had equalled the average percentage of gross cash domestic product for the period, it would have amounted to nearly £46 million instead of only £34.9 million.

17. The changing pattern of expectations over this period is best seen by examining expenditures by the private sector. In particular, the uncertainty that has characterized large-scale farming since 1959 emerges as a sharp decline in capital formation in that sector that was not halted until 1963, whence it rose sharply in 1964. A more irregular pattern is evident for the rest of the private sector which reached the peak level in 1956. In 1964
<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Machinery and Other Equipment</td>
<td>6.11</td>
<td>7.99</td>
<td>10.37</td>
<td>9.18</td>
<td>7.18</td>
<td>7.41</td>
<td>7.56</td>
<td>7.59</td>
<td>7.21</td>
<td>7.82</td>
<td>9.12</td>
<td>20.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Transport Equipment</td>
<td>8.42</td>
<td>11.71</td>
<td>9.40</td>
<td>9.12</td>
<td>8.52</td>
<td>8.38</td>
<td>10.72</td>
<td>6.21</td>
<td>7.59</td>
<td>8.26</td>
<td>10.69</td>
<td>23.4</td>
<td>-0.1</td>
</tr>
<tr>
<td>Non-Residential Buildings</td>
<td>5.09</td>
<td>6.79</td>
<td>8.29</td>
<td>7.85</td>
<td>7.05</td>
<td>7.07</td>
<td>6.42</td>
<td>4.41</td>
<td>3.65</td>
<td>3.04</td>
<td>5.40</td>
<td>15.4</td>
<td>6.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35.27</strong></td>
<td><strong>43.81</strong></td>
<td><strong>45.68</strong></td>
<td><strong>45.62</strong></td>
<td><strong>40.02</strong></td>
<td><strong>40.32</strong></td>
<td><strong>41.41</strong></td>
<td><strong>31.89</strong></td>
<td><strong>33.33</strong></td>
<td><strong>30.69</strong></td>
<td><strong>34.92</strong></td>
<td><strong>100.0</strong></td>
<td><strong>2.7</strong></td>
</tr>
<tr>
<td>Construction and works</td>
<td>9.75</td>
<td>9.92</td>
<td>7.74</td>
<td>11.47</td>
<td>10.15</td>
<td>10.22</td>
<td>9.90</td>
<td>9.21</td>
<td>11.83</td>
<td>9.15</td>
<td>7.67</td>
<td>25.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Residential Buildings</td>
<td>5.90</td>
<td>7.40</td>
<td>9.88</td>
<td>8.01</td>
<td>7.11</td>
<td>7.23</td>
<td>6.81</td>
<td>4.47</td>
<td>3.05</td>
<td>2.41</td>
<td>2.64</td>
<td>15.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Private, Other</td>
<td>14.14</td>
<td>20.43</td>
<td>25.91</td>
<td>23.67</td>
<td>20.97</td>
<td>20.97</td>
<td>21.57</td>
<td>12.87</td>
<td>16.87</td>
<td>16.35</td>
<td>19.13</td>
<td>50.3</td>
<td>8.2</td>
</tr>
<tr>
<td>Large Farm Sector</td>
<td>4.39</td>
<td>4.41</td>
<td>4.84</td>
<td>5.51</td>
<td>5.71</td>
<td>5.71</td>
<td>5.43</td>
<td>4.56</td>
<td>3.63</td>
<td>4.29</td>
<td>5.47</td>
<td>12.8</td>
<td>5.4</td>
</tr>
<tr>
<td>E. A. C. S. O. (Self-Contained Services)</td>
<td>8.16</td>
<td>9.17</td>
<td>4.66</td>
<td>5.50</td>
<td>3.73</td>
<td>3.17</td>
<td>2.08</td>
<td>2.07</td>
<td>2.02</td>
<td>1.99</td>
<td>3.92</td>
<td>11.0</td>
<td>-17.2</td>
</tr>
</tbody>
</table>
there was a significant rise in private investments outside farming. Investments in the E.A.C.S.O. Self-contained Services (Railways and Harbours, Posts and Telecommunications) have shown a similar pattern over the period although the abnormally high expenditures in 1954 and 1955 serve to exaggerate the decline. Except for the year 1960 and 1961, Government capital formation has not reflected the kind of anti-cyclical pattern that is expected today of governments that accept a responsibility for ensuring stability of business activity and employment.

18. It is perhaps even more revealing to examine the patterns of capital formation by class of assets acquired. Since 1959, the principal decline in capital formation has been in residential building, which in 1964 was less than 30 per cent of its magnitude in 1959. Construction and works expenditures have also declined and of perhaps more concern both of these categories of expenditures continued to decline in 1964 when other categories of capital expenditures increased.

19. The construction and purchase of new fixed capital assets, whether by Government or private industry, may be undertaken to replace worn out or obsolete capital, to replace labour or to increase output. The first two purposes are essentially cost-reducing in nature, while only the third expands output and employment. Evidence indicates that production techniques for the country as a whole tended to become more capital intensive over the period under review. The facts available show that gross capital formation amounted to £388 million (1954-63). Assuming a lag of one year before new capital becomes productive, this investment permitted gross cash domestic product to rise by £100 million (1954-64) (or by £69 million at constant 1964 purchasing power). Over the same period employment increased by 3,000. These data suggest that very little of the gross capital formation during that period resulted in the creation of new jobs. However, it would not be appropriate to draw any conclusions on the basis of changes in employment and capital investment during this period. A closer examination of the figures shows that in sectors like agriculture, construction, mining, etc., the employment was 115,000 lower in 1964 than in the respective years of maximum employment. Thus, the capacity of the economy to employ people was enhanced very considerably between 1954 and 1964, but structural changes in agriculture, and falling demand for construction services and other goods and services resulted in poorer utilization of the capital invested. However, in the case of manufacturing output rose by 7½ per cent per year between 1954 and 1964 while employment actually fell. This suggests that at least in this case capital investments were predominantly labour saving and resulted in falling employment in spite of an expansion of the production capacity.

Employment and Earnings

20. In an economy with an excess supply of labour, one criterion for assessing performance is the rapidity with which the excess supply has been
absorbed. Kenya did not function well in this respect over the ten-year period under review. With population growing at three per cent per annum and the labour force probably growing at a similar rate, reported employment did not grow at all, as indicated in Table 12. We should note, however, that the fall in agricultural wage employment to a considerable extent was offset by settlement of African self-employed farmers on former European-owned land. Despite limitations in coverage and other measurement difficulties, there can be little doubt but that unemployment of labour was substantially greater in 1964 than in either 1954 or 1959. Certainly the proportion of the population employed has declined; on the other hand, the slight increase in the number reported employed in 1964 is an encouraging factor. While changes in employment varied considerably among sectors, it is noteworthy that in only one, transport and communications, did employment grow faster than population, while employment in commerce appears to have grown at about the same rate as the labour force. At the other extreme reported employment fell most sharply over both the whole period and in the recent five years in mining and quarrying and building and construction—further evidence of the need to reactivate investment.

Table 12—Rates of Change in Reported Employment by Major Sector

<table>
<thead>
<tr>
<th></th>
<th>Salaried Employment (thousands)</th>
<th>Share in Total Employment</th>
<th>Annual Rates of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Old Coverage</td>
<td>New Coverage</td>
<td>New Coverage</td>
</tr>
<tr>
<td></td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
</tr>
<tr>
<td>1954</td>
<td>1959</td>
<td>1964</td>
<td>1964*</td>
</tr>
<tr>
<td>Transport and Communications (private)</td>
<td>9·8 14·2 17·7 18·0 3·1</td>
<td>7·7 4·5 6·1</td>
<td></td>
</tr>
<tr>
<td>Commerce</td>
<td>33·5 37·4 45·4 57·3 9·7</td>
<td>2·2 4·0 3·1</td>
<td></td>
</tr>
<tr>
<td>Electricity and Water</td>
<td>2·0 2·5 2·5 2·5 0·4</td>
<td>4·6 — 2·2</td>
<td></td>
</tr>
<tr>
<td>Public Services</td>
<td>148·4 160·1 173·7 173·7 29·5</td>
<td>1·5 1·6 1·6</td>
<td></td>
</tr>
<tr>
<td>TOTAL EMPLOYMENT</td>
<td>544·4 596·8 547·3 589·6 100·0</td>
<td>1·9 — 1·7</td>
<td></td>
</tr>
<tr>
<td>Agriculture and Forestry</td>
<td>223·1 251·7 208·3 208·3 35·3</td>
<td>2·4 — 3·7  — 0·7</td>
<td></td>
</tr>
<tr>
<td>Other Services (including</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic)</td>
<td>49·3 52·9 44·5 57·9 9·8</td>
<td>1·4 — 3·4  — 1·0</td>
<td></td>
</tr>
<tr>
<td>Manufacturing</td>
<td>50·0 53·7 44·8 60·8 10·3</td>
<td>1·4 — 3·5  — 1·1</td>
<td></td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td>5·7 5·4 2·2 2·3 0·4</td>
<td>—1·1 —16·3  —9·1</td>
<td></td>
</tr>
<tr>
<td>Building and Construction</td>
<td>22·6 18·9 8·2 8·8 1·5</td>
<td>—3·5 —15·4  9·6</td>
<td></td>
</tr>
</tbody>
</table>

*In 1964, a number of establishments, which had never before been covered by the annual Labour Survey, were included. To compare the employment in 1964 with that in previous years, the figures under the old coverage must be used.
21. While reported employment did not materially rise over the period, the total wage bill increased rapidly because wage rates advanced so sharply. Some indication of this can be seen in Table 13 which shows what has happened over the period to average annual earnings of African employees. These have grown at the average annual rate of 9.8 per cent and have grown more rapidly recently than earlier. Average annual earnings in public service employment have risen more sharply than in the private sector. Some part of the rise in average annual earnings can be attributed to rising productivity and, particularly in recent years, the improved promotion prospects for Africans. There is little doubt, however, that increases in wage rates have exceeded increases in productivity and have therefore contributed to the substitution of capital for labour noted above. The wage increases have improved the economic position of those employed, but this improvement in well-being has come partly at the expense of others who have become or remained unemployed because of the rising wage rates.

**TABLE 13—RATES OF CHANGE IN AVERAGE ANNUAL EARNINGS OF AFRICAN EMPLOYEES**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Average Earnings £ per annum</th>
<th>Annual Rates of Growth (based on old coverage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Old Coverage</td>
<td>New Coverage</td>
</tr>
<tr>
<td>Public Services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALL EMPLOYMENT</td>
<td>44·2</td>
<td>64·4</td>
</tr>
<tr>
<td>Private Industry and Commerce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture and Forestry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note.—The new coverage for 1964 includes more than 39,000 African employees in small enterprises in private industry and commerce. Their earnings were far lower than those in establishments covered by the Labour Survey in earlier years (viz. £56 per annum or only slightly above the earnings in agriculture).

**Income Distribution by Race and Region**

22. Data on income distribution are fragmentary and are not available in comparable form for an extended period of time. Table 14 contains limited information on income distribution among taxpayers by race for the year 1962. It demonstrates substantial inequality, especially among races but also by income group within each race. As the table excludes data on those unemployed or underemployed because their low incomes would not be subject to income tax, the data understate the degree of inequality that exists for people as a whole and more especially for Africans among whom unemployment and underemployment is most severe. Data are not available to determine whether or not income inequality has increased or decreased over the ten-year period.
TABLE 14—NUMBER AND PERCENTAGE OF TAXPAYERS IN EACH INCOME GROUP BY RACE 1962

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Africans</th>
<th></th>
<th>Africans</th>
<th></th>
<th>Africans</th>
<th></th>
<th>Africans</th>
<th></th>
<th>Africans</th>
<th></th>
<th>Africans</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under £120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>754,836</td>
<td>91·4</td>
<td>5,385</td>
<td>11·0</td>
<td>334</td>
<td>1·5</td>
<td>19,801</td>
<td>86·0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£120–£159</td>
<td>38,474</td>
<td>4·7</td>
<td>2,143</td>
<td>4·3</td>
<td>721</td>
<td>3·2</td>
<td>1,645</td>
<td>7·1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£160–£199</td>
<td>14,451</td>
<td>1·7</td>
<td>1,625</td>
<td>3·3</td>
<td>134</td>
<td>0·6</td>
<td>431</td>
<td>1·9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£200–£399</td>
<td>13,890</td>
<td>1·7</td>
<td>6,378</td>
<td>13·0</td>
<td>571</td>
<td>2·5</td>
<td>472</td>
<td>2·1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>£400 and over</td>
<td>4,351</td>
<td>0·5</td>
<td>33,609</td>
<td>68·4</td>
<td>20,708</td>
<td>92·2</td>
<td>674</td>
<td>2·9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>826,002</td>
<td>100·0</td>
<td>49,140</td>
<td>100·0</td>
<td>22,468</td>
<td>100·0</td>
<td>23,023</td>
<td>100·0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE.—These estimates are based on returns for the Graduated Personal Tax. They are inaccurate, but the differences in income distribution brought out by these data are so striking that they nevertheless illustrate the problem that exists.

23. Similar income inequalities undoubtedly exist by provinces but the data available by provinces is limited and sketchy. Table 15 contains data on per capita monetary gross domestic product by the old provinces and the inequality apparent for them is probably typical of the new provinces as well. These data may overstate the inequality that actually exists because (i) only monetary income is included and it is possible that subsistence incomes are highest in those provinces having the lowest cash incomes, and (ii) measures of cash income are incomplete and it is conceivable that more monetary transactions are omitted from low than from high income areas where markets are better organized.

TABLE 15—PER CAPITA MONETARY GROSS DOMESTIC PRODUCT BY OLD PROVINCE—1962

<table>
<thead>
<tr>
<th>Old Provinces</th>
<th>Monetary Product (£)</th>
<th>Population (thousands)</th>
<th>Per Capita Monetary Product (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi E.P.D.</td>
<td>79,494</td>
<td>315</td>
<td>252</td>
</tr>
<tr>
<td>Coast</td>
<td>28,224</td>
<td>728</td>
<td>39</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>23,691</td>
<td>1,049</td>
<td>23</td>
</tr>
<tr>
<td>Central</td>
<td>23,404</td>
<td>1,925</td>
<td>12</td>
</tr>
<tr>
<td>Nyanza</td>
<td>17,885</td>
<td>3,013</td>
<td>6</td>
</tr>
<tr>
<td>Southern</td>
<td>5,481</td>
<td>1,014</td>
<td>5</td>
</tr>
<tr>
<td>Northern</td>
<td>1,834</td>
<td>590</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>180,013</td>
<td>8,634</td>
<td>21</td>
</tr>
<tr>
<td>Total (excluding Nairobi and Mombasa)</td>
<td>76,618</td>
<td>8,139</td>
<td>9</td>
</tr>
</tbody>
</table>

24. Changes over time in income distribution by old provinces can be indicated by observing movements in wage bills as given in Table 16. As all other elements of incomes are excluded these data must be used in
guarded fashion. It is worth noting, however, that for the period covered the three provinces having the lowest per capita monetary income (Table 15) have the most rapid rates of growth (Table 16). Indeed, eliminating Nairobi there would appear to be an inverse relationship for the period as a whole between rates of growth in wages and levels of per capita monetary product with only the Coast Province being a partial exception. Preliminary data for 1963 and 1964 by new provinces suggest that this general relationship may have continued. These data indicate that there may have been a tendency for differentials in income distribution by provinces to narrow over the period reviewed, although the magnitude of the differentials remains large. It is also noteworthy that the wage bill for Kenya as a whole has grown by more than 8 per cent between 1963 and 1964, the first year of independence, as compared with an average rate of 4.1 per cent from 1955 to 1962.

### Table 16—Rates of Growth in Estimated Annual Wage Bills by Old Provinces

<table>
<thead>
<tr>
<th>Old Provinces</th>
<th>Estimated Wage Bill £'000</th>
<th>Share of Total Annual Wage Bill Per Cent</th>
<th>Annual Rates of Growth Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>400</td>
<td>559</td>
<td>826</td>
</tr>
<tr>
<td>Southern</td>
<td>1,700</td>
<td>2,379</td>
<td>2,594</td>
</tr>
<tr>
<td>Nyanza</td>
<td>5,800</td>
<td>7,597</td>
<td>8,834</td>
</tr>
<tr>
<td>Nairobi E.P.D.</td>
<td>27,900</td>
<td>34,948</td>
<td>39,272</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>67,100</td>
<td>79,574</td>
<td>88,816</td>
</tr>
<tr>
<td>Coast</td>
<td>11,200</td>
<td>12,228</td>
<td>13,947</td>
</tr>
<tr>
<td>Central</td>
<td>9,600</td>
<td>9,749</td>
<td>11,562</td>
</tr>
<tr>
<td>Rift Valley</td>
<td>10,500</td>
<td>12,114</td>
<td>11,781</td>
</tr>
</tbody>
</table>

**Some Problems for the Future**

25. In many respects Kenya began its independence with a stronger base for future development than has existed in many newly independent developing nations. Per capita incomes are higher; the infrastructure of roads, railways and communications, water supplies, power facilities, airports and harbours, forest development, and broadcasting facilities are better; industrial and commercial agriculture have proceeded further; the provision of primary education and social services is more extensive; the Government is better organized and more stable; and the people are more united with a stronger consensus on objectives and methods. This is not to say that any of the facilities and services referred to is adequate. Indeed this survey of the past ten years reveals many pressing problems and glaring defects in the structure, organization and operation of the economy that must be remedied if growth is to be accelerated and its fruits more equitably distributed.
26. Among the problems revealed are the following:

(i) The rate of growth of per capita incomes is inadequate to provide for reasonably rising living standards because population growth has been so rapid and the growth of gross domestic product has been too slow.

(ii) Many people continue to derive their principal income from activities in the subsistence sector where the promise of increased productivity is not substantial. The monetary sector must be strengthened and specialization encouraged to promote both economic well-being and national unity.

(iii) While the economy as a whole must grow more rapidly some sectors are in special difficulties which must be remedied with all possible haste. These include building and construction and livestock and dairy industries in particular.

(iv) The process of industrialization must be strengthened and more basic and investment goods industries developed as rapidly as possible.

(v) The development of the investment in small farms must be accelerated even further and the composition of their output considerably diversified.

(vi) Every effort must be made to stabilize Kenya terms of trade particularly through negotiation with other trading countries and groups, diversification of exports and the purchase of imports at the lowest possible prices.

(vii) Efforts must also be made to spread trade more evenly among countries without sacrificing the principles of selling at the highest price and buying at the lowest.

(viii) Capital formation must be stimulated quickly and substantially and the Government must take a leading role in providing guidance and inducements to the private sector, promoting building and construction, accelerating the development of basic services and adopting an anticyclical approach to development expenditures.

(ix) Strong efforts must be made to increase the number of employment opportunities throughout the country not only by increasing output but also through wages and tax policies designed to slow the substitution of capital for labour.

(x) The substantial inequalities that now exist by level of income, race and province must be reduced.

27. This is not intended to be a comprehensive list of immediate problems but rather those made apparent by the data discussed in this chapter. Others are equally important and apparent such as the need to increase domestic saving and domestic ownership of resources, to promote co-operatives, to extend secondary and university education, to devise a land use policy, and to modernize the tax structure. These and others will be considered in later chapters, particularly Chapters 4 and 5.
CHAPTER 3—FACTORS PROMOTING AND THOSE CIRCUMSCRIBING GROWTH

The specification of long-term objectives, the setting of specific short-term targets by both economic activity and geographic area, and the formulation of plans to alleviate limitations on development are all aspects of planning that are in reality closely interrelated. While they cannot be separated in practice, there is some advantage in separating them for purposes of exposition. In this chapter those factors promoting as well as those limiting development are considered and methods for alleviating the more serious of the limitations are explored. Chapter 4 will deal with the general strategy for development and some critical long-term objectives. Chapter 5 is a presentation of those physical and value targets that have been adopted for the five-year Plan.

Factors Promoting Growth

2. Kenya has many characteristics favourable to economic development and this Development Plan is designed to take full advantage of them. Some of these attributes relate to the culture and traditions of the Kenyan population; others depend on the natural resources of the country and the relatively advanced infrastructure that exists in Kenya; finally, less tangible but equally important, advantages derive from unity and political stability at home and substantial goodwill abroad.

African Aspirations, Attitudes and Traditions

3. Rapid growth and higher living standards are not easily attainable, but the task is made considerably easier if the people have a strong desire to reach these objectives. The people of Kenya agree on these objectives and the evidence of strong motivation is not limited to oral expressions and demands for services. Indeed, the more important pieces of evidence are to be found in the actions of the people themselves. Thus, it can be inferred from the rapid increase in demand for modern consumer goods, the willingness of the people to make almost any sacrifice to educate their children, the rapidly growing demand for land consolidation and registration, and the growing pressure on facilities for higher education, training and development loan capital, that the aspirations of the people are both strong and well directed.

4. But aspirations cannot be converted into achievements unless the attitudes and conditions of the people are conducive to accomplishment. A majority of the people of Kenya have already demonstrated that their attitudes are consistent with their aspirations. The sharp upsurge in the number of self-help schemes and co-operative organizations is a most encouraging sign that this is so. These activities are firmly based in traditions and the translation of the traditional co-operative spirit to the modern economy is a prerequisite to economic development. The willingness to work hard is spreading rapidly and pride in accomplishment can be noted in both Government and private activities. Finally, the interest displayed by
Kenyans in their fellow-men both at home and abroad is a firm basis on which to provide for an equitable distribution of a rapidly growing national income.

**Advantages in Natural Resources**

5. Kenya’s natural resources will contribute to economic growth and social welfare in three ways. Some of these resources can enter directly into the production of physical goods; others are those advantages of environment that make Kenya such a desirable place in which to live, work and visit; finally, some advantages stem from Kenya’s location with respect to other countries in Africa and the rest of the world.

6. Land is Kenya’s most important resource and successful economic development is contingent upon its intensive and productive utilization. Yet of over 140 million acres of land in Kenya, only about 25 million acres receive at least 25 inches of rainfall, enough to support intensive livestock and crop production, on mixed farms, plantations or ranches. Nevertheless, of the 1.5 million families in Kenya in 1964, perhaps no more than 400,000 derived their livelihood mainly from sources outside of agriculture. Despite the heavy concentration of population on the land, its full potential has not yet been realized. Perhaps one million acres of high-potential land is sparsely populated and used at best for unproductive grazing, while much larger areas of densely populated land are under-utilized and under-developed. In addition, much marginal land can be reclaimed through irrigation and more could be made useful through eradication of the tsetse fly and bush clearance. The principal avenues for increasing agricultural production, once various reclamation possibilities have been exhausted, must be the intensification of land use and rising productivity. The substantial range of climate, rainfall, altitudes and soil conditions make it possible for Kenya to enjoy a diversification in its agricultural output that is most unusual and of which full advantage must be taken.

7. Other natural resources which can enter directly into the production of goods include Kenya’s forests, fisheries and mineral resources. The extent and quality of Kenya’s forests are well known and rapidly growing. Their potential contribution to Kenya’s national income is substantially larger than the amount now being achieved. The fisheries resources in inland waters are reasonably well understood but their potential will not be fully realized until a more rational organization of the industry is achieved and some of the waters fished more intensively. The nature and extent of offshore and deep-water fisheries resources are not so well known but indications are that they are substantial indeed. Some of Kenya’s mineral resources, such as soda ash and diatomite, are already being exploited while others have been identified and are being tested for commercial value. There is little doubt but that many other mineral resources remain to be discovered and efforts to do so are already under way in many parts of the country. The water supplies of the country, though limited, do have substantial potential for both irrigation and the generation of power.
8. Kenya's environmental advantages are numerous and impressive. The incomparable climates to be found in the highlands, the mountains, and the seashores, and the large amounts and varieties of wild animals and birds make Kenya an ideal tourist attraction. Tourists already spend substantial amounts of money in Kenya, thereby increasing foreign exchange earnings and making possible the purchase of the large amounts of imports needed for development. Mountain climbing, fresh and salt water fishing and swimming, game viewing and hunting, and modern theatres and art galleries are tourist attractions seldom found in such pleasant and convenient combination. These environmental attractions, available to tourists, are natural advantages that can be enjoyed also by those who live in Kenya the year round. The environmental advantages of Kenya provide a desirable setting in which to enjoy the material goods and services which contribute to a higher standard of living.

9. Kenya's advantages in location can also make a significant contribution to development. Sitting astride the equator on the eastern coast of Africa, Kenya can trade with many countries throughout the world using inexpensive water transportation for relatively short distances. Mediterranean and European countries are readily accessible through the Suez Canal; the large potential markets in India and Pakistan are near at hand; and markets in the Far East are not inaccessible. Trading access to other African countries will be considerably improved as communications and transportation facilities are increased. Kenya must not only take advantage of its existing trade opportunities, but must also prepare for the development of trade with other countries as the costs of transportation are reduced. While many tourists reach Kenya using water, rail, or road transport, the bulk of Kenya's tourists come by air. Today's modern aircraft make Kenya readily accessible to every country throughout the world.

Infrastructure

10. Closely related to natural resources and equally important for economic development is the substantial investment that has been made in the past in infrastructure facilities. Many of Kenya's trade opportunities would not be open if Kenya did not have modern port facilities and major railway lines and connexions. Without Nairobi Airport and the many smaller airports throughout the country, the tourist industry could not have reached its present stage of development. The relatively extensive network of roads and the existence of many modern hotels and lodges provide a basis for further development of trade and tourism. The post and telecommunications systems are relatively efficient and fairly extensive and these together with progress in the development of radio and television facilities make a very real contribution to the national unity that now characterizes Kenya. The capacity to generate electric power is substantial and growing rapidly not only in terms of total output but also in terms of the number of people, areas and industries that are being served. In the field
of agriculture, considerable progress has been made in land consolidation and registration, and an extension service exists that is both efficient and extensive. Marketing facilities exist for most agricultural products; agricultural research facilities are both modern and progressive; forests have been planted, developed and protected; and much experience has been gained through the operation of a limited number of irrigation schemes. Development is facilitated also by the establishment of parks and reserves and the modern municipal services available in Nairobi and Mombasa and to a growing extent in other municipalities. Kenya is also fortunate in having industrial facilities which are both diversified and extensive as compared with those that exist in many other developing countries. Further, Nairobi is becoming an important African financial centre and facilities exist for dealing with any country in the world. Finally, the organization of both central and local governments is both extensive and effective.

**Limitations on Growth**

11. It will be necessary, in order for Kenya to make full use of the advantages considered above, to make a determined effort to overcome several other factors that tend to limit the rate of economic growth. Factors circumscribing the rate of growth are not limited to obvious shortages of resources such as those of trained and experienced manpower and domestic capital, but also include such a factor as population, whose rapid growth may tend to retard the rate of growth of national and *per capita* incomes.

12. While accurate measures of capital are not available in most developing countries, there is little risk of contradiction in stating on the basis of even casual observation that all of today's developing nations are characterized by a severe shortage of capital relative to both land and labour. Certainly in Kenya the amount of capital per acre of land and per adult person is abysmally low in comparison with the ratios prevailing in better developed countries. It follows, of course, that both land and labour are excessive in relation to capital.

13. As between land and labour the picture is less clear, and varies considerably from one country to another. This variation and Kenya's relative position can be seen in Table 1 which contains data on the number of potentially productive acres per person in a number of selected countries. Kenya is very low on the list in 1965 and observation in the heavily settled areas of Kenya, such as Nyanza and Central Provinces, tends to confirm that the labour-land ratio is high. It can be suggested, therefore, with reasonable safety that labour is high in relation to land and both are excessive in relation to capital. To attain labour-land-capital ratios more likely to maximize income per person, the obvious policy conclusion is to accelerate the accumulation of capital, both to make agriculture more efficient and to create employment outside agriculture, to reclaim and extend land area but at a lesser rate and to restrain the growth of the labour force.
**TABLE 1—POTENTIALLY PRODUCTIVE ACRES PER PERSON**

<table>
<thead>
<tr>
<th>Selected Countries</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>48·4</td>
</tr>
<tr>
<td>Congo</td>
<td>22·1</td>
</tr>
<tr>
<td>Brazil</td>
<td>18·8</td>
</tr>
<tr>
<td>Colombia</td>
<td>16·6</td>
</tr>
<tr>
<td>Tanzania (mainland)</td>
<td>13·7</td>
</tr>
<tr>
<td>Algeria</td>
<td>10·4</td>
</tr>
<tr>
<td>Ghana</td>
<td>6·5</td>
</tr>
<tr>
<td>Uganda</td>
<td>5·4</td>
</tr>
<tr>
<td>Kenya</td>
<td>4·2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>3·4</td>
</tr>
<tr>
<td>India</td>
<td>0·77</td>
</tr>
</tbody>
</table>

**SOURCES:**

*Basic Data for Population Estimates.*—1962 U.N. Statistical population figures and rates of growth in Yearbook, except—

Tanganyika: D. P. Ghai "Reflections on Tanganyika's Five-year Development Plan", Makedere College EDRP, No. 34.

Kenya: Ministry of Economic Planning and Development.

India: Third Five-year Plan.

*Potentially Productive Acres.*—UNFAO Yearbook 1956, except—

Kenya: Kenya Agricultural Sample Census, 1960/61. Land types A, B and C plus forests and “Scheduled Areas” (39.3 million acres as compared with the UNFAO estimates of 36.7 million acres).

India: Third Five-year Plan.

14. The problem in the future could become more serious than it is today. The rate at which arable land can grow through irrigation and other land reclamation schemes is limited and indeed requires capital to accomplish. It is therefore very likely that capital will grow more rapidly than land. Unfortunately for *per capita* incomes, however, there are strong indications that population and the labour force may grow much more rapidly than land or appropriately applied technological knowledge, thus making the labour-land ratio even more unbalanced than it is today. Present projections of population growth suggest that Kenya may have little more than 1.3 acres per person of potentially productive land in the year 2000. Clearly the rate at which *per capita* incomes can grow in the future is dependent on present Government policies with respect to the growth of these factors of production and on the way in which they will be used in production. None of these policies can be stated independently of the others. A vigorous policy to develop land may mean less capital for infrastructure facilities and industry; a hands-off policy on population growth may require large expenditures for social services and make less available for economic development; and inadequate development of non-agricultural activities will maintain and increase the pressure on land.
Capital

15. As already mentioned, the striking but not necessarily the most significant shortage in most developing nations is capital. Low per capita incomes provide an inadequate basis for taxation and the urgency of minimal consumption leaves little room for voluntary saving. Rapid development must therefore depend very considerably on sources of capital outside the country.

16. The precise relationship between increases in output and increases in a nation’s stock of capital depends on a number of factors including the length of life of capital, the availability of other factors of production, the extent and nature of substitution among factors of production, production techniques in different sectors, and the sectoral composition of capital formation, particularly between social services and economic activities. The ratio of added capital to added output for a nation can be used, however, to give some idea of the order of magnitude of capital needs to attain various rates of growth.

17. Data for the years 1954 to 1964, adjusted for price changes of output and capital, replacement needs, excess capacity and the lag between construction and operation of capital equipment, suggest that Kenya’s capital-output ratio, the additional net capital formation needed to increase output by \( \frac{1}{10} \), may lie between 2.5 and 3.0. This compares with ratios of 3 or 4 to 1 for advanced industrialized countries and with 2.6 for Ceylon and 2.3 for India and Malaya. A ratio of 2.8 is used in Table 2 to indicate the gross capital formation required to attain alternative rates of growth from the 1964 base, when monetary output was \( \text{\£}213 \) million. The Table is best explained by tracing one line across the page. If the desired annual rate of growth is 6 per cent and the capital output ratio is 2.8, net capital formation must amount to 2.8 times 6 per cent or 16.8 per cent of monetary gross domestic product. This percentage applied to \( \text{\£}213 \) million yields an estimate of required net capital formation of \( \text{\£}35.8 \) million. Adding estimated replacement requirement of \( \text{\£}15 \) million yields the estimate of required gross capital formation of \( \text{\£}50.8 \) million, which is 23.8 per cent of monetary gross domestic product in 1964. Of course, to the extent that there was excess capacity in 1964, monetary output in later years could be larger without any net capital formation. It should also be noted that investment in stocks has been excluded from this analysis because data are not available in Kenya on which to base estimates. Inclusion of this type of investment would raise the capital-output ratio and the gross investment required for each rate of growth.

18. Some perspective on prospective rates of growth can be gained by comparing data on gross capital formation in the recent past with the requirements indicated in Table 2. The highest level of gross capital formation attained over the past ten years was \( \text{\£}45.7 \) million in 1956. At the present level of output this amount would yield a growth rate a little above 5 per cent. On the other hand, actual gross capital formation in 1964 was \( \text{\£}34.9 \) million,
sufficient in the absence of excess capacity for a growth rate of about 3.5 per cent. In some respects, however, gross capital formation as a percentage of monetary gross domestic product is more revealing. For the ten-year period 1954-1964, the average percentage has been 21.7 which would yield today a growth rate barely in excess of 5 per cent.

Table 2—Estimated Capital Requirements for Alternative Rates of Growth (base £213 million)

<table>
<thead>
<tr>
<th>Desired rate of growth</th>
<th>Required net capital formation</th>
<th>Required net capital formation</th>
<th>Estimated replacement requirements</th>
<th>Required gross capital formation</th>
<th>Required gross capital formation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per cent</td>
<td>Per cent of monetary output</td>
<td>£ million</td>
<td>£ million</td>
<td>£ million</td>
<td>Per cent of monetary output</td>
</tr>
<tr>
<td>3</td>
<td>8.4</td>
<td>17.9</td>
<td>15</td>
<td>32.9</td>
<td>15.4</td>
</tr>
<tr>
<td>4</td>
<td>11.2</td>
<td>23.9</td>
<td>15</td>
<td>38.9</td>
<td>18.3</td>
</tr>
<tr>
<td>5</td>
<td>14.0</td>
<td>29.8</td>
<td>15</td>
<td>44.8</td>
<td>21.0</td>
</tr>
<tr>
<td>6</td>
<td>16.8</td>
<td>35.8</td>
<td>15</td>
<td>50.8</td>
<td>23.8</td>
</tr>
<tr>
<td>7</td>
<td>19.6</td>
<td>41.7</td>
<td>15</td>
<td>56.7</td>
<td>26.6</td>
</tr>
<tr>
<td>8</td>
<td>22.4</td>
<td>47.7</td>
<td>15</td>
<td>62.7</td>
<td>29.4</td>
</tr>
<tr>
<td>9</td>
<td>25.2</td>
<td>53.7</td>
<td>15</td>
<td>68.7</td>
<td>32.3</td>
</tr>
<tr>
<td>10</td>
<td>28.0</td>
<td>59.6</td>
<td>15</td>
<td>74.6</td>
<td>35.0</td>
</tr>
</tbody>
</table>

19. The availability of capital over the Plan period cannot, however, be inferred from past performance. Independence has opened up investment opportunities to a larger number of people and the Government is in a position to obtain aid from a larger number of external sources. Further, modification of the tax structure and of savings media should increase domestic funds. Finally, a resurgence of confidence in the private sector should raise private investment substantially above recent levels.

20. The principal sources of funds over the Plan period are personal, business and public saving and the net inflow of capital from abroad into both the private and public sectors. These are not, however, magnitudes that can be estimated independently either of each other or of other related variables. Of most importance is the obvious fact that the impact of domestic savings and capital inflow on development and the distribution of income depends on how these funds are utilized within Kenya. Expenditures in the form of luxurious buildings and furnishings in the public and business sectors or in the form of the conspicuous accumulation of luxury homes, durable goods and rare stones in the household sector do not contribute as substantially as other forms of expenditure to subsequent increases in output. The public, business and household sectors must direct savings and foreign capital into those uses that can be justified by their contribution to output.

21. The allocation of capital among the sectors should be guided by similar principles. Today much of the available saving is being invested in increases in population which, as will be noted below, may simply hamper development
as measured by increases in *per capita* income. The public sector in seeking to channel more savings to itself must be assured that the public uses of those funds will contribute more to social and economic development than their use in the private sector. Business must also evaluate investment opportunities carefully and rationally and avoid the ill-considered investment of capital abroad because of an explosive exaggeration of minor, temporary and often imaginary difficulties at home.

22. The allocation of domestic savings among sectors is of particular importance because their use in some sectors may attract complementary funds from abroad more effectively than their use elsewhere. Indeed, properly used, domestic savings may have a substantial multiplier effect on the volume of investment. Household savings made available to the Government may make it possible for the Government to obtain matching funds from abroad. If, in turn, the Government uses this total to build necessary infrastructure or to make loans to business, more private saving may be retained for investment in Kenya and these actions may stimulate the inflow of private capital from abroad.

23. Closely related to this multiplier effect is the probability that total investment will be larger if all sectors of the economy participate in raising and administering investment funds. Knowledge of resources and markets varies considerably among and within sectors and specialized abilities are not equally distributed. Diversification of investment by sector responsible is therefore likely to increase the efficiency of decision making and the total volume of investment.

24. Finally, the expenditure of funds can be abortive if its principal effect is merely to bid up the prices of existing real resources without adding in any way to the amounts available for development. Development depends on the creation and appropriate use of real resources such as land, factories, shops, machinery, schools, medical centres, roads, power lines and railway rolling stock. Finance is a lubricant, a means for obtaining the needed real resources. It should be used so long as such use increases the stock of real resources. Beyond that point expenditure merely raises prices and costs and may increase the amounts of our real resources that must ultimately be converted into cash in order to repay loans.

25. The Government has given full consideration to factors such as these in attempting to find methods for relieving the financial constraint on development. Its efforts in this regard have naturally been concentrated on sources of public funds and in particular on sources determining the magnitude of the Government Development Budget. Estimates of private investment are necessarily more sketchy although the financing of a sizeable portion of it will be assisted by Government. These estimates represent the Government’s assessment of opportunities in the private sector. Their realization depends not only on favourable Government policies but also on energetic, well directed private initiative.
26. The critical stricture on public development funds is the amount that the Government and quasi-public bodies can raise as a domestic contribution. The principal sources of such funds to the Central Government over the Plan period are surpluses in the recurrent budget, the National Social Security Fund, domestic borrowing, fiduciary issue and the switching of selected sterling investments to Kenya. These sources include public saving, diversions of private saving to the Government, the creation of money, and the inflow of capital under the direct control or influence of the Government. Careful examination of these several sources by the Ministries of Finance and Economic Planning and Development and the Development Committee has permitted the Government to raise its estimates of gross capital formation above those in the previous Plan.

27. During the Plan period surpluses in the recurrent budget are not likely to be a major source of funds, but in later years this source must become increasingly important as the switching of sterling investments is completed and the domestic share of development expenditure rises. It is expected that by 1969/70 £3 million will be available for development from this source. It is expected that total recurrent expenditure will rise by an average of 7 per cent per annum bringing recurrent expenditures, excluding commuted pension payments and compensation, from £46 million in 1965/66 to £60.3 million in 1969/70. Government revenues must therefore rise by an average of 8 per cent per annum to yield the planned surplus. Much of this increase will take place naturally at existing tax rates in response to rising taxable incomes.

28. Clearly, the necessary increase in recurrent expenditure depends on a number of factors including the amount and kind of development expenditure and the rate at which efficiency in Government administration can be increased. The dependence on the composition of development expenditure is perhaps most striking. Estimates of ratios of development to related increases in recurrent expenditure are given below for selected major categories of Central Government expenditures. It will be noted that a given capital expenditure on roads or water-works increases recurrent expenditures by only one-eighth as much as the same capital expenditure on education or health.

<table>
<thead>
<tr>
<th>Development/Recruent ratios</th>
<th>Roads</th>
<th>Water works</th>
<th>Agriculture</th>
<th>Education</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10.2</td>
<td>10.2</td>
<td>8.4</td>
<td>1.3</td>
<td>1.3</td>
</tr>
</tbody>
</table>

29. External aid sources are expected to finance about £60 million of expenditure under the Central Government Development Budget, excluding land transfer and development in the former Scheduled Areas. In order to finance a total programme of about £90 million, the Government must therefore raise some £30 million from domestic sources, which is considered to
be a feasible target (see also Chapter 5, Section F). The share of domestic resources in financing the Central Government’s annual development expenditure will rise from about one-quarter at the start of the Plan period to more than one-third in 1969/70.

30. The heavy dependence of development in Kenya on sources of foreign capital is a matter of legitimate concern. It should be noted, however, that the Plan calls for a decline over the Plan period in the share of development expenditures financed from abroad. Essentially the rate of this decline depends upon the speed with which domestic saving can be increased given the desired rate of capital formation. In any event, Kenya as an independent nation is free to accept, and reject, aid from any source. The policy of non-alignment is in this sense consistent with diversifying and expanding our sources of aid.

31. But the availability of aid does not always mean that it is economically wise to use it. If the scrutiny of projects for inclusion in the Plan has been effective, it is the accepted projects that should be financed, not others that may be more attractive to external sources of funds. Granted that no plan can be a rigid document and that some subsequent ideas may turn out to be more fruitful than marginal projects within the Plan, the criterion for adding a new project must be its economic feasibility and with limited real resources, its economic superiority to projects in the Plan. Mere availability of finance is not a suitable criterion.

32. This difficulty arises at a number of different levels of which two may serve to illustrate the dangers that can arise. Most aid is given through bilateral sources, only about 10 per cent flowing through multilateral channels. It is natural that these governments and their agencies would want to be in a position to defend at home the uses to which their aid has been put. Unfortunately, this need implies that aid sources will have a bias in favour of clearly defined projects that are imposing in design and structure. This preference for glamorous projects means that many elements of a plan will go unaided destroying the integrated pattern of development in favour of disorderly advance. A country must have prisons as well as universities, small agricultural and traders’ loans as well as finance for large-scale undertakings, and small lodges as well as grand hotels. The desire for glamorous projects may even lead sources of funds to suggest projects with the appropriate characteristics as substitutes for less striking projects in the Plan. Such tendencies must obviously be resisted even though there may be a sympathetic political attractiveness to them in the developing country itself.

33. Turnkey projects require equally careful scrutiny. An equipment manufacturer from abroad may offer to construct a plant with loans guaranteed by his or the developing country’s government. Frequently the loan is of short duration, the interest rate and machinery prices excessive, and management and marketing arrangements are left unresolved. Even when small equities are involved the equipment manufacturer may be able to
cover the risk of loss through charging even higher prices. The country which hastily accepts on the availability criterion may find itself with substantial debt and a bankrupt operation, while the manufacturer has a substantial profit and his country an increase in perhaps much needed exports. Competitive bidding and independent appraisals are means for reducing the worst risks of turnkey projects. Similar methods may be needed when aid is tied by countries to imports from those countries. The advantage of an apparently subsidized rate of interest can be quickly dissipated if the prices paid for such imports are in excess of those in other countries. A special case of this problem arises when aid is received from a country whose currency is not convertible into the currencies of other countries. Such aid must be spent in the aiding country and no possibility exists for seeking competitive prices. Ultimately loan repayments must be made and will require the sale of sufficient goods in that country perhaps at less than world prices or the drawing down of limited reserves of convertible currencies. Again careful scrutiny cannot be limited to the structure and terms of loans, but must also consider economic feasibility and the possible uneconomic diversion of trade.

34. It is also important that financial terms be tailored to the project for which funds are supplied. The timing and scale of repayments should be suited to the productivity of the project in order to avoid serious drains on foreign exchange during early, unproductive years. If such a drain occurs it may well mean the postponement of other desirable projects because of the inability to finance the necessary imports of capital equipment and operating materials. Another aspect of this problem is determining the total cost of a project to be divided between the aiding and receiving countries. If the rule being used is that 30 per cent of the cost is to be borne by the recipient country, it is important that all costs be included. If a project, such as secondary school construction, will not add to the nation's output for a number of years, the present value of the recurrent cost of running the project during those unproductive years is a legitimate part of the cost of the project. If these costs are excluded the aiding country may be contributing far less than the 70 per cent advertised. Indeed, if recurrent costs per annum are as high as 50 per cent of construction cost, the total cost of the project over a four-year period will be nearly three times the construction cost and the aiding country's contribution substantially less than 25 per cent.

35. It is also becoming fashionable to exclude local costs from eligibility for foreign aid. If the rule is applied so that the secondary spending effects of a project on imports are given appropriate weight, some arguments can be marshalled in support of the rule. Unfortunately, the rule is not always so liberally construed. Even when it is, the rule makes it very difficult to adjust aid to the balance of payments and banking reserve positions of the developing countries. Taxing and tax-collecting capacities of these countries are often low and reliance on fiduciary issue can seriously weaken bank and balance of payments reserves.
36. A problem worthy of separate mention is the lack of co-ordination among sources of foreign aid. This is in one way paradoxical because it is partly with the encouragement of aid-giving agencies that planning has been given such strong support in many developing countries. A plan attempts to ensure integrated development and to demonstrate that particular projects have a just place in the development scheme. The aiding country’s evaluation of a project is made considerably easier and more reliable. But an integrated plan falls to pieces unless all of its parts can be implemented. Better co-ordination among donors would do much to eliminate the situation in which some projects receive offers of support from several sources while other necessary and complementary projects attract no assistance.

37. None of this review of the difficulties with foreign aid is intended to suggest that Kenya should do without it under present circumstances. Indeed, the rapid growth desired could not be attained without it. But aid should not be offered with political strings, inordinate self-interest or to the exclusion of the best interests of the recipient country. In any event Kenya will scrutinize all aid offers carefully to ensure that economic development is promoted and not hindered by the nature of the aid accepted.

38. Between 20 and 25 per cent of all investments during the Plan period will be undertaken by Government-owned organizations, statutory bodies or other units in which the Government holds a strong interest. These include, for example, the E.A.C.S.O. self-contained services, various marketing boards, etc., and many lending institutions set up with Government support. A substantial part of these investments will be financed by operating profits or repayment of loans. Most of these organizations are in a strong position to obtain credit on favourable terms from abroad and some of the money provided by aid-giving agencies will also be channelled through them. Investments undertaken by these organizations will become increasingly important. They are directed towards strengthening the infrastructure; assisting development of small-scale farming, industry and commerce and co-operative societies; and promoting growing African participation in the economy and the realization of the social targets of African Socialism.

39. The opportunities for private capital formation over the Plan period are substantial indeed, and it is expected that capital expenditures in this sector will amount to 56 per cent of total capital formation as compared with 63 per cent from 1954 to 1964. The slight fall in share is expected largely because of the redoubled efforts of Government to expand public capital formation and will occur despite a very substantial increase in the absolute level of private expenditures. These are expected to amount to approximately £180 million over the Plan.

40. While projections of private capital formation are necessarily somewhat nebulous and are more in the nature of estimated opportunities than estimated expenditures as already noted, these projections are fairly soundly based. First,
these expenditures are estimated to start in 1965/66 at a level of about £22 million, growing over the Plan period to yield an average of £36 million. These figures are not unreasonable on the basis of the experience of the past ten years when private capital formation averaged nearly £25 million and reached a peak as far back as 1956 of nearly £31 million. Further, it is expected that the Government will assist the private sector by providing finance on a larger scale than previously through such bodies as the Agricultural Finance Corporation, the Land and Agricultural Bank, the Development Finance Company of Kenya and the Industrial and Commercial Development Corporation. The construction of industrial estates and shopping and marketing centres and direct participation of Government with private investment in selected ventures will also assist private development. The African farmer and small businessman will be encouraged to join the investment efforts and should contribute significantly to raising the level of private investments. A part of private investment can, therefore, be estimated with some firmness. Finally, the renewal of confidence and the success of limited exchange control has resulted in more domestic savings being retained in Kenya without in the least harming the inflow of private capital from abroad.

41. The expected flow of capital for development purposes over the Plan period of five fiscal years, 1965/70, can be summarized as follows:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Government programmes</td>
<td>...</td>
<td>£72 million</td>
</tr>
<tr>
<td>Other public (direct and loans, etc.)</td>
<td>...</td>
<td>£73 million</td>
</tr>
<tr>
<td>Privately financed investment</td>
<td>...</td>
<td>£180 million</td>
</tr>
<tr>
<td>Total fixed capital formation</td>
<td>...</td>
<td>£325 million</td>
</tr>
</tbody>
</table>

A more detailed discussion of the investment programme is included in Section E of Chapter 5.

High- and Middle-Level Manpower

42. Whether the ambitious programme of development expenditure outlined above for both the public and private sectors can be achieved depends critically on the availability of trained and experienced manpower in both sectors. In many developing countries otherwise sound plans have foundered because of a shortage of skilled manpower and a failure to take the vigorous steps necessary to alleviate the shortage. More labour of all kinds is normally needed as development proceeds but as an economy becomes more complex the need for high- and middle-level manpower expands at a disproportionate rate. Careful advance planning is necessary if the highly trained people needed are to be on the job at the right time and place.

43. Fully aware of this problem and its significance for development, the Kenya Government arranged for a survey of high-level manpower requirements covering the period 1964-70 in considerable detail and the period 1970-80 in broader outline. This report, which gives minimum high-level
manpower requirements, was made available to the Government in May of 1965 and has received serious study since then. The survey concentrated on those occupations outside private agriculture requiring at least two years of education, training or apprenticeship beyond primary school. These needs were divided into four categories as follows:

Category A: those occupations requiring university or higher education.

Category B: professional occupations in which a university degree is not mandatory.

Category C: skilled technicians and clerical workers needing secondary or trade school education.

Category D: qualified artisans.

44. The employment of high level manpower in total is shown in Table 3 for 1964 and 1970 in relation to other components of employment. The average annual rate of growth in the employment of high level manpower of 7.4 per cent is exceeded only by the substantial growth rate which can be expected to be achieved in the number of remuneratively self employed through the creation of many market oriented small farms in agriculture and small enterprises in commerce and industry. Indeed, many of the highly trained people needed will themselves be owners and managers of new enterprises. The importance of high level manpower to the successful operation of the non-agricultural monetary sector is indicated by the fact that in 1964 highly trained people represented 19.0 per cent of non-agricultural employment. This percentage is expected to reach 22.7 in 1970 as existing vacancies are filled and the managerial complexity of the economy increases.

**Table 3—Reported Employment Including Employment of High and Middle Level Manpower 1964 and 1970**

<table>
<thead>
<tr>
<th>Category</th>
<th>Employment (thousands)</th>
<th>Annual rate of growth Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1964 Reported</td>
<td>1970 Estimated</td>
</tr>
<tr>
<td>Report wage employment</td>
<td>589-6</td>
<td>724-0*</td>
</tr>
<tr>
<td>Do. excl. agriculture and domestic service</td>
<td>(362-9)</td>
<td>(468-0)</td>
</tr>
<tr>
<td>Report self employed (including family members)</td>
<td>113-2</td>
<td>200-0</td>
</tr>
<tr>
<td>Employed and self employed</td>
<td>702-8</td>
<td>924-0</td>
</tr>
<tr>
<td>High-and middle-level manpower</td>
<td>69-0</td>
<td>106-1</td>
</tr>
<tr>
<td>(As per cent of non-agricultural employment)</td>
<td>(19-0)</td>
<td>(22-7)</td>
</tr>
<tr>
<td>(As per cent of employed)</td>
<td>(11·7)</td>
<td>(14·7)</td>
</tr>
<tr>
<td>(As per cent of employed and self-employed)</td>
<td>(9·8)</td>
<td>(11·5)</td>
</tr>
</tbody>
</table>

* Estimate included in the Development Plan 1964-70, and used as basis for the Manpower Survey. The employment estimates have subsequently been revised upwards (see Chapter 5, Section D).
45. Employment and net requirements of high-level manpower by categories are given in Table 4. Office workers and craftsmen in Category C of the Manpower Survey are shown separately. The figures for vacancies in 1964 include in some cases people who were occupying positions for which their employers felt they were not qualified. It will be noted that there were severe shortages of high-level manpower in 1964 which must be overcome before provision can be made for the increased needs of the future. The positions, filled and unfilled, in 1964 are indicative of the structure of demand for high- and middle-level manpower in that year. By 1970 it is expected that this structure will shift even more strongly toward high-level manpower. Thus requirements, i.e. positions filled and unfilled, in Categories A and B are expected to grow at average annual rates of 6.1 and 5.9 per cent respectively as compared with the rate of 4.6 per cent for total high- and middle-level manpower positions. Because of the large numbers of vacancies in 1964, the growth of employment between 1964 and 1970 must exceed the growth of positions if those positions are indeed to be filled by 1970. The most significant difference between the rates of growth of employment and established positions is that for technical and semi-professional workers. The task of increasing employment in this area at the average rate of 16 per cent per annum is a gigantic one. The need disclosed in these statistics is apparent throughout the economy. The efficiency of many professional and management people is being seriously endangered by the severe shortage of supporting staff.

46. The total demand for high- and middle-level manpower by 1970 is made up of current vacancies, new positions created, and replacement personnel. These are shown in Table 5 along with estimates of supply. The general conclusions of the survey were based on such estimates for a large number of occupational groups—57 in A, 32 in B, 50 in C and 26 in D. Supply estimates were based on policies in effect at the time of the survey. Shortfalls were therefore indicative of the need for policy changes if the minimum demands for high- and middle-level manpower were indeed to be met in full by 1970.

47. The general conclusions of the survey are:

(i) By 1970 Kenya's supply of Category A, university educated people, may be nearly 18 per cent less than those required to meet minimum needs.

(ii) The overall shortage of Category A people may be further complicated by substantial unevenness in the composition of supply resulting in serious shortages in some occupations, such as secondary school teachers, doctors, mechanical and electrical engineers, architects, surveyors, pharmacists, veterinarians, and lawyers, and moderate surpluses in a few occupations.
<table>
<thead>
<tr>
<th>Category</th>
<th>Employed 1964</th>
<th>Per cent of total</th>
<th>Vacancies 1964</th>
<th>Established positions 1964</th>
<th>Per cent of total</th>
<th>Established positions 1970</th>
<th>Per cent of total</th>
<th>Annual Growth Rate (Per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Employment</td>
</tr>
<tr>
<td>Professional and top</td>
<td>6,279</td>
<td>9·1</td>
<td>708</td>
<td>6,987</td>
<td>8·6</td>
<td>9,968</td>
<td>9·4</td>
<td>8·0</td>
</tr>
<tr>
<td>management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6·1</td>
</tr>
<tr>
<td>Technical and semi-</td>
<td>12,815</td>
<td>18·6</td>
<td>9,341</td>
<td>22,156</td>
<td>27·4</td>
<td>31,213</td>
<td>29·4</td>
<td>16·0</td>
</tr>
<tr>
<td>professional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5·9</td>
</tr>
<tr>
<td>Skilled office workers</td>
<td>31,986</td>
<td>46·4</td>
<td>1,398</td>
<td>33,384</td>
<td>41·2</td>
<td>41,272</td>
<td>38·9</td>
<td>4·3</td>
</tr>
<tr>
<td>Skilled craftsmen</td>
<td>13,071</td>
<td>18·9</td>
<td>453</td>
<td>13,524</td>
<td>16·7</td>
<td>17,046</td>
<td>16·1</td>
<td>4·5</td>
</tr>
<tr>
<td>Semi-skilled manual</td>
<td>4,830</td>
<td>7·0</td>
<td>122</td>
<td>4,952</td>
<td>6·1</td>
<td>6,574</td>
<td>6·2</td>
<td>5·3</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>68,981</strong></td>
<td><strong>100·0</strong></td>
<td><strong>12,022</strong></td>
<td><strong>81,003</strong></td>
<td><strong>100·0</strong></td>
<td><strong>106,073</strong></td>
<td><strong>100·0</strong></td>
<td><strong>7·4</strong></td>
</tr>
</tbody>
</table>

**Note:**—These data and other data on the demand for high and middle level manpower used in this section of the Development Plan are taken from the report on High-level Manpower, Requirements and Resources in Kenya 1964-70, published by the Ministry of Economic Planning and Development, May 1965. The demand figures are on the low side, since estimates of growth in national income and, consequently, of employment opportunities have been raised since the Manpower Survey was prepared.
TABLE 5—HIGH AND MIDDLE LEVEL MANPOWER DEMAND AND SUPPLY

<table>
<thead>
<tr>
<th>Category</th>
<th>Vacancies</th>
<th>New Positions</th>
<th>Replacement Requirements 1964-70</th>
<th>Estimated Minimum Demand</th>
<th>Estimated Supply 1964-70</th>
<th>Shortfall</th>
<th>Per Cent of Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and top management</td>
<td>700</td>
<td>3,000</td>
<td>1,900</td>
<td>5,600</td>
<td>4,600</td>
<td>1,000</td>
<td>17.4</td>
</tr>
<tr>
<td>Technical and semi-professional</td>
<td>9,300</td>
<td>9,000</td>
<td>5,400</td>
<td>23,800</td>
<td>19,000</td>
<td>4,800</td>
<td>20.3</td>
</tr>
<tr>
<td>Skilled office worker</td>
<td>1,400</td>
<td>7,900</td>
<td>5,400</td>
<td>17,800</td>
<td>1,800*</td>
<td>—</td>
<td>(89.8)</td>
</tr>
<tr>
<td>Skilled craftsmen</td>
<td>300</td>
<td>3,500</td>
<td>3,200</td>
<td>7,100</td>
<td>2,200*</td>
<td>—</td>
<td>(69.0)</td>
</tr>
<tr>
<td>Semi-skilled manual</td>
<td>100</td>
<td>1,600</td>
<td>1,000</td>
<td>2,700</td>
<td>300*</td>
<td>—</td>
<td>(88.9)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12,000</strong></td>
<td><strong>25,000</strong></td>
<td><strong>20,000</strong></td>
<td><strong>57,000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Only known supply resulting from formal training schemes which produce fully competent workers has been included. Graduates of trade schools or other similar institutions who enter into training and apprenticeship programmes are counted only once, i.e., when they complete the last training programme. Much of the demand in these occupations will be met during the Plan period by upgrading workers and through informal training. This source of supply is not included as it is impossible to project how much of the demand will be met this way.

(iii) By 1970 the shortage of Category B people may be in excess of 20 per cent with even greater gaps for some occupations such as qualified primary school teachers, nurses, non-certified accountants, draughtsmen and engineering technicians.

(iv) Shortages in Category C occupations may be of even greater and indeed of serious magnitude, particularly with regard to stenographers, secretaries, book-keepers, cashiers, motor vehicle mechanics and telephone and telegraph operators.

(v) Shortages in Category D, skilled artisans, may be substantially less serious than the shortages in Category C.

(vi) The degree of Africanization varies considerably both between and within the public and private sectors and by occupation. In 1964, Africans held 22.7 per cent of Category A positions, 75.7 per cent of Category B, 45.6 per cent of Category C and 81.5 per cent of Category D.

48. Detailed plans to overcome the shortages indicated will be found in other sections of this Plan, particularly those dealing with Africanization, education, trade and apprenticeship programmes, training schemes, student guidance and technical assistance. Only a brief summary of these programmes is given here.

49. The principal steps being taken to increase the supplies of qualified Kenya citizens include—

(i) a reconstruction of the development plan for the University of East Africa and particularly of University College, Nairobi, to accelerate the intake of students, to modify curricula and to guide students into those pursuits most urgently needed;
(ii) increased surveillance through the Ministerial Scholarships Committee of the number and composition of foreign scholarships to ensure that the studies of students abroad meet the occupational needs of Kenya and that upon their return these students take positions where the need is most urgent;

(iii) an intensive programme of careers advice in the secondary schools to acquaint counsellors, students and potential employers with the occupational needs of the country and to guide students toward those having the highest priority;

(iv) the training of executive level employees on the job and in the classroom through the medium of such institutions as the Kenya Institute of Administration and the new Management Training and Advisory Centre;

(v) the expansion of management talent through the Small Industry Research and Training Centre at Nakuru, the Large Farmers School at Thomson's Falls, a new Large Farmers School and the extended advisory services of the Industrial and Commercial Development Corporation;

(vi) the modification of the curriculum in selected secondary schools and the expansion of specialized study facilities to meet the urgent needs for skilled office workers;

(vii) the up-grading of trade schools to secondary level, the introduction of new streams, establishment of secondary technical schools, and the co-ordination of the programme with apprenticeship training schemes and the Kenya Polytechnic Institute to meet the expected demand for skilled and semi-skilled craftsmen;

(viii) the expansion and closer co-ordination of apprenticeship training programmes in private industry and the provision of more extensive training schemes by the Government;

(ix) the intensification of programmes for training Kenya citizens as teachers and for recruiting others from abroad;

(x) the continuing search for means to accelerate the educational and training process at every level by using currently idle time and facilities more fully and by eliminating non-essential material from curricula.

50. The survey assumed differential wastage or replacement proportions over the period 1964-70, namely 18 per cent for Africans, 42 per cent for Asians and 48 per cent for Europeans. Identifications by citizenship were not possible. The results of the survey disclose that in some occupations the rate of Kenyanization can be accelerated over the coming years as qualified Kenya citizens become available in greater numbers. The substantial shortages envisaged in other occupations suggest that the rate of Kenyanization must be reduced below that assumed in the survey. Qualified Kenya
citizens may not be available in large enough numbers to support the assumed rate. Reductions in the rates of Kenyanization for selected occupations will, of course, reduce the shortfalls envisioned in the survey.

51. As these many efforts to relieve the shortages of high- and middle-level manpower proceed and residual shortages are disclosed, the principal remaining means for filling gaps will be technical assistance. Indeed, because of the long lag between requests for technically qualified people and the actual addition of such people to the work force in Kenya, it is necessary to anticipate the most urgent needs well in advance. An extensive survey of expected technical assistance requirements throughout the Kenya Government is currently under way. The needs revealed will be met by requesting technical assistance from abroad under contractual arrangements that will not impede Kenyanization. In this way neither economic development nor Kenyanization will be hampered by shortages of high-level manpower and the efforts made to alleviate them.

Foreign Exchange

52. Kenya's principal sources of foreign exchange are existing reserves and investments abroad, visible exports, tourism, transportation and handling services rendered to other countries, and the inflow of private and public capital. Foreign exchange is needed by Kenya mainly to purchase imports, to pay for services rendered by foreign countries, to pay interest and dividends on foreign capital, to repay loans from abroad, and to maintain reserves in support of the domestic money supply and as cover for seasonal and extraordinary movements of capital. Estimates of sources and uses of foreign exchange for the Plan period are presented in Section C of Chapter 5. The estimates disclose that a substantial return flow of private and public capital will be needed if Kenya is to meet its obligations with regard to investment income remitted abroad and to import those goods required for implementing the Development Plan. During the five-year period 1965 to 1970 the Central Government alone should receive about £75 million in foreign loans and aid to help financing the annual development budgets and land transfer and development in the former Scheduled Areas; public and semi-public enterprises and organizations should be able to obtain more than £30 million from foreign sources; and private foreign investments in enterprises to be built or expanded should at least reach £50 million, and in addition the private sector should be able to obtain considerable foreign credits. In total the gross inflow of capital from abroad should average about £35 million per year, and should probably be higher than the average in 1970. The net inflow will be much smaller, partly because of contractual repayments of foreign loans, public and private, and partly because of repatriation of foreign-owned capital. These figures suggest that it is likely that Kenya will be able to finance its current balance of payments deficit, fulfil its capital servicing obligations, and maintain its foreign exchange reserves over the period. The minimum reserves required in 1970 will, of course, be higher than
in 1965 because the volume of external transactions will itself be substantially larger as the result of successful economic development. It does not appear, however, on the basis of present evidence, that during the Plan period balance of payments considerations will require any direct control of imports or foreign exchange beyond the simple controls now being enforced and the adjustment of selected tariffs.

**Population Growth**

53. *Per capita* income is obtained by dividing the nation's total income by population. If the growth of Gross Domestic Product were given, a reduction in the growth of population would obviously raise income *per capita*, the same income being shared among fewer people. Reducing population growth may, for several reasons, raise the rate of growth of Gross Domestic Product, thus giving an even greater lift to *per capita* income. First, a larger share of private and public development expenditure can be devoted to immediately productive activities rather than to increased expenditures in some social sectors which yield a greatly delayed increase in output. Second, the rise in income *per capita* will mean better nutritional standards, reducing still further the need for some social services and increasing the productivity of the labour force. Third, higher *per capita* incomes should result in more domestic savings not only per person but in the aggregate and with a progressive tax system aggregate tax revenues should also increase. Thus the rate of growth of Gross Domestic Product will be higher because a larger share of a larger pool of development funds can be allocated to immediately productive activities employing a more efficient labour force. The net effect of those factors means that a moderate reduction in population growth could cause *per capita* income 25 or 30 years hence to be at least 50 per cent greater than what it would be with present population projections. Instead of being, say, £60 it might be £90 or £100.

54. Government's consideration of population growth has not concentrated solely or even primarily on economic growth effects. Indeed, the principal concern has been with the welfare of the individual and the family. Data from the recent demographic inquiry covering 10 per cent of the population suggest that on the average between seven and eight children are born to women reaching the age of 50. The death rate has also fallen substantially and is expected to fall further. The expectation of life at birth should reach 60 to 65 by the turn of the century as opposed to its present level of 40 to 45. With a lower birth rate a higher proportion of women could be given adequate maternity care ensuring better health for mothers and fewer deaths of children during the first year of life (now estimated at 15 per cent). Longer intervals between births would also promote maternal health and better nutrition and medical care for children, particularly during the early, crucial years of childhood. Fewer children, more widely spaced, would reduce the annual cost to the family of putting children through school and would mean that more children could be carried to higher levels of education. Pressures on housing, and water and food supplies would be diminished, permitting the family a
higher standard of living and the possibility of increasing its saving for the future. Evidence suggests that many mothers are aware of these factors and would prefer to space their children further apart.

55. The conjunction of family and national interests in this matter led the Government to invite an Advisory Group of experts to visit Kenya and make recommendations for a programme of family planning “through voluntary means and within religious prescriptions”. The programme would make information and supplies available free of charge through Government and private facilities to those families wishing to avail themselves of the opportunity. This is in keeping with the Government’s general policy objective of making medical services available free of charge to those wanting them.

56. The Advisory Group estimated on the basis of experience in other countries that with such a programme population would double over the next 35 years instead of the next 18 years, and families would average about four children per woman instead of the present number of nearly eight, still in excess of the two and a half to three children now characteristic of the Soviet Union, the United States and countries of Western Europe. The rate of population growth at the end of the century would be about 1.8 per cent as compared with the 3.9 per cent rate likely to prevail without the programme. Table 6 indicates the possible impact of the programme on total population, those of primary school age and the adult male labour force. Even data of this limited nature make it apparent that a population policy is necessary for planning purposes. Thus, with constant fertility and at current construction costs of £20 per student, it would cost over £100 million to build the additional facilities needed to educate everyone of primary school age at the end of the century. With diminished fertility the cost would be less than £45 million. The savings on primary school construction alone would be over £55 million, or about £1.6 million per annum, which could be used for additional economic development. Savings on recurrent expenditure at £10 per student would amount to over £5 million in the year 1980 alone and to nearly £30 million in the year 2000. In addition, savings would arise in the necessary construction and operation of secondary schools and teacher-training colleges. If the objective of universal primary education is to be realized in a reasonable period without seriously jeopardizing economic growth, the rapid rate of population growth must be checked. Similar considerations apply to the attainment of universal medical care and other social objectives.

57. The magnitude of the employment problem at the end of the century would also be substantially different. In the year 2000, the male labour force would number about 5.3 million in the one case and 7.0 million in the other. During the last five years of the century additional jobs would have to be created at the annual rate of 78,000 as compared with 230,000. Further, the proportion of the population dependent on the employed would be smaller so that everyone could enjoy a higher standard of living. Under the programme smaller families will be better fed, better educated, and in better
health permitting each to make a greater contribution to development and to participate more fully in the fruits of that contribution. At the same time substantial resources will be freed for economic development that otherwise would not be available. The Advisory Group projections shown in Table 6 imply a growth rate of 2.8 per cent during the present Plan period, but introduction of family planning measures will take time, and for planning purposes it has been assumed that the population will continue to grow by 3 per cent annually up to 1970.

Table 6—Projected Population, Primary School Age Population and Male Labour Force under Two Fertility Assumptions

<table>
<thead>
<tr>
<th>Year</th>
<th>Population in Thousands</th>
<th>Fertility unchanged</th>
<th>Fertility reduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>9,400</td>
<td>1,810</td>
<td>2,260</td>
</tr>
<tr>
<td>1970</td>
<td>10,900</td>
<td>2,110</td>
<td>2,600</td>
</tr>
<tr>
<td>1975</td>
<td>12,700</td>
<td>2,480</td>
<td>3,010</td>
</tr>
<tr>
<td>1980</td>
<td>15,000</td>
<td>2,960</td>
<td>3,520</td>
</tr>
<tr>
<td>1985</td>
<td>17,800</td>
<td>3,530</td>
<td>4,140</td>
</tr>
<tr>
<td>1990</td>
<td>21,100</td>
<td>4,220</td>
<td>4,900</td>
</tr>
<tr>
<td>1995</td>
<td>25,300</td>
<td>5,080</td>
<td>5,830</td>
</tr>
<tr>
<td>2000</td>
<td>30,600</td>
<td>6,180</td>
<td>6,980</td>
</tr>
</tbody>
</table>

Natural Resources and Conservation

58. If natural resources are measured by square miles of land and water within the borders of Kenya, the quantity of this important factor of production would have to be taken as given. If, however, natural resources are regarded as those known, accessible and of economic potential under present circumstances, there is much that can be done to expand the quantity and quality of natural resources available for economic development. Physical and land use planning is, of course, fundamental to this exercise.

59. First, knowledge of Kenya’s resources can be substantially increased. The mineral survey being conducted will identify many of the mineral resources in Kenya and those of possible commercial value will be investigated quickly with a view to exploiting them fully. Continuing research in the Ministry of Agriculture is increasing rapidly knowledge of Kenya’s soil and climatic conditions and of the potential of Kenya’s varied soil structure for different types of crops. A recently completed survey of coastal fishing resources is now being pursued with a view to proving the extent of the resources and the potential scale of commercial exploitation now just begun. Studies are continuing and will be expanded through the Ministry of Natural Resources, Wildlife and Tourism on the numbers, habits and ecology of
Kenya’s wildlife. Water resources are being identified and research on techniques for conserving them for present and future needs will indicate how these resources can be used most efficiently for development. Studies of the waters of Lake Victoria and the Upper Nile require, of course, the co-operation of a number of countries.

60. The accessibility of resources is an important factor in economic development. Arable land without transport and marketing facilities cannot contribute to development except through subsistence farming. The substantial road and land consolidation programmes in this Plan are expected to bring many acres of such land into more production and commercial agriculture. Similarly the establishment of new National Parks and Game Reserves and the construction of tourist roads will increase the accessibility and economic potential of wildlife. In a somewhat different way land reclamation projects and irrigation schemes expand the amount of natural resources contributing to development. Thus bush clearance, the eradication of the tsetse fly and the construction of irrigation systems will result in a considerable increase in usable land.

61. The economic potential of land in its given setting depends very much on processes of conservation and physical and land use planning. Much land in Kenya is now being used in such a way as to diminish considerably if not in fact destroy its economic potential for future generations. Indiscriminate burning, stripping land of bush and trees and the use of outmoded farming techniques are turning many fertile acres into desert, accelerating soil erosion, and dissipating needed water supplies. The formulation of a firm policy with regard to the conservation of land and natural resources is a joint responsibility of the Ministries of Agriculture and Animal Husbandry, Lands and Settlement, and Natural Resources, Wildlife and Tourism. The planned expansion of the staff and functions of the Town Planning Department to cover physical and land use planning on a regional and national basis is a necessary and long-needed step in the right direction. The enlarged Department will also be concerned with the best uses of land planning, including the future needs of land for National Parks and Game Reserves, mineral development, agriculture and livestock uses, forests and water, and rural as well as urban development.

Social Change

62. The attitudes of the people towards economic development are in general a positive factor promoting development. The acceptance and enthusiasm accorded programmes already under way is ample evidence of this. Thus, the demand for land consolidation has assumed tremendous proportions since independence and the willingness to accept the fairly rigid but necessary discipline of irrigation schemes is growing rapidly. Requests for assistance from agricultural extension officers are also increasing and the enthusiastic initiation of self-help projects in most areas of the country
is a boon to development. The desire for education and the growing participation in co-operatives are further signs of a generally favourable attitude toward development.

63. Nevertheless, there is in certain areas of the country some resistance to change that can only retard development. The nomadic way of life, the high regard for numbers of livestock rather than its quality, and a disdain for the true economic value of land are cases in point. Many projects that have high economic priority must be postponed because the people who must be involved do not wish to modify their social attitudes and customs. The unevenness of development throughout the country can often be explained by this simple fact.

64. An important role of social planning is to determine the attitudes of people and to discover means for altering these when they are unfavourable to development. A sample attitude survey was completed in the middle of 1965 and is now being analysed. It will provide a baseline against which social change can be estimated through later surveys. Concurrently with social research several positive steps are being taken to draw people into development. The whole of the community development programme is designed for this purpose and the promotion of the co-operative form of organization is intended to increase the participation of people in development. Further, the reorganization of Provincial and District Teams has introduced a strong consciousness of development into the provincial administration that should be transmitted to the people. The reorganization of the trade union structure in Kenya is intended to achieve the efficient, well-disciplined work force so necessary in a modern economy and to give the workers the opportunity to participate directly in development as well. Social planning is still in its infancy in Kenya but the expansion envisaged in this Plan should assist substantially in removing the resistance to development and movement towards a modern economy which continues to characterize some areas in Kenya.
CHAPTER 4—STRATEGY FOR ECONOMIC DEVELOPMENT

Kenya’s strategy for development is simple and straightforward. It is to involve the people of Kenya at every step and to an increasing extent in the economic development of the nation. Viewed in this light, a strategy for economic development cannot be judged solely in terms of production, per capita incomes, balance of payments and the level of prices, but must also be assessed in terms of the participation of citizens in economic activity, the improvement of their talents and abilities, and the equitable distribution of the gains from growth. This approach to development permeates Kenya’s Development Plan.

2. This strategy in development planning emphasizes a social approach to economic development. Although development and structural change go together, exclusive emphasis on structural change would require that available resources be devoted almost entirely to creating new and expanding existing production units using modern technology. It can be argued that rapid industrialization and modernization of the techniques of production would provide a new and modern setting to which the skills and ability of the people must adapt. But if large structural shifts of this sort are to be effected quickly in Kenya, large amounts of capital would be needed from abroad because structural change is essentially a capital intensive operation. Large amounts of specialized manpower would also have to be imported because structural change means the establishment of large, complex forms of economic organization. Indeed, the approach could mean the establishment of isolated enclaves of economic activity that are, at least initially, almost completely divorced from the people of the country itself. Such isolated pockets of economic activity might lead to substantial increases in output with, however, only minimal participation by the people of the country in the operation, management, and ownership of this activity. Indeed, the assimilation of the people in the development process might be a slow and costly exercise, and the dual economy which development should eradicate might simply be perpetuated, though perhaps in a different form.

3. While the dangers noted above need not necessarily arise even with an emphasis on structural approach to economic development, the policy of adopting social change and improvement as the primary criterion for economic development will guarantee that these dangers do not arise in Kenya. Wherever possible, every project incorporated in this Development Plan has been critically examined to ensure that it will involve people in development to the fullest possible extent and not assign to them the role of mere spectators. The direct and indirect effects of these projects will—

(i) enhance the skills and experience of the people;

(ii) ensure growing participation in management, technical and professional tasks;
(iii) provide increasing opportunities for domestic participation in the ownership of resources; and

(iv) spread development throughout the economy as economic opportunities permit.

4. The concern with social change and improvement does not imply, however, any disregard for the economic criteria that projects must satisfy for inclusion in the Plan. If projects do not offer benefits in excess of their costs, they cannot contribute to economic development and it is unlikely that they would make a substantial contribution to social change and improvement. Involvement of the people should not necessarily be taken to mean mere transfer of existing assets from ownership by one race to ownership by another, or from outsiders to Kenya citizens—although such transfer may be necessary in some cases and is already being done, for example, in settling Africans in former Scheduled Areas. Involvement means that new development projects, the expansion of existing economic activity, and the generation of new economic opportunities have been designed to achieve the fullest possible participation by the people of Kenya. This is Kenyanization and it is this process that the present Development Plan will facilitate.

Means for Promoting Kenyanization

5. The means for promoting Kenyanization are detailed in other sections of the Development Plan. They are summarized here so that the general nature of the programme can be seen in the context of the general strategy for economic development. The purpose of the programme is to raise the living standards and welfare of the people by increasing their skills, education, and experience and increasing and spreading the domestic ownership of productive resources. To achieve this purpose quickly and effectively new methods of organizing production and distributing ownership will be needed, training and education facilities must be modified and expanded, new development opportunities must be created in which the newly acquired skills can be utilized, knowledge from abroad must be adapted to the needs and circumstances of Kenya, and productivity, discipline and thrift must become dominant social characteristics. Each of these is provided for in the Development Plan.

Forms of Productive Organization

6. The forms of organization of production that are given most emphasis in this Plan are based largely on constructive traditions of the people of Kenya. They include an increasing role for the Government, and expansion of the co-operative form of organization, the encouragement and active promotion of self-help schemes, and a respect for private ownership coupled with a growing domestic share in that ownership.
Role of the Government

7. In the future the Government will play a much more active role than it has in the past in identifying development opportunities, whether for itself or for private enterprise. To conserve its own resources for other necessary development activity, the Government will encourage private enterprise to undertake those developments for which it is best suited. If, however, private enterprise is hesitant or slow in taking up these opportunities the Government will initiate the more important projects on its own account. The development of sugar factories, the pulp and paper mill, and off-shore fisheries are examples of opportunities identified and being promoted by the Government. Certain state enterprises will also be established or expanded during the Plan period. These include the National Trading Corporation, the proposed Co-operative and Commercial Banks and the proposed National Construction Company. In addition the Government will assist in the financing of home ownership; participate in many large-scale investments through the Development Finance Company of Kenya, the Kenya Tourist Development Corporation and the Agricultural Development Corporation; make millions of pounds available in the form of credit to agriculture, commerce and industry through the Land Bank, the Agricultural Finance Corporation, and the Industrial and Commercial Development Corporation; start five industrial estates and several shopping and marketing centres through the Industrial and Commercial Development Corporation; participate in electric power development; and provide substantial capital for the development of co-operatives and the promotion of self-help schemes.

Co-operatives

8. The promotion of co-operatives is a major aim of the Government in this Plan. Many people are already abroad studying the complexities involved in organizing and operating co-operatives and a Co-operative College will soon be established in Kenya. The Co-operative Bank will assist substantially in financing new co-operatives and in providing working capital to existing co-operatives. It is expected, however, that most co-operatives will be self-financing, and indeed, will provide a means for channelling the savings of many small producers into other important development activities. First priority in the establishment of co-operatives is assigned to agricultural production and marketing co-operatives. The extension of co-operative activity into agricultural processing industries will also be promoted, and consumer, industrial and fisheries co-operatives will be developed as needs and opportunities arise.

Self-Help

9. Self-help schemes are another important means for channelling productive resources into development activity. These schemes have not yet been fully integrated into the Plan but self-help efforts are being co-ordinated to ensure that their requirements for capital, recurrent expenditures and manpower
are consistent with and complement other development activities. The present enthusiasm for self-help schemes is being actively promoted and more supplementary resources are being provided to enhance the efforts of the people.

**Encouragement of the Private Sector**

10. The large amounts of money provided in the Plan as credit to the private sector are indicative of public policy in this regard. The people's right of private ownership will be fully respected by the Government so long as privately owned assets make a full and useful contribution to the development of the country. Much of Government credit will go to the development of small farms and enterprises with a view to multiplying the number of successful undertakings and providing increasing experience to larger numbers of people in the successful management and operation of such enterprises. To achieve increasing domestic participation in the ownership of large corporations, these will be encouraged to make shares available to workers and the general public. Savings programmes will be designed for low and middle income people to provide them with the means to participate in the ownership of development activity. The Workers' Investment Trust will permit workers to share in ownership and to initiate important undertakings.

**Education and Training**

11. Training, education and apprenticeship opportunities are considerably expanded in the Plan. The Government fully recognizes that without such programmes the people of Kenya would not be in a position to take advantage of the many opportunities that will arise during the coming years. The formal educational system is being substantially expanded particularly at the secondary level and opportunities both at University College, Nairobi, and abroad will more than double during the Plan period. In addition the curriculum in the secondary schools is under constant study to ensure that what is being taught fosters the development of good citizenship within our own traditions and matches the needs for specialized training revealed by the Manpower Survey. Many specific needs of the economy are being provided for through the expansion of trade and secondary schools and the Kenya Polytechnic Institute. In addition the Ministry of Labour is modifying and expanding its own training and apprenticeship programmes and will ensure that all important industries provide training and apprenticeship programmes as well as managerial training. Special training programmes for important occupational needs such as nurses, pharmacists, secretaries and stenographers will also be provided. Others include the Management Training Centre at Nakuru, the Large-scale Farmers' Training Centre at Thomson's Falls and a second one in Western Kenya, a Co-operative College, and a hotel management training scheme. The rapid expansion of teacher training facilities will ensure that the expanded educational programme can be carried out.
Adapting Technological and Economic Knowledge

12. One of the most difficult problems facing Kenya in her early stages of development is the need to adapt the technological and economic knowledge available abroad to the needs and circumstances of Kenya. The agricultural techniques successful in other countries must nearly always be modified if they are to be equally successful in Kenya. Soil and rainfall conditions are different; the organization of farms and the conditions of transport are in many ways unique; the infrastructure needed to make many modern techniques successful is less advanced in Kenya; and the need to train people in the use of modern techniques is often a time-consuming task. The need to adapt modern industrial technology to Kenya's needs is equally great though perhaps less apparent. The training and working habits of the labour force are different and the prices of labour and capital do not coincide with the prices paid in countries for which the modern techniques were devised. Finally, even in the field of economic policy, Kenya cannot borrow without adaptation. Sales taxes, an important revenue device in many advanced countries, are difficult to administer and collect in Kenya; investment incentives appropriate to advanced countries may not be appropriate in Kenya; Kenya's heavy dependence on international trade reduces the effectiveness of fiscal policy on business fluctuations at home; while Kenya's access to substantial amounts of foreign aid gives development planning in Kenya a flexibility which it could not have otherwise. If Kenya citizens are to participate fully in development, knowledge borrowed from abroad must be carefully scrutinized before its application in Kenya.

Social Characteristics

13. Finally, the development of a modern economy will require changes in those traditions and patterns of behaviour which, though appropriate to the traditional economy, are not conducive to development in the modern sense. Development of the monetary economy will in itself generate opportunities that were not available in the traditional subsistence economy. These opportunities will in turn induce changes in behaviour patterns and incentives by making available to people a range of consumer goods that were not available to them before and by opening up markets in which they can sell their increased production. The modern economy also puts a premium on productivity, a disciplined labour force, and saving habits—characteristics fundamental to rapid development. The recent reorganization of the labour movement in Kenya is designed to give all three of these characteristics the prominence that they deserve.

14. The various approaches discussed above are all designed to ensure that the people of Kenya will have every opportunity to participate in the development of the nation. The programmes include—

(i) providing formal education and training for Kenya citizens to equip them for the efficient exercise of entrepreneurial, technical, professional and farm management functions;
(ii) supplementing these formal educational opportunities with training and apprenticeship programmes in private industry at all levels and in all industries;

(iii) making capital available to citizens through Government organizations;

(iv) following the provision of capital with extension and advisory services whether in agriculture, commerce or industry;

(v) helping traders and businessmen directly through the Industrial and Commercial Development Corporation and the small traders’ loan scheme;

(vi) providing new markets and transport facilities for produce and consumer goods so that more of the subsistence sector can be made an effective part of the market economy;

(vii) stimulating large-scale investment through the Development Finance Company of Kenya, the Kenya Tourist Development Corporation, and the Agricultural Development Corporation, organizations in which the Government has a direct interest;

(viii) encouraging foreign-owned business firms in Kenya to make available to workers and the public an increasing number of shares in the business, and supplementing these efforts by making shares owned by Government organizations available to Kenya citizens;

(ix) providing for ownership of an increasing number of agricultural processing industries, such as tea factories, cotton ginneries and sugar mills, by the farmers who furnish the primary products, whether through the co-operatives or as individuals;

(x) promoting the Workers’ Investment Trust to give workers an ownership interest in various enterprises;

(xi) developing new financial organizations such as the Central Bank, the Kenya National Insurance Company and the proposed Co-operative and Commercial Banks so that Kenya citizens can participate in the financial development of the country;

(xii) promoting producer, marketing and consumer co-operatives and training people to run them so that larger-scale opportunities are open to citizens with limited capital;

(xiii) promoting home ownership through tenant-purchase schemes, self-help housing projects, co-operative housing associations, Finance Mortgage Company of Kenya and other mortgage finance companies;

(xiv) participating with private capital in many ventures in agriculture, industry and in exploitation of natural resources;
(xv) making direct investments in various sectors through Government organizations;

(xvi) setting up certain state enterprises such as the National Trading Corporation, the National Construction Company, and selected national farms; and

(xvii) ensuring that development is reasonably spread throughout the districts of Kenya so that all can share in the fruits of development.

15. The opportunities to share in the rapidly growing development opportunities in Kenya will naturally accrue in substantially larger numbers to Africans. This is because Africans represent the majority of the population and, further, have suffered the brunt of the racial imbalances inherited from the past. The present imbalances are the result of two factors. First, many of the economic opportunities that have existed in Kenya in the past have been denied to Africans. Second, many Africans have lacked education, experience, and resources, to take full advantage of those limited opportunities open to them. In order to achieve increased African participation in future development, the Government will ensure that economic opportunities are open to Africans and that Africans have the education, training and resources to develop those opportunities fully and successfully. The reasons for stimulating African participation extend beyond equity and justice. Such a policy will guarantee that the skills, education and training of the nation’s limited reservoir of high level manpower are utilized fully. Furthermore, by mobilizing the inherent talents and abilities of the African population the future scope for development in Kenya will be widened tremendously. Indeed, without greater African participation to broaden the base of the economy, little significant growth can take place.

Structure of Production

16. The emphasis in this Plan on social change and domestic participation in development is reflected in the planned structure of production. During the Plan period the Government will emphasize the development of agriculture and in particular the expansion of output, productivity and employment on small farms. The stimulation of small-holder farming will require an immediate expansion in marketing facilities both for the sale of farm produce and for the purchase of farm inputs, capital items and consumer goods. Numerous small industries, frequently regional in character, will be required to serve the needs of farmers. Finally, the development of agriculture will make possible the concurrent growth of agricultural processing industries and these, too, will often be regional in character. Some agricultural activities must be conducted on a large-scale basis in order to be competitive. The co-operative form of organization will be especially encouraged in these cases. Large-scale industries will also be encouraged where economies of scale are apparent and the extent of the market demands. Industries processing agricultural commodities or other primary products such as forest products, fish and mineral resources are given high priority. Tourism will also be
encouraged by every device available to Government in order to maximize
the net contribution of this industry to the foreign exchange earnings of the
country. These activities and the many efforts of Government to increase the
supply of basic and social services will naturally stimulate the volume of
construction and the provision of services.

Development Priorities Between Industry and Agriculture

17. It is frequently argued that there is a conflict between development
of agriculture and development of industry as these two main sectors of
economy will have to compete for scarce development resources. This is not
necessarily so although, of course, excessive emphasis on one of the two
sectors may lead to starvation of the other. But in reality agricultural and
industrial development are complementary. Still there remains the question
of time phasing—under certain circumstances it may be advisable to give
industrial development priority, under others, the emphasis must be put on
agriculture.

18. In most low-income countries there is underemployment in agriculture,
that is, the farmers and farm workers are not fully occupied throughout
most of the year. In some cases there may also exist disguised unemployment
—in the sense that reduction in the number of people working on land would
not reduce total agricultural output even with no change in methods of
production. Against this background it is frequently argued that this surplus
labour should be moved into industries and thereby contribute to the
national income. It is assumed that farm output will not fall as a result
of such a move from farming to manufacturing. In the extreme, the argument
runs that the workers will not eat more than before so that the industrial
output comes as a net addition to the national resources. This type of
argument in favour of initial emphasis on industrialization is often highly
questionable, partly because in many cases migration of labour from agricul­
ture will lead to a fall in farm output, and partly because the argument
implicitly excludes the possibility that efforts to improve agriculture could
lead to an even larger addition to national income than a move from
agriculture to industry. Moreover, it is easy to exaggerate the scope for
increased employment opportunities in manufacturing in a developing
country. In most developing countries there are social pressures to raise wages
which seem to be accompanied by a growing tendency to adopt the most
modern technology. The two taken together frequently mean that output
grows rapidly in industry without comparable increase in the number of
people employed. This appears to have been true in the decade of the fifties
in Uganda and Venezuela, and also in Kenya between 1954 and 1964. The
large discrepancy between growth in industrial output and growth in
industrial employment implies that if industry is to provide employment
opportunities for people leaving agriculture, industrial output must grow at
an extremely high rate. Finally, rapid industrialization without corresponding
efforts to transform traditional agriculture may frequently lead to a creation
of a dual economy or strengthen this pattern where it already exists. The
main characteristic of a dual economy is a modern sector with comparatively high living standards for those in it, which exists isolated from the surrounding countryside in which poverty persists and which only acts as a supplier of unskilled labour to the towns.

19. Kenya at the date of its independence was a typical example of a dual economy. This situation was even more apparent because modern large-scale farming, manufacturing, other modern activities and most skilled and well-paid positions were in the hands of non-Africans. Africanization of the modern sector alone is not an answer to this problem. It only means that a minority of Africans would become privileged members of the modern sector in the dual economy. To promote national unity and realize the targets of African Socialism it is imperative to break the barriers between modern and traditional sectors and thus spread the benefits of development to the rural areas and enlist the participation of all people in the development process. This argument alone is sufficient to justify a strong emphasis on agricultural development during this Plan period. Such a strategy can be followed without impeding industrial growth. Kenya has already a fairly well-developed range of manufacturing industries and the urban infra-structure—transport and communications, power supply, urban services, etc.—is fairly well developed and provides a healthy basis for further industrial expansion. The expected increases in national income in general and rural incomes in particular, form a strong stimulus for further industrialization and will open many investment opportunities. Growth in agriculture will establish the basis for a much broader development throughout the economy. It will also serve as a brake on the flow of people into towns until urban job opportunities become ample, and the urban areas have the means to accommodate a rapidly increasing population.

20. The emphasis on agriculture does not imply that the Government neglects the need to develop other sectors of the economy. Indeed, in this Plan period it is planned to do more to promote industrialization than in all past years. But the policies to be followed will be based upon a different and valid concept of surplus labour. Such a concept of surplus labour can be obtained by comparing labour-output ratios in developing countries with those of more advanced countries having efficient marketing and transportation systems and a large amount of capital per worker. What can frequently be observed in developing countries is a low level of output per worker which partly can be traced back to a high ratio of leisure to work. This observation is usually valid for both over- and under-populated areas. In this context over- and under-populated refer to ratios of population to land. In over-populated areas the high ratio of leisure to work can be explained by the division among a large number of workers of the total hours of work that can be used efficiently with limited land and capital. In the under-populated areas this observation may simply indicate that a relatively high level of subsistence can be obtained with few hours of work. In the latter case, the use of methods of production that are wasteful by modern standards can be observed.
Apparently idle land and an obvious disregard for conservation may simply indicate the adoption of methods of production that while wasteful by modern standards are efficient in the circumstances of the people involved. Some might infer that people in these circumstances are lazy, uninformed or poorly organized. A more accurate interpretation would be that people are behaving rationally given their social values and options and opportunities available to them. The essential point is that people in both over- and under-populated areas have too little capital with which to work. Over-population with respect to capital is typical of all developing countries. Kenya is no exception.

21. Arable acres per person, even when differences in land potential have been taken into account, vary considerably from one country to another and indeed, within a country. Systems of land tenure and traditional and legal restrictions on the movement of population tend to preserve differences that now exist. While efforts must be made to eliminate such restraints, it is also necessary in planning development to take into account the degree of over- or under-population with respect to arable land. While capital is needed in both situations in order to increase production, the form it should take will differ. Intensive irrigation schemes that make sense in over-populated areas may represent a waste of resources in under-populated areas.

22. In over-populated areas, the modification of methods of production must be given highest priority. Irrigation schemes, changes in the organization of production, fertilizers, insect control, and the provision of hybrid seed and better breeds of livestock, are all examples, normally involving capital expenditures, of methods by which production can be increased. It is also usual in over-populated areas for the level of subsistence to be quite low. Thus the incentive to increase production when new methods make it possible already exists. Further, as much of the increase in output will be consumed locally, the need to supply outlets and transportation for products or markets for consumer goods may not be a pressing one. Means for supplying the new inputs must, however, be found and if these inputs are to be paid for, markets for some of the increased production must also be created. The time sequence of development priorities in over-populated areas can be summarized as follows—

(i) modification of the means of production and the transport and distribution of new inputs;

(ii) the provision of markets and transport facilities for increased output;

(iii) the provision of markets, transport and communication facilities to make possible more diversified consumption and savings out of increased incomes.

The generation of employment opportunities elsewhere and the promotion of labour mobility must also be given high priority because the modernization of production methods in one area may generate a labour surplus which can be absorbed in other areas of the country.
23. In under-populated areas quite a different order of priorities is needed. If a relatively high level of subsistence is being earned with a relatively small input of labour, the provision of new capital and a more efficient organization of production may lead only to a small increase in the level of subsistence accompanied by a substantial decrease in the number of hours worked. The increased satisfaction to be gained from further consumption of a narrow range of subsistence commodities may not be very great as compared with the additional satisfaction to be obtained from more leisure. Under such circumstances, a high priority must be attached to the provision of adequate incentives for increased production, whether with existing or new methods. The obvious way to increase these incentives is to make available to the people a much wider array of agricultural and manufactured goods and saving instruments. This requires the possibility of exchanging increased subsistence output for other consumer goods and savings. The possibility of exchange requires that increased outlets for produce be provided as well as means by which the incomes so generated can be used to purchase consumer goods and to acquire savings. The time sequence of development priorities is in this case, reversed, namely—

(i) the provision of market and transport and communication facilities as a means of supplying consumption and saving outlets for higher incomes if earned;

(ii) the provision of markets and transportation for the sale of the increased agricultural output which could undoubtedly be produced with more effort even with existing methods of production; and

(iii) the modification of the means of production and the provision of markets to supply the new inputs required.

24. The allocation of capital between industry and agriculture depends in these circumstances on the relationship between increased benefits and increased costs for each project where external benefits and costs are considered and among these the participation of people in development is accorded a high priority. This does not suggest any a priori reason for preferring agriculture to industry, but it does suggest that there is no a priori reason, such as a zero marginal product of labour in agriculture, for preferring a substantial structural shift in favour of industry. Industrial development may, inter alia, be needed to help absorb a labour surplus in overpopulated agricultural areas, which was not present initially, but which was generated through the progress in agriculture itself. The critical question is: how can the people of the country be most quickly and intimately involved in development. The “sink or swim” approach would divorce people from their established customs, traditions, and habits of behaviour and create for them completely new situations in which their very survival might depend upon the speed of their adaptation. An alternative approach, favoured by the Kenya Government, is to start with people in the circumstances in which they now live and with the traditions and knowledge to which they are already
accustomed and build on this knowledge an increasingly more modern economy. It is for this reason that the principal emphasis in planning development in Kenya is placed on the development and modernization of agriculture on which most of the people depend for their livelihood. Substantial efforts will also be made to develop small industry and wholesale and retail trade establishments as a means of introducing people into these kinds of occupations and entrepreneurial activities. Finally, more formal training and educational schemes will be required in order to prepare people for the complexities of research and management in large-scale enterprises, including modern co-operatives.

Agriculture

25. In agriculture most of the planned development expenditures are designed to aid the small farmer. Programmes that fit this description include land registration and consolidation, irrigation, land reclamation, the smallholder credit programme, the range management programme and much of the programme in the former Scheduled Areas. The expansion of extension services and developments in coffee, tea, sugar, cotton, pineapple and pyrethrum are also designed to accelerate production from small farms. The organization of much of this development will involve co-operatives. Credit will also be provided for the transfer and development of selected larger farms and some European-owned land coming up for sale will be purchased for the development of National Farms, frequently in co-operation with private investment. Finally, a substantial effort will be made to expand existing agricultural processing industries and to establish new ones. Many of these developments such as tea factories, cotton ginneries, sugar factories and the proposed rice mill at Mwea will provide for the increasing purchase of ownership shares by those who supply inputs to the factories.

26. In much the same way that agriculture will supply a basis on which to build industry, the development of other natural resources will lead to similar results. The present Plan, therefore, puts substantial emphasis on the development of forestry, fisheries, mineral resources, and the conservation of game.

Trade

27. Much of the needed expansion in wholesale and retail trade will take place naturally through the private sector in response to growing demand. The principal efforts of Government in this area will be to ensure that the growth of economic activity in urban areas is shared equitably with the African population, which has to date been effectively excluded from this type of economic activity. Shopping centres will be constructed in many urban areas to replace the temporary marketing arrangements that have sprung up in many areas of Nairobi, Mombasa and other towns. It will also be necessary to ensure that markets are available for providing the necessary inputs into agriculture if the land registration and smallholder credit
programmes are to be effective. In addition, markets and transportation will have to be provided for the sale of the increased output from these farms and shopping centres in the rural areas will be needed to supply necessary consumer goods. The traders’ loan programme will also assist those in the private sector to establish important marketing outlets. Hotels, motels, lodges and restaurants will be needed in increasing numbers as the flow of tourists increases and as business activity grows throughout the country.

**Industry**

28. Substantial industrial development should take place as expansion proceeds in agriculture, fisheries, forestry, mineral resources and tourism. Some industries will be needed to service the enlarged activities in these sectors while other industries will be developed to process the larger outputs. The pulp and paper mill planned for Broderick Falls, sugar and tea factories, cotton ginneries, fruit and vegetable canneries, the processing of inland and coastal fish and the larger programme to develop deep-sea fishing are examples of the kind of industrial expansion that will be required. It is expected also that urban population will continue growing at a more rapid rate than the total population so that additional industries will be needed to produce the new consumer goods required not only by the expanding incomes of the farming population, but also rapidly growing urban centres. The Government has undertaken a survey of industrial opportunities in Kenya and is prepared to discuss these with interested business firms. There are also substantial export opportunities and all firms are encouraged to take an active interest in developing such markets. The Export Promotion Council will undertake a substantial campaign in support of the efforts of private firms to develop export markets.

**Basic Services and Construction**

29. The various activities described so far will depend, in part at least, on the substantial expansion of basic services and the construction industry. Thus roads, airports, railways and harbours, posts and telecommunications, power, information and broadcasting and the expansion of police and prisons must be undertaken on a scale consistent with planned expansion in these other areas. Investments in these and other fields will lead to a substantial expansion of the activities in the construction industry. The Government, of course, will undertake a major responsibility for these developments.

**Responsibilities of Developed Countries**

30. Much of the planned expansion in the development and processing of primary products depends upon world conditions some of which can be predicted within reasonable probability, and others which can only be modified favourably through political action in conjunction with other
countries and at the conference table. Demand for many food and other primary products tends to grow at a rate slower than the rate of growth in total income throughout the world. The demand for other products, such as vegetables, bananas, pineapples, and meat preparations tends to grow more rapidly than income. Obviously the rate of growth in the supply of the latter type of commodity can be greater without depressing prices. Every country producing primary products must take these kinds of factors into consideration in determining the rates at which outputs of various goods can be increased.

31. There has, however, been a general tendency in recent years for the terms of trade to move unfavourably for producers of primary products. No one country can regulate the prices of these products. It requires, instead, the combined effort of all countries buying and selling them. Commodity agreements among buyers and sellers, such as that recently negotiated for coffee, are one means of attempting to prevent wide price fluctuations and the tendency for prices to decline over time. Commodity agreements by themselves, however, are not sufficient to meet the needs of most developing countries. It is somewhat ironic that many of these primary commodities are the basic necessities of life throughout the world and yet the people who produce them must often live in poverty and run the risk of famine when weather conditions are unfavourable. This is basically an international problem and should be taken up by an appropriate international organization, namely the United Nations. If the problem were seriously considered at this level, it should be possible to find a means for stabilizing the flow of basic primary commodities to those who need them and at the same time to ensure more stable prices for those who produce them.

32. Many of the advanced countries have low or nil tariffs with respect to the import of many raw materials and some foods. But the existence of relatively high tariffs on processed products makes it difficult indeed for developing countries to grow through the expansion of processing industries even though processing is frequently more efficiently carried out in the producing country. Moreover, in many industrialized countries there are fiscal charges on many tropical foods; and these and the various devices now in force in these countries for protecting domestic agriculture constitute a big barrier to increased imports from the developing countries. Kenya will continue to support all efforts designed to reduce these tariffs, fiscal charges and other barriers against imports from primary producers.

**Employment, Incentives and Technology**

33. The twin problems of unemployment and underemployment are of major concern to the Kenya Government. It has already been noted that the appropriate approach to underemployment in agriculture is to provide more capital and better organization, and to create adequate transport and marketing facilities for agricultural inputs, agricultural produce, consumer
goods and savings instruments. If this approach is successful, the self-employed in agriculture, particularly in the so-called underpopulated areas, should increase both output and hours of work. Whether or not employment opportunities in agriculture will in fact increase depends upon the ways in which capital is applied in agriculture. The creation of additional employment opportunities in agriculture will depend essentially on two things—

(i) a bias when introducing capital into agriculture in favour of labour using techniques and (ii) a wage policy designed to increase employment in rural agricultural areas. To ensure that the employment opportunities created in agriculture do not go to waste, the Government will strengthen its back-to-the-land movement in four ways—

(i) the attractiveness of living conditions in the rural areas will be increased in large part through the generation of more income in agriculture by the development programmes already reviewed but also through Government efforts to create markets and transport facilities, to build schools and health centres, to assist self-help housing schemes and to establish water and power supplies;

(ii) minimum and average wages in rural areas will not be allowed to get out of line with those in urban areas, though the higher cost of living in urban areas will be kept in mind in establishing minimum wages there;

(iii) movement of people from overpopulated to underpopulated areas will be encouraged and facilitated; and

(iv) industries will be encouraged to establish themselves in the rural areas.

34. There are in Kenya areas of unoccupied and unused land that can be made economic by various reclamation and irrigation programmes. The rapid development of such land will increase employment opportunities, particularly if labour-intensive crops are encouraged in that development. Some additional employment opportunities may also be created through the more intensive use of fertile land now occupied but under-utilized. In the long run, however, agricultural employment is likely to follow the downward trend of other countries. Once land approaches complete utilization, further increases in output are likely to be generated through increases in productivity which are at the same time labour-saving. For the duration of this Plan, however, agricultural development will be the principal means for creating employment opportunities and raising incomes in Kenya.

35. Growing numbers of employment opportunities should also be created in trade and the provision of services. Typically, increases in productivity in these areas occur more slowly than in industry or agriculture. However, as the demand for these services should grow at a rate close to that of monetary product as a whole, these sectors should become increasingly important in providing employment.
36. As agricultural and rural areas are made more attractive as places to live in, the drift into towns will be reduced. It is expected, however, that population in the urban areas will continue to grow at nearly 6 per cent per annum. The generation of employment opportunities in the urban areas through the expansion of industry, trade, services and Government activities must therefore keep pace. The critical problem here is that of industrial employment. In attacking this problem an apparent dilemma must be faced. The terms on which industry can develop in Kenya must be competitive with those available in other countries. If they are not, foreign capital will flow in other directions and profits generated in Kenya will tend to be invested outside of the country. As things now stand the company tax and investment allowances in Kenya make Kenya an attractive place for foreign capital and investment of profits. In addition, approved industries are guaranteed the right to repatriate capital and dividends. The Kenya Government is determined to maintain the attractiveness of investment in Kenya but at the same time is concerned that between 1954 and 1964 the value added in manufacturing grew at the rate of 6·7 per cent per annum while over the same period employment in manufacturing showed no increase at all. While price increases can explain some of this differential, much of it is undoubtedly attributable to the growing substitution of capital for labour. The effects of the substitution of capital for labour in any one year are undoubtedly small but when these effects are cumulated over a ten-year period it could mean that something like 25 per cent fewer people are employed in manufacturing than might otherwise have been the case. Similarly, successful efforts to reverse the trend would appear to have a small impact in any particular year but over a longer period of time the increase in employment could be substantial indeed.

37. The substitution of capital for labour in recent years seems to have stemmed from three principal causes. First, when business firms accustomed to operating in advanced countries establish new industries in Kenya, there is the natural tendency to use in Kenya the same techniques of production that have succeeded in the advanced country. These techniques have, however, been tailored to the circumstances and needs that exist in advanced countries. They frequently require a high ratio of skilled to unskilled labour and a high ratio of capital to labour. The techniques have been perfected under circumstances involving a plentiful supply of skilled labour, shortages of unskilled labour, an abundance of capital, and high wage rates coupled with low capital costs. Business firms interested in developing new industries in Kenya are encouraged to examine carefully the circumstances that exist here to ensure that the methods of production adopted in Kenya are those which are most profitable under local conditions. Generally the conditions most profitable in Kenya as compared with those used in industrialized countries will involve the use of more labour in conjunction with capital.

38. Second, the cost of labour in Kenya while low in monetary terms when compared to costs in industrialized countries may nevertheless be high
relative to the training and experience of the workers. Four factors have contributed to the relatively high cost of labour—

(i) the pressure of trade unions to achieve higher wages for their members than are warranted by increases in productivity;
(ii) the social pressure for higher minimum wages;
(iii) the relatively high cost of training workers; and
(iv) the high turnover of employees.

The relatively high cost of labour tends to reinforce the natural tendency of business firms to utilize techniques of production that are relatively capital intensive and adapted to circumstances existing in industrialized countries. This force is even stronger if business firms anticipate that future increases in wage costs will outstrip increases in productivity.

39. The third factor stimulating the substitution of capital for labour in industry is the system of investment allowances that has been established for tax purposes. While these allowances attract capital to Kenya, they also stimulate the substitution of capital for labour by reducing the cost of capital relative to labour.

40. A solution to this problem has not yet been found but investigation is proceeding with a view to stimulating employment as well as output in the manufacturing sector. The general outlines of such a policy must maintain the total value of incentives now available to business firms, while at the same time modifying the components of the incentive package in such a way as to make it profitable for firms to employ more labour in their expansion than they would under present circumstances.

41. It is recognized, of course, that the establishment and expansion of many industries will stimulate employment in related areas of production. Indeed, this is another important reason for emphasizing the establishment of industries processing primary products, which create increased outlets for such products.

**Demand for Goods and Services**

42. Kenya’s goods and services are sold abroad or to Government, business establishments and households at home. It is an accepted responsibility of Government to stimulate a more rapid expansion of sales opportunities. Rough estimates of the sources and dispositions of Kenya goods and services are contained in Table 1. An increase in demand for any one of these kinds of purchases, if it is not at the expense of another, will increase total demand for goods and services. If, however, such an increase in demand is satisfied entirely through imports there can be no concurrent increase in domestic income.

43. The export component of demand is in many ways an attractive one to which to turn for increased sales potential. The market is vast and Kenya can satisfy only a small proportion of it; the market is not limited by increases in domestic income on which increases in domestic sales
depend; some of Kenya’s products can be sold abroad as quickly as production can be increased, for example, meat and meat preparations and dairy products; others can be sold as soon as these products can be produced at competitive prices through increases in productivity and quality; and sales abroad give Kenya foreign exchange needed to buy the many goods and services which cannot be produced efficiently at home but which are urgently needed for further development. The export potential for most of Kenya’s primary products is good and in many cases markets exist for these products in more highly processed form. In the case of manufactured exports, however, there are at present some problems. While markets in Europe, Asia and many parts of Africa are expanding, efforts in Tanzania and Uganda to become more self-sufficient in manufactured goods may stem the recent rapid rate of growth of Kenya’s interterritorial exports. On the other hand, however, the establishment of the proposed Eastern Africa Economic Community will substantially brighten the prospects for Kenya’s exports of manufactured goods, while at the same time enabling Kenya to shift a larger proportion of her imports to African sources.

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44. The demand for private capital formation—construction, plant, machinery and equipment—is affected to some extent by the current size of business incomes, but the long life of capital means that its purchase is conditioned to a much greater degree by the size and security of prospective incomes.

The rapid rate of increase planned for monetary gross domestic product coupled with the secure position of the private sector in Kenya and favourable investment incentives should stimulate a rapid expansion in private capital formation. Public capital formation will itself grow rapidly and in turn will stimulate the private demand for capital as Government’s many specific programmes for development get under way. Because the import content of capital formation is relatively high, the direct effect of capital expenditure on domestic incomes is not so large as the effect of equal expenditures on other kinds of goods. But capital formation is a
principal means of increasing productivity and expanding output, thus making possible more rapid increases in the production and sale of all kinds of goods.

45. The domestic demand for consumer goods and services is determined largely by the size of domestic income, the way in which these incomes are distributed among the population, and the propensity of people to save a portion of their incomes. This Plan provides for substantial increase in *per capita* incomes which should generate a growing demand for consumer goods and services though at a somewhat slower rate because people are likely to save a larger proportion of their higher incomes. The principal way to increase consumer purchases is, therefore, to create additional incomes as rapidly as possible by increasing productivity and developing markets for increased output. The Government will ensure that higher income can purchase larger quantities of goods and services by preventing profiteering and inflation. The Plan also provides for a more equitable distribution of income. This by itself might tend to reduce the level of savings in the economy unless counteracted by increases in incomes and the strong efforts planned to increase savings.

46. Goods and services purchased by Government have a relatively large domestic component and generate substantial domestic income. Further, the demand by Government can be manipulated to some extent to compensate for fluctuations in private demand, thus stabilizing employment. This ability is restricted, on the one hand, by commitments to long-range expenditure programmes, and on the other hand, by the capacity to collect taxes and to borrow, whether from abroad or at home. A prudent use of the monetary policy will, however, enable the Government to exercise a strong stabilizing influence.

47. The achievement of rapid economic growth depends not only on increasing total demand for goods and services but also on the composition of that demand. Wherever possible consumer and business demands will be diverted from imported to domestic goods and services in order to stimulate output and employment at home and to conserve scarce foreign exchange for needed imports of capital equipment.

48. A choice must also be made between satisfying collective or co-operative needs and individuals’ wants. The Government can satisfy the rightful demands of the people for such things as universal education, a comprehensive health programme, the development of co-operatives, a social security programme, and the extension of basic services only as rapidly as people accept the necessary taxes or contributions which serve to reduce their own purchasing power. The Government believes that many of these collective needs are pressing and that some are long overdue. Since Independence, the Government has expanded substantially the social services available to the people and in certain cases of pressing needs has reduced the cost of these services to people in the lower income groups. The provision of free medical
services to outpatients and all children is a case in point. Nevertheless, any comprehensive provision of social services free of charge must await the success of development programmes. First, these services can never be really free; it is only the mode of payment that can be changed from that of direct payments by the individual receiving the service to that of indirect payments through tax collections. Until per capita incomes are much higher than they are now, thus providing a larger tax base, financing the extension of social services through tax revenues must be done selectively and in moderation. Second, the provision of more free social services must reduce the amount of Government revenue that can be allocated to economic development. Drastic shifts in Government expenditures from economic to social services will slow the rate of growth and postpone further the day when reasonable standards of living and adequate social services can be provided. As the Government proceeds with its moderate programme of providing selected free social services it will always ensure that these are first provided for people in the lower income groups. Those who are earning high incomes or who can be expected to earn high incomes as a result of education and training must accept the responsibility for paying the taxes necessary to make social services more readily available to those who are less fortunate.

**Income Distribution and Regional Development**

49. Most of the policies designed to achieve a more equitable distribution of income have already been examined in connexion with other matters. As the process of Kenyanization proceeds over time, an ever-increasing share of incomes generated in Kenya will go to Kenya citizens as opposed to foreigners. Within Kenya the process of Africanization of the economy through various programmes outlined in the Plan will result in a more equitable distribution of income among races. Studies are also continuing as to how the tax structure can be modified to achieve the more equitable distribution of income and wealth that is consistent with African Socialism in Kenya. The lines being investigated have already been stated in Sessional Paper No. 10 and include—

(i) exempting from direct taxes people making extremely low incomes (in particular, the objective is to eliminate progressively for this group the graduated personal tax, substituting property taxes for it);
(ii) retaining the progressive income tax, lowering allowances;
(iii) adopting progressive inheritance taxes;
(iv) making any capital gains tax progressive;
(v) exempting basic necessities from sales and excise taxes; and
(vi) taxing luxury items heavily.

50. The purpose of development is not to develop an area as such but to develop and make better off the people of the area. It is not possible to have uniform development in all areas of the country—if only because of differences in natural resource endowment. Moreover, many of the less developed
areas are also very sparsely populated, and the costs of basic investments in roads, water supplies, power and telecommunications in these areas would be very high in themselves and excessively high in relation to the population to be served. Even for countries far richer than Kenya it is a long-term task to create the necessary infrastructure for the development of all regions and all remote corners of the country. However, the people of these areas must not be forgotten and therefore it is the Government policy to ensure the development of the people in all areas, regardless of how poor and remote the areas are. If an area is deficient in resources, this can best be done by—

(i) developing those limited resources in the area that are economic;
(ii) investing in the education and training of the people whether this is done in the area or elsewhere;
(iii) investing in the health of the people; and
(iv) encouraging some of the people to move to areas richer in resources.

51. With education and training and some capital, the people of a district can make the best of limited resources. If the potential for expansion is small, medical services, education and training will make more people qualified to find employment elsewhere. Unfortunately, incomes in the less developed areas are by definition low and the people cannot afford to provide education, training and health services at a level comparable to that in districts having higher per capita incomes. The Central Government, therefore, will assume a responsibility to see that the necessary level of these services is in fact provided in the less developed areas. A formula is now being worked out within Government that will provide grants and loans to the poorer areas on more liberal terms than those offered to the richer areas. But the poorer districts and the people in them must assume responsibilities as well. Among other things these areas must co-operate with the Government in allowing freer movement of people among districts. And the people themselves must not only want facilities for education, health, training, and development, but must also be willing to work in order to establish these facilities and to take advantage of them once they are established. There is no sense in constructing schools and health centres without the cooperation of the people who will share the benefits and still less sense in doing so if the facilities are not efficiently and fully utilized upon completion.

52. Measures will also be taken to develop those natural resources that exist in each district including agriculture, game, forestry, fishing and minerals, and to build on these resources those processing industries that are economic. As the processing of many primary products can be done most efficiently near the source of supply, the establishment of processing industries is the strongest step that can be taken to ensure the rapid development of the poorer areas of the country. Those industries that depend upon imported materials and substantial amounts of power must naturally be located along railway lines and near power outlets and, of course, near markets which they serve. Efforts are being made in this Development Plan to provide for the
extension of power to many new parts of the country. New roads will also make many markets accessible to less developed parts of the country and studies are also provided for in the Plan to determine in what areas of the country new railway extensions would be economic.

**Incomes and Wages**

53. An incomes policy for Kenya must simultaneously promote employment, protect consumers and workers against exploitation, work towards a more equitable distribution of income, and increase savings for investments in future growth. A careful balance in pursuance of these objectives is necessary. However, the creation of new employment opportunities must be given the highest priority, not only to provide employment for 50,000 to 60,000 additional men who will enter the labour force each year but also to eliminate existing unemployment and underemployment. As has been pointed out several times in this chapter, the wage level has a tremendous influence on employment—high wages encourage labour-saving methods and thus diminish the number of new jobs that will be created in new enterprises of all kinds. Moreover, high wages may limit the production of some goods—in agriculture and elsewhere—which depends on labour-intensive methods, by making continued production unprofitable. To a large extent the number of new job opportunities depends on the profitability of new enterprises, and to foster new enterprises, to attract foreign investments, to encourage existing enterprises to invest their profits in new activity in Kenya, and to accelerate the growth in the number of the African businessmen, industrialists and farmers, Government controls on prices and profits should not be such as to discourage entrepreneurship. Business profits are also the main source of private savings that are needed to finance future development. This necessary emphasis on the profitability of private enterprise does not imply, however, that the Government will tolerate exploitation of the consumers or workers. Monopolies will be kept under surveillance, and while protective tariffs will be needed to stimulate new ventures in many fields of manufacturing, such protection will be regularly reviewed in order to avoid over-protection and unreasonable level of profits. Similarly, labour regulations, including establishment of minimum wages and working conditions in general, will be maintained and strengthened to prevent private employers from exploiting the workers.

54. Both in the short and in the long run it is a fundamental Government policy to work towards a more equitable distribution of income. In a low-income country equitable distribution of income must be tackled within a framework of growth. In Kenya, in particular, even if the whole of the national income were distributed equally among all the people, the poorest would only be slightly better off while those in higher income brackets could only be retained in their jobs through compulsion. The policy of equitable distribution must therefore be consistent with, among other things, measures to promote growth. Essentially this means emphasis on measures to raise the
income levels of the poorest groups as growth takes place, although, of course, such instruments as progressive income taxes, death and inheritance taxes must also be used. In Kenya these and other instruments will be used on an increasing scale, but emphasis is being laid on bringing a large number of subsistence farmers into the monetary economy so that they can achieve higher incomes by producing more efficiently and selling growing surpluses in the market; creating numerous employment opportunities in other activities of the economy; and fostering education and training so that many more people can be promoted to skilled and better paid positions. The use of Government revenue to provide social services, especially education and health, more widely and intensively is also a fundamental point of this policy. Furthermore, Africanization of the economy will reduce income inequalities among races. The measures outlined above and more fully in Sessional Paper No. 10, will also ensure equitable distribution of income among the Africans themselves.

55. Urban Wages.—Most of the urban wage earners have a substantially higher income than the subsistence farmer or the farm worker. Even unskilled workers in urban areas earn higher wages than their rural counterparts. Some differential between urban and rural wages is necessary because of higher living costs in the urban areas. Urban workers, however, feel that for several reasons they can claim much higher wages: they earn substantially less than workers in similar position in more industrialized countries; they know that their employers often obtain high profits and that the management is well paid; and they feel that their own living standard is still miserably low. While improvement of the welfare of the urban workers will continue to receive full attention by the Government, other facts must be taken into account. A large number of urban workers are employed by the Government, and have to be paid out of its meagre tax revenues; and even in private business there are many firms that are earning small profits and which could not pay much higher wages without passing the bill to the consumers in the form of higher prices. Thus the scope for wage increases that could be paid by the employers out of their profits is limited. If urban wages were to rise too fast this would have several consequences—

(a) limit urban employment opportunities both by reducing the scope for new profitable business activities and by forcing the employers to reduce the number of their employees;

(b) lead to greater pressure for mechanization, which would mean fewer new jobs in new enterprises, and less jobs in old firms;

(c) widen the income differences between countryside and towns with a resulting inflow of job seekers from rural areas, and thus aggravate existing urban unemployment, the burden of which to a great extent would have to be borne by those already employed in urban areas; and
(d) lead to a situation of rising prices, because wage increases started in profitable industries will inevitably spread to less profitable industries and government services.

It is therefore necessary to advocate wage restraint among urban workers. This calls for a national wage policy which is based on what the nation can afford in higher wages without jeopardizing increase in employment or disrupting the development process.

56. Rural Wages.—In rural areas the position of the wage earner is partly similar to and partly different from what it is in the towns. Most farm workers are employed on large farms and estates, many of which are highly profitable. But the scope for mechanization on large farms is also substantial, and rising wages may lead to more mechanization and a shift from labour-intensive to capital-intensive production. Small-scale farming will in the future create a large number of jobs for hired labour, especially if the farmers grow labour-intensive crops which will require hired labour besides family labour. Therefore, if rural wages rise faster than the ability of large and small scale agriculture to pay, rural job opportunities will only grow slowly, and may even decline. This will again lead to an accelerated exodus of labour to the towns and to increased urban unemployment. It should be stressed, however, that the rural wage earners must get their share of the benefits resulting from economic growth, and therefore a gradual rise in rural wages must take place. This may hamper certain types of labour-intensive production but such production is not economical if it does not result in an acceptable labour income.

57. The incomes and wage policy in Kenya must be viewed against the background of the general development strategy and its implications for the employment pattern. Major emphasis is put on raising rural income levels by bringing subsistence farmers into the monetary economy. In fact, most of the increase in per capita incomes will take place as people shift from low income occupations. This fundamental fact has a major impact on the incomes policy. The people who will obtain the most impressive increases in their incomes are those who now live at a subsistence level and who either will move into profitable commercial agriculture or find wage employment.

58. The strategy for development described in this chapter is both more detailed and more specific than that presented in the previously published Plan. This in itself is adequate justification for the Government’s decision that planning in Kenya will be a continuous process, involving the periodic revision and extension of its Development Plan. Many of the policies announced in this Plan were under study when the previous Plan was published, while other policies now under investigation will assume concrete and specific form in subsequent Development Plans. Continuous planning in the view of the Kenya Government has already proven itself to be a necessary and efficient approach to economic development.
CHAPTER 5—TARGETS AND FINANCE

A comprehensive development plan is a blueprint for the social and economic development of the nation as a whole. It describes the impact of the planned development efforts on all aspects of the social and economic life of the nation. Statistical data in Kenya, while fairly comprehensive and of reasonably good quality, do not permit a total analysis of all implications of the present Plan. Thus, the descriptive and analytical sections of the following chapters contain many significant gaps. Nevertheless, the Plan is comprehensive in the sense that it both projects the summary impact of social and economic changes to 1970 in a target rate of economic growth for the economy as a whole, and shows what these changes require in terms of scarce resources such as capital, skilled manpower and foreign exchange, as well as how the planned growth itself will supply a significant part of these resources.

2. Realization of Plan targets depends on factors which are subject to varying degrees of Government control and predictability. The highest degree of accuracy applies to the set of programmes which the Government itself proposes to carry out under the Plan. These programmes have been drawn up in accordance with the best evidence available as to the financial and manpower resources which the Government will have at its disposal for carrying them out, and targets dependent on them may therefore be considered reasonably certain of realization. The behaviour of the private sector is less subject to control but can be predicted within reasonable limits on the basis of observations of past behaviour and revealed intentions for the future. Thus it is possible to make useful predictions of how consumers will spend their additional income, what businessmen and companies will do with increased earnings, and how farmers will react to improved extension services, to mention a few examples. Even the behaviour of foreign governments, private companies, and individuals can be predicted with some precision. Thus estimates of grants and loans from foreign governments can be based on recent experience as well as on commitments already undertaken by those governments. Within limits, it is possible to foresee how foreign private investors will react to the improved investment opportunities in Kenya and also how better tourists facilities will encourage more foreign tourists to come to Kenya. Finally, there is an important set of factors over which the Government and people of Kenya have no control at all, and which are extremely difficult to predict. These include climatic conditions, the incidence of plant disease and its effect on major crops, and the development of market conditions and prices abroad. Projections of agricultural output are made on the assumption of normal weather conditions and in the hope that any disease outbreaks can be contained, while projections of exports from Kenya are based on certain expectations regarding international price movements but cannot take into account the large and unexpected fluctuations which frequently take place.
3. To judge the implementation of the Plan merely by the degree of fulfilment of targets would be improper. However, an evaluation of Plan performance will be needed and in such an evaluation process it is imperative to try to trace the reasons for deviations from Plan targets. In some cases it may become evident that the targets were unrealistic to begin with, and the planners must accept blame for having set them; in some cases the Government may have to accept responsibility for having failed to implement its own programmes; in other cases the reason may be that people do not exploit fully the opportunities open to them; but in many cases the cause of shortcomings may be international conditions or inadequate rainfall or other natural factors which reduce agricultural output.

4. The principal categories of targets described in this chapter are:—

(a) Growth and use of national income;

(b) Trade and other transactions with foreign countries, i.e. the balance of payments;

(c) Growth of the labour force and new employment opportunities;

(d) Main physical targets in the various economic and social sectors;

(e) Investment and other development expenditure required to achieve the growth targets; and

(f) Financing the Development Plan, including mobilization of private savings and the inflow of capital from abroad.

Many of the specific targets will be treated in Chapters 6-11; this chapter aims at giving a global picture of the actions and changes which will take place during the Plan period.

A—Gross Domestic Product

5. National income is the best measure available for the strength of the economy and also for the rate of growth, since the change in national income gives the best picture of increased economic strength. This being said, it should be noted that national income figures can be grossly misrepresentative and that they by no means give an accurate evaluation of the welfare of the people, which depends both on the distribution of the national income and on the level of national income per capita. There are countries that have a high national income per capita but where the majority of the people still live in misery. This results from the existence of a modern, highly industrialized urban sector linked with a few very prosperous industries employing a small minority of the people in highly paid jobs. Similarly, a fairly rapid growth of national income per capita may be concentrated in the modern
urban sector with little impact on the way of life of the majority. As stated in Chapter 4, the Government is determined to prevent such a development from taking place in Kenya. On the assumption that the people as a whole will be involved in the development process and will benefit from it, the rate of growth of national income per capita becomes a significant measure of the improved welfare of the people.

6. It is customary to express the essential purpose of a development plan in terms of an increase in national income and consequently also in national income per capita. One possible procedure is to set a target in such terms and then seek ways and means of achieving it. However, this approach involves the risk of setting a target that is either unrealistically high or else the opposite, i.e. lower than the actual development potentialities permit. For this reason Kenya's Development Plan is not based on a preconceived target growth rate, but rather the target growth rate has been set after analysing actual resources and possibilities, with special reference to the factors promoting or circumscribing growth as described in Chapter 3, and determining what concrete steps can be taken to accelerate the development process under these conditions. The target growth rate of 6.0 per cent* (see Table 1) assumes that these steps will succeed, and is therefore as high as can be hoped for under present circumstances in Kenya.

7. National income statistics in Kenya are still inadequate. The only published figure is Gross Domestic Product (G.D.P.) at factor cost, i.e. the sum of the value added produced by the various sectors of the economy. To arrive at national income, it is necessary to subtract depreciation allowances needed to maintain the capital stock of the economy and factor income accruing to non-residents of Kenya. Because the growth of G.D.P. depends on a large investment programme, which means that relatively larger amounts than in the past must be set aside for capital depreciation and paid abroad as interest on foreign loans and profit from foreign investments, the rate of growth of G.D.P. will exceed that of national income. However, the difference is not so large that the growth of G.D.P. cannot be used as an indicator of Kenya's economic development, as indeed it is done in most other countries. There are no comprehensive data available on how the resources available in Kenya are being used for consumption, current government services, and investment. By definition, total resources consist of G.D.P. plus imports less exports of goods and services. Any estimates of the use of resources must therefore be very crude and can only serve as an illustration of certain economic trends.

8. There are several ways of forecasting the growth of G.D.P. over a given period, two of which could be used for Kenya: (1) adding up targets for increased output of each sector in the economy; and (2) dividing the amount of investment to be undertaken during the Plan period by the capital-output

*Adjusted for losses due to price changes in international trade.
ratio. In preparing this Plan it has been possible to formulate specific targets for the most important sectors of the economy on fairly realistic assumptions, and reasonable projections can be made for the remaining sectors. Thus, it is the sector approach which has been used here to forecast the rise of G.D.P. The second approach, linked with the capital-output ratio, i.e. the amount of investment needed to raise G.D.P. by one unit, is very crude, because the ratio is both highly unstable and difficult to measure. It is used here merely as a broad check on the result yielded by the sector approach.

9. In most economies the impetus to growth comes from a few major goods-producing sectors. The growth of the most important service sectors, trade and transport, is closely linked with the growing output of goods. Private service trades as well as Government services can only grow apace with the purchasing power of the population and tax revenues. During the period 1964 to 1970 it is estimated (see Table 1) that the goods-producing sectors (including the construction industry) will contribute half of the growth of G.D.P. If the analysis is limited to the monetary sector, the percentage is about 45 per cent. In other words the growth of the industries that produce goods is expected to induce an equally large or larger increase in output of the service activities. For the two most important goods-producing sectors — agriculture and manufacturing—the Plan contains specific targets, from which reasonable forecasts can be made of growth in many other sectors.

| Table 1—Gross Domestic Product at Constant Prices by Major Sectors 1964 and 1970 |
|--------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| **1964 G.D.P. at 1964 prices, revised estimate** | **1970 G.D.P. at 1964 prices, projected** | **Compound annual rate of growth, 1964-70** | **Distribution of G.D.P.** | **Contribution to growth of G.D.P., 1964-70** |
| £ million | £ million | per cent | per cent | per cent | per cent |
| **MONETARY SECTOR** |  |  |  |  |  |
| Fishing and hunting | 0.87 | 2.95 | 22.6 | 0.3 | 0.7 | 1.7 |
| Construction | 4.38 | 12.60 | 18.3 | 1.6 | 3.0 | 6.3 |
| Forestry | 0.92 | 1.65 | 10.2 | 0.3 | 0.4 | 0.6 |
| Mining and quarrying | 0.75 | 1.20 | 8.2 | 0.3 | 0.3 | 0.4 |
| Banking, insurance and real estate | 4.49 | 7.10 | 8.0 | 1.6 | 1.7 | 2.1 |
| Manufacturing | 29.38 | 46.60 | 8.0 | 10.4 | 11.5 | 13.9 |
| Other services | 18.30 | 28.20 | 7.5 | 6.5 | 7.0 | 8.0 |
| Transport, storage and communications | 26.30 | 39.50 | 7.0 | 9.4 | 9.8 | 10.7 |
| General Government | 34.11 | 51.20 | 7.0 | 12.1 | 12.6 | 13.8 |
| Agriculture | 36.72 | 54.50 | 6.8 | 13.1 | 13.5 | 14.4 |
| Electricity and water | 3.47 | 5.10 | 6.7 | 1.2 | 1.3 | 1.3 |
| Wholesale and retail trade | 34.06 | 48.30 | 6.0 | 12.1 | 11.9 | 11.5 |
| Livestock | 9.50 | 11.75 | 3.5 | 3.4 | 2.9 | 1.8 |
| Rent (including ownership of dwellings) | 9.54 | 11.70 | 3.5 | 3.4 | 2.9 | 1.8 |
| **NON-MONETARY GROSS DOMESTIC PRODUCT** |  |  |  |  |  |
| **TOTAL GROSS DOMESTIC PRODUCT** | 212.79 | 321.75 | 7.1 | 75.6 | 79.5 | 88.2 |

| 68.53 | 83.10 | 3.2 | 24.4 | 20.5 | 11.8 |
| 281.32 | 404.85 | 6.3 | 100.0 | 100.0 | 100.0 |
### Table 2—Gross Domestic Product—Summary

1964 and 1970

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<tbody>
<tr>
<td></td>
<td>£ million</td>
<td>£ million</td>
<td>per cent</td>
<td>per cent</td>
<td>per cent</td>
</tr>
<tr>
<td>G.D.P. AT CONSTANT PRICES BY GROUPS OF SECTORS—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary sectors, non-monetary*</td>
<td>68·53</td>
<td>83·10</td>
<td>3·2</td>
<td>24·4</td>
<td>20·5</td>
</tr>
<tr>
<td>Primary sectors, monetary*</td>
<td>48·76</td>
<td>72·05</td>
<td>6·7</td>
<td>17·3</td>
<td>17·8</td>
</tr>
<tr>
<td>Total primary sectors*</td>
<td>117·29</td>
<td>155·15</td>
<td>4·8</td>
<td>41·7</td>
<td>38·3</td>
</tr>
<tr>
<td>General Government</td>
<td>34·11</td>
<td>51·20</td>
<td>7·0</td>
<td>12·1</td>
<td>12·6</td>
</tr>
<tr>
<td>Other sectors</td>
<td>129·92</td>
<td>198·50</td>
<td>7·3</td>
<td>46·2</td>
<td>49·1</td>
</tr>
<tr>
<td>TOTAL G.D.P. AT CONSTANT PRICES</td>
<td>281·32</td>
<td>404·85</td>
<td>6·3</td>
<td>100·0</td>
<td>100·0</td>
</tr>
<tr>
<td>G.D.P. AT CURRENT PRICES†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monetary G.D.P.</td>
<td>212·79</td>
<td>316·85</td>
<td>6·9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total G.D.P.</td>
<td>281·32</td>
<td>399·95</td>
<td>6·0</td>
<td></td>
<td></td>
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</tbody>
</table>

* Agriculture, livestock, forestry, fishing, hunting and mining.
†See Table 3—1970 agricultural output may be £5 million below the projected value at 1964 prices due to fall in export prices.

10. For the period 1964-70 Table 1 projects the real (i.e. constant-price) growth rate of the monetary economy at an average of 7.1 per cent annually, of the subsistence sector at 3.2 per cent and of the economy as a whole at 6.3 per cent from 1964 to 1970. Eight of the thirteen sectors included in the monetary economy are projected to achieve a real growth rate ranging between 6 per cent and 8.2 per cent. Three sectors should grow even faster: fisheries should witness a very rapid increase, once large-scale commercial fishing is started on Lake Rudolf, supplemented by development in other inland and coastal fisheries; construction, under the general impact of the Plan, should advance rapidly from its depressed level of 1964; and commercial forestry will be stimulated by increased building activity, the opening of a pulp factory at Broderick Falls, and higher exports of many wood products. Two sectors will lag considerably behind the average: rent, which will increase only slightly faster than the population, because of the scarcity of financial resources available for new housing; and livestock, which has almost stagnated during the last few years, and will only feel the full impact of major Plan projects late in the Plan period. Amongst the eight sectors which are projected to grow at a rate fairly close to that of monetary G.D.P. as a whole, the expected rapid growth of manufacturing and monetary agriculture is vital to the economic progress of the country. Between themselves, these two sectors are projected to account for 33 per cent of the growth of monetary G.D.P. during the Plan period.
11. Agriculture.—Figures for agriculture in Table 3 are derived mainly from detailed production targets in Appendix Tables 10-21. For agriculture excluding livestock these targets suggest an annual rate of growth as high as 7.9 per cent. If all these targets are attained, Kenya’s agriculture will probably advance as rapidly as has any agriculture in the world over a similar period. Table 3 also shows that most of this progress will take place in the small-farm sector, which should increase its contribution to G.D.P. by as much as 18 per cent per year. The following list gives some major components of this projected rise in crop production on small farms and co-operative schemes:

<table>
<thead>
<tr>
<th>Crop</th>
<th>Value of output (£ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee</td>
<td>14.54</td>
</tr>
<tr>
<td>Cotton</td>
<td>2.87</td>
</tr>
<tr>
<td>Pyrethrum</td>
<td>2.21</td>
</tr>
<tr>
<td>Sugar cane (for white sugar)</td>
<td>1.22</td>
</tr>
<tr>
<td>Tea</td>
<td>1.60</td>
</tr>
<tr>
<td>Wheat</td>
<td>1.15</td>
</tr>
<tr>
<td>Rice</td>
<td>0.78</td>
</tr>
<tr>
<td>Cashew nuts</td>
<td>0.47</td>
</tr>
<tr>
<td>Pineapples (for canning)</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The growth of the large-farm sector, at 2.5 per cent per year, is very modest by comparison, because the area under large-scale farming will be gradually reduced due to new and continuing settlement schemes. The forecast rate of increase in the livestock sector is 4.6 per cent, with a 10 per cent increase in the small-farm sector. Chapter 6 describes the efforts that will be made to reach these targets, which are based in part on relatively predictable harvests from coffee trees and tea bushes, etc., already in the ground. Forward planning in agriculture is subject to many uncertainties, and for the purpose of estimating the impact of expected agricultural development on G.D.P., it has been considered prudent to allow for an average shortfall of 5 per cent in the output targets for agriculture and livestock. This is done not because the targets are considered over-ambitious but because some allowance must be made in all sectors of the economy for under-fulfilment of targets. If not, the growth target for the economy as a whole would become unrealistically high and could only be reached if all favourable conditions underlying the projections were fulfilled without exception. The amended growth targets are 6.8 per cent for crop production and 3.6 per cent for livestock.

12. Industry and Construction.—The expected growth pattern in manufacturing is set out in detail in Table 1 of Chapter 8. The table shows that production of the modern manufacturing units covered by the Census of Industrial Production should grow by as much as 9 per cent per year during the Plan period. If small-scale industries and handicrafts are included the calculated growth rate drops to 8.4 per cent. As in the case of agriculture the overall target has been lowered, but only to 8 per cent. The reason for
Table 3—The Contribution of Agriculture and Livestock to Monetary Gross Domestic Product, 1964 and 1970

<table>
<thead>
<tr>
<th></th>
<th>Gross farm revenue</th>
<th>Gross value added (contribution to G.D.P.)</th>
<th>Growth rate, 1964–70</th>
</tr>
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<tbody>
<tr>
<td><strong>Crop production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large farms</td>
<td>31·55</td>
<td>35·98</td>
<td>—</td>
</tr>
<tr>
<td>Small farms</td>
<td>10·95</td>
<td>29·30</td>
<td>—</td>
</tr>
<tr>
<td>Other (agric. services)</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total Crops</strong></td>
<td>42·50</td>
<td>65·30</td>
<td>60·00</td>
</tr>
<tr>
<td><strong>Livestock production</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large farms</td>
<td>8·22</td>
<td>9·00</td>
<td>—</td>
</tr>
<tr>
<td>Small farms</td>
<td>3·38</td>
<td>6·15</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total Livestock</strong></td>
<td>11·59</td>
<td>15·15</td>
<td>15·15</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>54·09</td>
<td>80·45</td>
<td>75·15</td>
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</table>

1970 targets reduced by 5 per cent to account for uncertainties

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<tbody>
<tr>
<td><strong>Crop production</strong></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large farms</td>
<td>62·00</td>
<td>57·00</td>
<td>54·50</td>
<td>49·60</td>
<td>6·5</td>
<td>5·0</td>
<td>6·8</td>
<td>5·1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Livestock production</td>
<td>14·40</td>
<td>14·40</td>
<td>11·75</td>
<td>11·75</td>
<td>3·7</td>
<td>3·7</td>
<td>3·6</td>
<td>3·6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>76·40</td>
<td>71·40</td>
<td>66·25</td>
<td>61·35</td>
<td>5·9</td>
<td>4·7</td>
<td>6·2</td>
<td>4·9</td>
<td>—</td>
<td>—</td>
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</tbody>
</table>

Note: Gross value added equals gross farm revenue less purchase of goods and services from other sectors of the economy (including retentions by marketing boards, KFA etc.)
this small adjustment is that for many industrial sectors very conservative forecasts have been made, so that the figures in Table 1 of Chapter 8 already contain a safety margin. Growth in manufacturing during the Plan period is largely assured by a very rapid growth in food-processing, partly for export, partly to supply the rapidly growing urban population, and partly because a large sugar industry will be built up. Kenya’s textile industries are on the point of a break-through, which is expected to take place over the Plan period. Targets for manufacturing assume a relative stagnation in exports of manufactured goods to Kenya’s East African neighbours. If, early in the Plan period, an agreement is reached which guarantees free movement of manufactured goods within East Africa, industrial development will be stimulated further. It is also possible that the foundations for the Economic Community for Eastern Africa will be laid during the Plan period, giving an additional stimulus to industrial development. The growth of the construction industry cannot be forecast with precision, since it depends to a large extent on the recovery of residential building, on the timing of programmes included in the Plan, and on unforeseen investment projects that may come up towards the end of the Plan period. The figure included in Table 1 is based on an analysis of the impact of the Plan on the output of the construction industry.

13. Transport and Trade.—During 1954-64 the growth of the transport and communications sector was significantly faster than the growth of the monetary economy as a whole. There are many reasons why this should continue in the future, but the forecasts by individual subsectors suggests that it may be prudent to forecast the growth of this sector at the same rate as for monetary G.D.P. Thus, for example, the increase in railway revenues may be slow due to a continued fall in passenger traffic, while the growth in post and telecommunications services is forecast at no higher than 6 per cent by the responsible Administration. On the other hand, airline revenues should increase by almost 15 per cent per year and other transport should continue to grow at a very high rate. Turnover in wholesale and retail trade will be stimulated not only by the growing production of agricultural and industrial goods but also by the increase in urban population and the very rapid growth of sales by African farmers, which will give them purchasing power and stimulate rural trade. Nevertheless, trading income increased slower than monetary G.D.P. in the past decade, and it is assumed here that this will hold true for the future as well. Thus, the annual growth rate for this sector has been projected at 6 per cent. Needless to say, fulfilment of the targets for transport and trade depends entirely on the extent to which targets for other sectors are reached.

14. Other Sectors.—“Other services” are projected to increase by 7.5 per cent per year. This rapid increase is partly explained by the expected boom in tourism, which should enable the hotel industry and related industries, notably the safari business, to grow by nearly 15 per cent annually. Personal services should continue their rapid growth, while business and legal services
should increase at least as fast as the entire monetary economy, of which they are an integral part. Domestic services, on the other hand, are assumed to grow very slowly, by 1 per cent per year, which would still mean a reversal of the decline in recent years. In the past decade banking, insurance and real estate was the fastest growing sector of the economy (see Chapter 2, Table 2), and it should continue to grow at least as fast as manufacturing. Electricity consumption rose very fast during 1954-64 but from 1964 to 1965 there was no significant increase. In the long run this sector (which also includes water) should grow much faster than G.D.P. but a slower rate of growth has been assumed here because of the stagnation in 1965. The growth in rent has been projected on the basis of planned residential construction, using the relationship between housing investment and increased rent during the past ten years as the basis of calculation.

15. Government Services.—The recurrent costs of the Central Government cannot be permitted to rise by more than about 7 per cent per year during the Plan period and Government product, i.e. wages and salaries paid to Government employees, should rise by about the same rate. This is considerably slower than in recent years but a large part of that increase was caused by rising wages. (The present estimates are in terms of constant prices and therefore, in the case of Government product, constant wages.) During the Plan period Government services that have a direct impact on the country's social and economic progress, notably education, health, and agricultural extension services, will grow much faster than the average.

16. Non-monetary Product.—It is hard to predict what is going to happen to the non-monetary (or subsistence) product.* Agriculture and livestock represent more than 90 per cent of the estimated non-monetary product while forestry, fishing and hunting account for the remainder. Both subsistence agriculture and animal husbandry should benefit from efforts during the Plan period to raise the level of productivity and standard of living in the small-farm areas. On the other hand, the main impact of the programmes will be to shift farmers now producing mainly for their own subsistence into production for the market. This fact could even indeed lead to a fall in subsistence output per capita, but it has been assumed here that the overall impact of better agricultural technology will be to raise subsistence product somewhat faster than the population will grow. Data on subsistence agriculture are deficient and the figures given for 1964 and 1970 output must be regarded as crude approximations.†

* In addition to subsistence output non-monetary product includes production for local barter and for sale in rural and other markets whose transactions are not recorded.

† Subsistence agriculture has been estimated to grow at 3.5 per cent per year; subsistence livestock at only 2.5 per cent (due to the rapid expansion of sales of cattle to the organized market, which is the basic assumption behind the growth of monetary livestock production, and which means that less is left for subsistence); and subsistence forestry by 3 per cent.
17. *Capital Investment and the Rate of Growth.*—As shown below, Gross Domestic Investment during the Plan period, i.e. July 1965 to June 1970, is projected on the order of £325 million. To this figure must be added 1964/65 investment of around £35 million. Between 1964 and 1970 monetary G.D.P. is projected to increase by £109 million. Compared with projected investment of £360 million, this gives a gross capital-output ratio of 3.3. Gross capital-output ratios in countries at a stage of development comparable to Kenya's are generally estimated in the range of 3-4. There are good reasons why Kenya would find herself in the lower end of such a range—the productive capacity built up during the preceding decade was not fully utilized in 1964, due to changes in the structure of demand and political uncertainties which followed Independence; and some £7-£8 million of increased output in 1970 will arise from the coming into bearing of coffee trees planted before the Plan period.

18. *Gross Domestic Product Per Capita.*—Table 1 gives figures for G.D.P. expressed in constant prices. Changes over time in this variant of G.D.P. measure changes in physical output of the different sectors of the economy, and are therefore a valid measure of the country’s economic progress. The figures tell us that between 1964 and 1970 constant-price G.D.P. should increase from £31 to £37 per capita and from £192 to £231 per family, a total rise of 21 per cent or 3.2 per cent per year. This is an acceptable rate of progress, although the nation must aim at raising it further during subsequent Plan periods when the foundations for more rapid growth have been laid. Monetary G.D.P. per capita in constant prices is expected to increase from £23 to £29, a rise of 27 per cent, i.e. 4.0 per cent per year. In terms of output per head most of the progress during the Plan period will take place in the monetary sector of the economy. This is a natural consequence of the modernization of the economy, which means increased production for sale.

19. As already observed, Gross Domestic Product does not give an accurate measure of the income which accrues to the population since it includes depreciation allowances as well as income which accrues to non-residents of Kenya. A crude estimate suggests that national income in constant prices, and therefore also per capita income, will grow by 0.4 per cent less than G.D.P. This difference is small and does not alter the picture of rapid growth in Kenya’s economic strength and the well-being of her people. Another element must be taken into account, however, i.e. changes in export prices in relation to import prices. In 1964, which serves as a base for the calculations, the export prices of coffee, tea, and especially sisal were comparatively high. The sisal price in 1970 will almost certainly be considerably lower than in 1964 and it is prudent to make allowance for lower 1970 prices for tea, coffee, and perhaps some other exports. Losses due to lower prices are projected at approximately £6 million, which means that G.D.P. adjusted for this expected unfavourable change in the terms of trade would grow at
6.0 per cent as against 6.3 per cent for constant-price G.D.P. Even this adjustment, however, does not alter the picture of a satisfactory rate of growth during the Plan period.

B—The Use of the Nation's Resources

20. The material resources at a country's disposal consist of its Gross Domestic Product plus imports of goods and services. These resources can be used for consumption, investment, and exports. If imports are higher than exports, the country is able to use more resources for domestic purposes than it produces. Such an import surplus must, of course, be paid for out of foreign exchange resources. In the short run a nation can pay for an import surplus by drawing on its foreign exchange reserves, but in the long run foreign grants, credits, and investments are needed. By having an import surplus the nation can add to the resources available for investment in productive capacity and thereby raise its future production and income levels.

21. Table 4 gives a very approximate picture of the actual and projected use of resources in Kenya in 1964 and 1970 respectively. No separate figures are given for imports and exports—instead the export surplus has been included in uses of G.D.P. Note that imports and exports as used in this table do not include payments of investment income to or from abroad. No actual data are available for 1964 investment in stocks; in most countries annual investment in stocks averages one-fifth to one-fourth of the annual change in monetary G.D.P., and the value given in the table for 1964 is one-fourth of the increase in monetary G.D.P. between 1963 and 1964. Since stock investment fluctuates widely from one year to the next, the figure in the table is subject to a wide margin of error, which in turn affects the estimates of consumption and savings, although by a relatively small amount.

22. In 1964, 11.5 per cent of total G.D.P. at market prices or 15 per cent of monetary G.D.P. was devoted to gross capital formation. It is estimated that almost half of this, or about £15 million, corresponded to depreciation of existing capital equipment. Net investment would therefore have amounted to about 7 per cent of total Net Domestic Product (N.D.P.) or about 9 per cent of monetary N.D.P. Assuming a net capital-output ratio of 2.8, 1964 investment was barely sufficient to assure an increase in monetary N.D.P. (3.3 per cent) higher than the growth of the population at close to 3 per cent. By 1970 the ratio of gross fixed investment to total G.D.P. should increase to about 19 per cent, or 23.5 per cent of monetary G.D.P. Net investment should increase to about 17 per cent of monetary N.D.P. Again assuming a net capital-output ratio of 2.8, this should ensure a rate of growth of about 6 per cent in monetary N.D.P. As shown earlier, during the Plan period monetary G.D.P. will increase by as much as 7 per cent per year. This high rate of growth is partly a result of investments undertaken prior to the Plan period and partly a result of the accelerated development effort which is expected to take place during the early years of the Plan. While the projected investment increase from 1964 to 1970 is very substantial, even
greater efforts may be required to maintain the high growth rate of 7 per cent for the monetary sector beyond 1970.* The Government will put considerable emphasis on finding additional financial resources so that, under the next development plan, covering the period 1968 to 1973, it will be possible to raise the investment level in 1970 beyond what is now thought possible.

23. Gross fixed investment is projected to rise from £35 million in 1964 to £83 million in 1970, an increase of £48 million. Taking into account investment in stocks, which must follow the increase in national income, total Gross Domestic Investment is projected to grow by about £49 million. This increase has to be financed through higher domestic savings and/or imports of capital. Table 4 shows how these resources for additional investment are to be found: Gross Domestic Savings are projected to increase from £49.5 million to £80 million, a rise of about £30 million, while a further £19 million in resources will become available through the transformation of a £10.5 million export surplus in 1964 (goods and services, except investment income) into an import surplus of £8.5 million. In 1964 a net amount of £12.5 million accrued to foreigners as earnings on investments in Kenya. Thus, Kenya had a current balance of payments deficit (excluding transfers) of £2 million (equal to £10.5 million export surplus on merchandise and invisible excluding investment income, less net investment income payments abroad of £12.5 million). Due to increased private and public foreign investment, including both loans and equity, investment income payments abroad will increase to about £20 million and the current balance of payments deficit (excluding transfers) to about £28 million in 1970.†

24. The question may be asked whether it is necessary and desirable to plan for a deliberate increase in the current balance of payments deficit from £2 million to £28 million. The answer can be found in the relationship of savings to G.D.P. In 1964 Gross Domestic Savings reached 16.5 per cent of G.D.P., and if savings paid abroad are deducted, the resulting figure for Gross National Savings equals more than 12 per cent of Gross National Product. This is a very high figure for a low-income country, and it is explained by the dual character of the Kenya economy, where a high proportion of the national income accrued to a small minority of persons or

*It would be justifiable, however, to apply the capital-output ratio to new investment rather than to net investment. During a period of rapid growth, investment in replacement will be lower than the depreciation allowance, and consequently new investment will exceed net investment. If new investment is used as basis of calculation, investment in 1970 should be sufficient to maintain a 7 per cent growth rate immediately after 1970.

†The financing of the projected increase in investment can be estimated alternatively as follows: Gross national savings (i.e. domestic savings less investment income payments abroad) will increase from £37 million to £60.5 million or by £23.5 million, while the current balance of payments deficit will increase from £2 to £28 million or by £26 million. These two figures add up to the increased investment, £49.5 million. Thus, a little less than half of the increased investment will be financed by higher savings retained by Kenya residents, while the other half will be met by higher inflow of capital from abroad, needed to finance the increased balance of payments deficit.
### Table 4—Expenditure on Gross Domestic Product

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<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>£ million</td>
<td>Per cent of G.D.P. at market prices</td>
<td>£ million</td>
<td>Per cent of G.D.P. at market prices</td>
<td>£ million</td>
<td>per cent</td>
</tr>
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<td><strong>GROSS DOMESTIC PRODUCT</strong></td>
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<tr>
<td>G.D.P. at factor cost</td>
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<td>Monetary G.D.P.</td>
<td>213-0</td>
<td>70-6</td>
<td>322-0</td>
<td>74-0</td>
<td>109-0</td>
<td>7-1</td>
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<tr>
<td>Non-monetary G.D.P.</td>
<td>68-5</td>
<td>22-7</td>
<td>83-0</td>
<td>19-1</td>
<td>14-5</td>
<td>3-2</td>
</tr>
<tr>
<td>Total G.D.P. at factor cost</td>
<td>281-5</td>
<td>93-4</td>
<td>405-0</td>
<td>93-1</td>
<td>123-5</td>
<td>6-3</td>
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<tr>
<td><strong>plus indirect taxes less subsidies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>G.D.P. at market prices</td>
<td>301-5</td>
<td>100-0</td>
<td>435-0</td>
<td>100-0</td>
<td>133-5</td>
<td>6-3</td>
</tr>
<tr>
<td>of which Monetary G.D.P. at market prices</td>
<td>233-0</td>
<td>77-3</td>
<td>352-0</td>
<td>80-9</td>
<td>119-0</td>
<td>7-1</td>
</tr>
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<td><strong>USE OF RESOURCES</strong></td>
<td></td>
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<tr>
<td><strong>Consumption</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal</strong></td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>Monetary</td>
<td>136-5</td>
<td>45-3</td>
<td>201-0</td>
<td>46-2</td>
<td>64-5</td>
<td>6-7</td>
</tr>
<tr>
<td>Non-monetary</td>
<td>68-5</td>
<td>22-7</td>
<td>83-0</td>
<td>19-1</td>
<td>14-5</td>
<td>3-2</td>
</tr>
<tr>
<td>Total personal consumption</td>
<td>205-0</td>
<td>68-0</td>
<td>284-0</td>
<td>65-3</td>
<td>79-0</td>
<td>5-6</td>
</tr>
<tr>
<td><strong>Government</strong></td>
<td>47-0</td>
<td>15-6</td>
<td>71-0</td>
<td>16-3</td>
<td>24-0</td>
<td>7-0</td>
</tr>
<tr>
<td>Total consumption</td>
<td>252-0</td>
<td>83-6</td>
<td>355-0</td>
<td>81-6</td>
<td>103-0</td>
<td>5-9</td>
</tr>
<tr>
<td><strong>Investment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Fixed Investment</td>
<td>35-0</td>
<td>11-6</td>
<td>83-0</td>
<td>19-1</td>
<td>48-0</td>
<td>15-5</td>
</tr>
<tr>
<td>Investment in stocks</td>
<td>4-0</td>
<td>1-3</td>
<td>5-5</td>
<td>1-3</td>
<td>1-5</td>
<td>5-5</td>
</tr>
<tr>
<td>Total (=Gross Domestic Investment)</td>
<td>39-0</td>
<td>12-9</td>
<td>88-5</td>
<td>20-4</td>
<td>49-5</td>
<td>14-6</td>
</tr>
<tr>
<td><strong>Exports less imports of goods and services (excluding investment income payments)</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>10-5</td>
<td>3-5</td>
<td>-8-5</td>
<td>-2-0</td>
<td>-19-0</td>
<td>negative</td>
</tr>
<tr>
<td><strong>Total Use of Resources</strong> (=G.D.P. at market prices)</td>
<td>301-5</td>
<td>100-0</td>
<td>435-0</td>
<td>100-0</td>
<td>133-5</td>
<td>6-3</td>
</tr>
<tr>
<td><strong>SAVINGS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Domestic Savings</td>
<td>49-5</td>
<td>16-4</td>
<td>80-0</td>
<td>18-4</td>
<td>30-5</td>
<td>8-4</td>
</tr>
<tr>
<td>(=Gross Domestic Investment plus export surplus)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net investment income payments abroad</td>
<td>12-5</td>
<td>4-1</td>
<td>19-5</td>
<td>4-5</td>
<td>7-0</td>
<td>7-7</td>
</tr>
<tr>
<td>equals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross National Savings</td>
<td>37-0</td>
<td>12-3</td>
<td>60-5</td>
<td>13-9</td>
<td>23-5</td>
<td>8-5</td>
</tr>
<tr>
<td>Current balance of payments deficit excluding transfers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(=Gross National Savings minus Gross Domestic Investment)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-2-0</td>
<td>-0-7</td>
<td>-28-0</td>
<td>-6-4</td>
<td>-26-0</td>
<td>55-0</td>
</tr>
</tbody>
</table>

*Note:* The current balance of payments deficit (excluding transfers) is identical with the balance of payments "gap" that must be covered by an inflow of transfers (including foreign aid grants), and foreign loans and direct investments.
companies which earned enough to be able to save a large part of their incomes. During the Plan period a substantial part of the increased national income will accrue to the masses of the people. It will take a major effort to channel a significant part of the increased incomes of African wage-earners, small farmers, and small businessmen into savings, and it would not be surprising if savings as a percentage of national income should actually tend to fall for some years. The Government is aware of the necessity to avoid such a decline, and will take appropriate steps (see paragraph 25). Out of the Plan increase in monetary G.D.P. about £50 million will probably find its way to wage-earners, and private “operating surplus” (defined as gross value added less labour costs, or the sum of depreciation, interest, and pre-tax profit) will increase by about £55 million. Most of the increase in wage income will accrue to relatively low-paid workers, including many farm labourers, and determined efforts are needed to raise savings out of wage income by as much as £5 million. Of the increased “operating surplus”, which includes income of self-employed persons, at least £20 million will accrue to small African farmers and businessmen, and it would be optimistic to assume that they will save more than £5 million (or one quarter) of their increased income. The Central Government should, by 1970, aim at saving £3 million in the form of a budget surplus, without major changes in taxation. If Government, wage-earners, and small African farmers and businessmen contribute £12-£13 million of the £30.5 million additional savings required, the remaining £17.5 million must come out of the £30-£35 million additional operating surplus that should accrue to large farms and businesses. Part of this income will be paid in taxes; thus, much more than half of the additional after-tax operating surplus would have to be set aside as depreciation, reinvested, or saved in other ways. The very tentative character of these calculations should be stressed, but the orders of magnitude are valid, and suggest that an increase of £30.5 million in Gross Domestic Savings by 1970 is a very ambitious target indeed. Kenya can therefore not avoid relying on foreign finance to underwrite a substantial part of the increased development effort.

25. From the foregoing, it is evident that the savings target cannot be reached unless all income groups save a larger proportion of their income in the future than at present. In order to bring this about, the Government has taken or will take a number of steps that will stimulate savings particularly amongst low and middle-income groups. Some of these steps have been discussed elsewhere in the Plan (vide sections on the National Social Security Fund and Workers’ Investment Trust). In addition, the following measures are under consideration:—

(i) A vigorous publicity campaign, undertaken jointly by the Government and financial institutions, to point out the importance of savings to the individual and the community and the different kinds of savings media that are available.
(ii) Introduction of contractual savings schemes for specific purposes (e.g. housing, education).

(iii) Issue of savings certificates of a low denomination, the return on which would assume the form of capital appreciation and increase in proportion to the time for which the certificate is held.

(iv) Enabling the Post Office Savings Bank to play a greater role in initiating the vast non-banking public into the banking habit and tapping the savings of low and middle-income groups.

While the Government hopes that adequate voluntary savings will be forthcoming, the greater use than hitherto of compulsory savings cannot be ruled out. The National Social Security Fund is a compulsory savings scheme and further devices of this nature will be introduced if required.

26. The savings assumptions imply that total private consumption will increase by about 5.6 per cent per year during the Plan period, and consumption per head by 2.5 per cent per year. As pointed out in Section D of this chapter much of this growth will take the form of a move of people from lower- to higher-paid occupations. The Government will provide improved services in such fields as education and health, and thus help to raise the welfare of the people even faster than is suggested by the figures for private consumption.

C—Balance of Payments

27. Kenya’s current balance of payments (excluding transfers) is determined by its current exports and imports of goods and services (including receipts from and payments for transport, insurance, banking, tourism, etc.), together with obligations in respect of interest and profits on foreign capital invested in Kenya (less earnings on Kenya investments abroad). In Section B of this chapter it has been shown that, if Kenya is to be able to finance the Plan, the 10.5 million export surplus which Kenya earned in 1964 will have to be turned into a deficit of £8.5 million by 1970, covered by capital imports. A country’s export or import surplus equals the difference between its domestic investment and savings. If a country invests more than it saves, it is bound to have an import surplus, regardless of how high its exports are. An import surplus helps the country to undertake a large investment programme and thereby accelerate its economic and social development. An import surplus is therefore not necessarily a bad thing for a developing country, provided that (1) it is associated with a serious development effort, thereby facilitating rapid economic growth, and (2) it is financed in a responsible manner, notably by importing equity and long-term loan capital from abroad rather than by mortgaging the country’s economic future through contracting massive short-term debts or drawing down foreign exchange reserves below safe levels.

28. Turning to a separate examination of the two sides of Kenya’s balance of payments, it is inevitable that the development programme outlined in this Plan and the rapid economic growth resulting from it will cause
a rapid increase in imports. Table 4 suggests that by 1970 Kenya will export about £8.5 million less than it will import. Even so, exports will have to be increased considerably during the Plan period. If they fail to grow fast enough, savings will not increase as rapidly as assumed in Table 4, and Kenya will have difficulty financing the resulting import surplus. The prospects for a rapid increase in exports are good, however. Table 5 below shows the expected growth of agricultural exports over the Plan period. These will remain Kenya’s most important exports (63 per cent of commodity exports in 1970 against 64 per cent in 1964; 40 per cent of exports of all goods and services in 1970 as in 1964). While exports of agricultural goods have been projected to grow by not quite 4 per cent annually, exports of other goods are projected to grow by 4 per cent (see Table 6). The growth of Kenya’s exports to Tanzania and Uganda is bound to slow down as a result of industrialization in those two countries. Prospects for exports outside East Africa are very good, however, and should ensure a reasonable growth of exports of non-agricultural raw materials, minerals, and manufactured products. Amongst invisibles, income from foreign tourists should rise very rapidly (by almost 15 per cent per year), while increased economic activity in neighbouring countries will ensure a steady growth in income from freight and insurance on goods passings through Kenya.

**Table 5**

**Kenya’s Agricultural Exports**

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1970</th>
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</thead>
<tbody>
<tr>
<td>Coffee not roasted</td>
<td>15·4</td>
<td>22·7</td>
</tr>
<tr>
<td>Tea</td>
<td>6·5</td>
<td>10·5</td>
</tr>
<tr>
<td>Pyrethrum</td>
<td>2·5</td>
<td>4·0</td>
</tr>
<tr>
<td>Sisal</td>
<td>6·0</td>
<td>3·7</td>
</tr>
<tr>
<td>Cotton lint</td>
<td>0·6</td>
<td>3·4</td>
</tr>
<tr>
<td>Dairy products</td>
<td>2·1</td>
<td>2·6</td>
</tr>
<tr>
<td>Beef, beef products</td>
<td>2·0</td>
<td>2·2</td>
</tr>
<tr>
<td>Pineapple</td>
<td>1·0</td>
<td>2·1</td>
</tr>
<tr>
<td>Hides, skins and</td>
<td>1·6</td>
<td>1·9</td>
</tr>
<tr>
<td>leather</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat and flour</td>
<td>2·1</td>
<td>1·1</td>
</tr>
<tr>
<td>Oil seeds, nuts and</td>
<td>0·6</td>
<td>1·0</td>
</tr>
<tr>
<td>vegetable oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans, peas and</td>
<td>0·6</td>
<td>1·0</td>
</tr>
<tr>
<td>lentils</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wattle bark and</td>
<td>1·1</td>
<td>0·9</td>
</tr>
<tr>
<td>extract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wool</td>
<td>0·5</td>
<td>0·7</td>
</tr>
<tr>
<td>Cashew nuts and</td>
<td>0·3</td>
<td>0·4</td>
</tr>
<tr>
<td>kernels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pig products</td>
<td>0·3</td>
<td>0·4</td>
</tr>
<tr>
<td>Passion fruit</td>
<td>—</td>
<td>0·1</td>
</tr>
<tr>
<td>Other</td>
<td>3·4</td>
<td>2·7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1964</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-Total</strong></td>
<td>46·6</td>
<td>58·3</td>
</tr>
<tr>
<td><strong>Less 5 percent possible shortfall</strong></td>
<td></td>
<td>3·1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>46·6</td>
<td>58·3</td>
</tr>
</tbody>
</table>

*Including sales to Tanzania and Uganda.*
### Table 6—Balance of Payments—1964 and 1970

#### £ million

<table>
<thead>
<tr>
<th>Current Account</th>
<th>Debits</th>
<th>Credits</th>
<th>Balance Net Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Commodity Trade</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports f.o.b.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural products</td>
<td>46·6</td>
<td>58·5</td>
<td></td>
</tr>
<tr>
<td>Other products</td>
<td>26·4</td>
<td>33·0</td>
<td></td>
</tr>
<tr>
<td>Re-exports</td>
<td>6·4</td>
<td>8·0</td>
<td></td>
</tr>
<tr>
<td>Coverage and valuation adjustment*</td>
<td>-1·4</td>
<td>-1·5</td>
<td></td>
</tr>
<tr>
<td>Imports c.i.f.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer goods</td>
<td>34·7</td>
<td>43·0</td>
<td></td>
</tr>
<tr>
<td>Producer goods</td>
<td>30·4</td>
<td>47·5</td>
<td></td>
</tr>
<tr>
<td>Capital goods</td>
<td>16·4</td>
<td>33·0</td>
<td></td>
</tr>
<tr>
<td>Re-exports</td>
<td>6·4</td>
<td>8·0</td>
<td></td>
</tr>
<tr>
<td>Coverage and valuation adjustment*</td>
<td>-0·5</td>
<td>-0·5</td>
<td></td>
</tr>
<tr>
<td><strong>Commodity trade, total and balance</strong></td>
<td>87·4</td>
<td>131·0</td>
<td>78·0</td>
</tr>
<tr>
<td><strong>B. Invisibles (excluding investment income)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freight and insurance on international trade and shipments</td>
<td>1·2</td>
<td>3·0</td>
<td>13·5</td>
</tr>
<tr>
<td>Other transportation</td>
<td>5·7</td>
<td>8·0</td>
<td>6·9</td>
</tr>
<tr>
<td>Foreign travel</td>
<td>6·3</td>
<td>8·0</td>
<td>6·8</td>
</tr>
<tr>
<td>Government transactions</td>
<td>2·7</td>
<td>2·1</td>
<td>9·5</td>
</tr>
<tr>
<td>Other</td>
<td>4·0</td>
<td>5·1</td>
<td>3·0</td>
</tr>
<tr>
<td><strong>Invisibles, total and balance</strong></td>
<td>19·9</td>
<td>26·2</td>
<td>39·7</td>
</tr>
<tr>
<td><strong>C. Goods and Services (excluding investment income) total and balance</strong></td>
<td>107·3</td>
<td>157·2</td>
<td>117·7</td>
</tr>
<tr>
<td><strong>D. International Investment Income</strong></td>
<td>17·2</td>
<td>22·0</td>
<td>4·7</td>
</tr>
<tr>
<td><strong>E. Goods and Services, total and balance</strong></td>
<td>124·5</td>
<td>179·2</td>
<td>122·4</td>
</tr>
<tr>
<td><strong>F. Transfer Payments, total and balance</strong></td>
<td>11·5</td>
<td>n.a.</td>
<td>24·1</td>
</tr>
<tr>
<td><strong>G Balance on Current Account and Transfers</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Capital Account</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprises, short and long-term</td>
<td>19·5</td>
<td>n.a.</td>
<td>13·0</td>
</tr>
<tr>
<td>Government, short and long-term</td>
<td>4·2</td>
<td>n.a.</td>
<td>2·2</td>
</tr>
<tr>
<td>Monetary institutions</td>
<td>4·9</td>
<td>n.a.</td>
<td>8·1</td>
</tr>
<tr>
<td><strong>H. Total Capital Movements</strong></td>
<td>28·5</td>
<td>n.a.</td>
<td>23·5</td>
</tr>
<tr>
<td><strong>I. Errors and Omissions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Including exports and imports of non-monetary gold.

29. Total exports of goods and services (excluding income from investments abroad) are projected to grow from £1177.7 million in 1964 to £1472.2 million in 1970, a rate of 3.8 per cent per year. Consequently the share of exports in monetary G.D.P. should fall from 56 to 47 per cent. This change is substantial, but it must be viewed against the background of the very high export ratio in 1964. A poor country with a small modern sector that
has developed on the basis of exports will normally export a high proportion of its monetary product. As the base of the economy becomes broader and domestic production more diversified, a larger proportion of domestic output is used within the country. The fall of exports in relation to monetary product is therefore not in itself an unhealthy sign. On the other hand, as a small country with a narrow domestic market, Kenya stands to gain from a high level of foreign trade and should continually strive to increase her exports so as to be able to import goods and services which can be produced better and more cheaply in other countries.

30. Imports of goods are projected to grow by 7.0 per cent annually during the Plan period. This is more than the projected growth of constant-price total G.D.P. (6.3 per cent), but less than that of constant-price monetary G.D.P. (7.1 per cent). During the decade 1954-64 imports increased by only 3 per cent per year while total G.D.P. rose by 6.0 per cent and monetary G.D.P. by 6.6 per cent. Thus, in recent years imports have been growing much more slowly than national income. In rapidly growing economies, whether highly industrialized or at an early stage of development, imports normally rise faster than national income. Thus, the relative stagnation of imports into Kenya during the decade ending in 1964 was atypical, and indeed Kenya’s net imports from outside East Africa jumped by 16 per cent in 1965 over 1964. While part of the increase was due to extraordinary imports of maize to meet the 1965 domestic shortage, the evidence suggests that imports in 1964 were below the long-run trend and imports are likely to rise faster in the future than during 1954-64. The import projections are based on the following assumptions:

(i) Consumer goods imports are projected to grow by £8.5 million, or 3½ per cent per year. This relatively slow increase reflects two factors—firstly, new and expanded industries producing consumer goods to replace previously imported ones (“import substitution”) should slow down the growth of consumer goods imports, and, secondly, a large part of the increased consumer expenditure will be incurred by lower-income groups who will spend a much lower proportion of their earnings on imported goods than the wealthier population groups. If consumer goods imports should tend to grow faster than projected, the Government will take appropriate measures to check the growth.

(ii) Imports of producers’ goods are projected to grow very rapidly by £17 million, or more than 7½ per cent per year. Three factors will contribute to this rise: increased use of modern inputs in agriculture as a result of development efforts in that sector; rapid growth of industrial output, requiring increased imports of many raw materials and components; and expansion of construction activities, involving imports of many types of materials. The projections in this category are based on past relationships between domestic output of certain goods and imported inputs.

(iii) Capital goods imports in 1964 represented about 50 per cent of the value of fixed investment undertaken in that year. Data from earlier years
show, however, that imports of capital goods fluctuated around 40 per cent of gross fixed capital formation. Capital goods imports in 1970 are set at 40 per cent of projected 1970 gross fixed capital formation, or £33 million.

31. Imports of invisibles, excluding investment income payments to abroad, are relatively insignificant compared to commodity imports. Table 6 shows how these imports are expected to increase. The projections are, of course, very approximate, but they do not significantly affect the overall picture. The total foreign trade projections for 1970 point toward an import surplus of £8.5 million excluding investment income payments, and £28 million including these payments. These figures correspond to the ones in Table 4. Thus, the projections for imports and exports and for investment and savings are mutually consistent. If the country can attain the savings level projected in Table 4, then it should also be able to increase exports and hold down imports sufficiently to limit the total current balance of payments deficit (excluding transfers) to about £28 million in 1970.

32. The current balance of payments deficit of £2 million in 1964 was more than covered by a net inflow of £12.6 million in transfers, consisting of a net inflow of about £16.8 million on Government account and a net outflow of £4.2 million on private account. Government transfers comprise mainly foreign aid grants, while private transfers include both money taken out of the country by emigrants and remittances to dependants overseas by Kenya residents. The figure for 1964 Government transfers includes a book-keeping transaction of £6 million corresponding to the U.K. Government’s cancelling Kenya’s obligation to repay a £6 million loan made in the 1950’s. It is also unlikely that new Government grants will be as high in 1970 as in 1964. While private transfers arising from emigration should be somewhat lower in 1970, remittances to dependants will remain a significant item. The net inflow of transfers in 1970 is therefore prudently projected at £1.5 million. Thus, £26.5 million out of the total current balance of payments deficit of £28 million in 1970 must be financed by a net inflow of capital from abroad. In 1964 there was a net recorded outflow of £5 million.* The gross inflow of capital excluding purely monetary transactions was about £15 million. Thus the gross outflow must have amounted to about £20 million. In Table 6 the outflow of capital is expressed in terms of an increase in assets held abroad. In a formal sense this is correct—capital transfers abroad by Kenya residents, or Kenya-based companies, result in additional income-earning foreign assets owned by Kenya residents. In fact, however, income from these assets is seldom transferred back to Kenya, and capital transfers abroad must be offset by additional inflow of capital into Kenya. Any prediction of capital transfer abroad in 1970 would be almost a pure guess. Supposing it were as

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*The figure for errors and omissions (£5.6 million) probably includes some unrecorded outflow of capital, but the total cannot be counted as capital outflow as it certainly contains unrecorded current transfers as well as errors and omissions in other items.
much as £15 million, * Kenya would have to find a total of £40 million in gross capital inflow. If foreign companies operating in Kenya reinvest earnings locally to the tune of £5-£10 million, the need for fresh capital inflow drops to between £30 and £35 million. The prospects for inducing such an inflow are discussed in Section G below.

D—Employment

33. Employment.—Most underdeveloped countries face a problem of unemployment and underemployment, and Kenya is no exception. No systematic study has been made of the employment situation in Kenya but the existence of urban unemployment is obvious, and many rural areas are overpopulated in the sense that there are not enough work opportunities to keep the labour force active during most of the year. Without a systematic employment study it is not possible to say exactly how large the labour force† is. A recent survey carried out in Tanzania indicated that the labour force represented about 37 per cent of the total population, with 58 per cent of the working population being male and 42 per cent female. However the survey also revealed that most of the women work on family farms or smallholdings, and represent only about one out of ten employed in nearly all other occupations, as wage earners or as self-employed.

34. Data on age-sex distribution in Kenya’s 1962 Population Census suggest that the male labour force represents between 20 and 21 per cent of the total population. On this assumption the male labour force in 1964 is estimated at 1.85 million. If it grows at the same rate as the population, i.e. 3 per cent per year, it should increase by 350,000 during the six-year period 1964-70. As for the total labour force, assuming that it represents 35 per cent of the population, it should increase by 600,000 between 1964 and 1970. These two figures provide some guidance for employment policy. Employment opportunities must increase by at least 400,000 if all able-bodied men are to find jobs, taking into account that at least one out of ten employment opportunities will be filled by women. It is impossible to say how many more jobs should be created in order to reduce existing unemployment and underemployment to tolerable levels. A considerable amount of underemployment should be eliminated without any new jobs being created because of the continued shift over the Plan period from subsistence agriculture to production for the market. One thing is certain: it is not necessary to increase gainful employment opportunities by as much as 600,000 to provide reasonably full employment. At the present stage of development most women who reach working age will continue to find their employment as working family members in farming.

*Part of the gross capital outflow consists of contractual repayments of foreign loans. While repayments in 1970 of existing loans are known, the total repayment burden in 1970 depends on the terms on which loans are obtained during the Plan period, and thus cannot be forecast accurately.

†The labour force is defined to include persons who are unemployed (i.e. actively seeking employment). It excludes persons in school, keeping house, and unable or unwilling to work.
### Table 7—The Growth of Employment, 1964 to 1970

<table>
<thead>
<tr>
<th></th>
<th>Number of persons, 000's (1)</th>
<th>Compound annual rate of growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1964</td>
<td>1970</td>
</tr>
<tr>
<td><strong>Population and Labour Force</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>9,104</td>
<td>10,850</td>
</tr>
<tr>
<td>Labour force(2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male(2)</td>
<td>1,850</td>
<td>2,200</td>
</tr>
<tr>
<td>Female</td>
<td>1,350</td>
<td>1,600</td>
</tr>
<tr>
<td>Total labour force</td>
<td>3,200</td>
<td>3,800</td>
</tr>
</tbody>
</table>

**Employment Reported in Annual Enumeration**

*All sectors except agriculture, forestry and fishing*

<table>
<thead>
<tr>
<th>Wage employment</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and other construction(3)</td>
<td>30-0</td>
<td>61-0</td>
<td>31-0</td>
</tr>
<tr>
<td>Services not included elsewhere</td>
<td>39-5</td>
<td>57-0</td>
<td>17-5</td>
</tr>
<tr>
<td>Banking, insurance and real estate</td>
<td>6-5</td>
<td>9-0</td>
<td>2-5</td>
</tr>
<tr>
<td>Government services(3)</td>
<td>124-5</td>
<td>167-0</td>
<td>42-5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>61-0</td>
<td>80-0</td>
<td>19-0</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>2-5</td>
<td>3-0</td>
<td>0-5</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>51-0</td>
<td>64-0</td>
<td>13-0</td>
</tr>
<tr>
<td>Electricity and water</td>
<td>2-5</td>
<td>3-0</td>
<td>0-5</td>
</tr>
<tr>
<td>Transport, storage and communications(3)</td>
<td>46-0</td>
<td>52-0</td>
<td>6-0</td>
</tr>
<tr>
<td>Domestic services</td>
<td>18-5</td>
<td>20-0</td>
<td>1-5</td>
</tr>
<tr>
<td>Total wage employment</td>
<td>381-0</td>
<td>516-0</td>
<td>135-0</td>
</tr>
</tbody>
</table>

| Self employment, total | 53-5 | 68-0 | 14-5 | 4·0 |

<p>| Total wage employment and self-employed in all sectors except agriculture, etc. | 434-5 | 584-0 | 149-5 | 5·0 |</p>
<table>
<thead>
<tr>
<th><strong>Agriculture, forestry and fishing</strong></th>
<th><strong>1964</strong></th>
<th><strong>1970</strong></th>
<th><strong>Change from 1964 to 1970</strong></th>
<th><strong>Per cent</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large farms—employees</td>
<td>193.5</td>
<td>190.0</td>
<td>-3.5</td>
<td>-0.3</td>
</tr>
<tr>
<td>Settlement farms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owners</td>
<td>15.0</td>
<td>35.0</td>
<td>20.0</td>
<td>15</td>
</tr>
<tr>
<td>Family members (4)</td>
<td>28.5</td>
<td>65.0</td>
<td>36.5</td>
<td>15</td>
</tr>
<tr>
<td>Employees</td>
<td>7.0</td>
<td>44.0</td>
<td>37.0</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total settlement farms</strong></td>
<td>50.5</td>
<td>145.0</td>
<td>94.5</td>
<td>19</td>
</tr>
<tr>
<td>Other farms (producing mainly for market)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owners and family members (4) (incl. large farms)</td>
<td>16.0</td>
<td>(50.0)</td>
<td>34.0</td>
<td>(21)</td>
</tr>
<tr>
<td>Employees</td>
<td>7.5</td>
<td>(15.0)</td>
<td>7.5</td>
<td>(12)</td>
</tr>
<tr>
<td><strong>Total other farms</strong></td>
<td>(23.5)</td>
<td>(65.0)</td>
<td>41.5</td>
<td>(18.5)</td>
</tr>
<tr>
<td><strong>Total agriculture</strong></td>
<td>267.5</td>
<td>399.0</td>
<td>131.5</td>
<td>6.9</td>
</tr>
<tr>
<td>Forestry and fishing—employees</td>
<td>0.5</td>
<td>1.5</td>
<td>1.0</td>
<td>(20)</td>
</tr>
<tr>
<td><strong>Total wage employment and self-employed in agriculture, etc.</strong></td>
<td>268.0</td>
<td>400.0</td>
<td>132.0</td>
<td>6.9</td>
</tr>
<tr>
<td><strong>TOTAL REPORTED EMPLOYMENT, ALL SECTORS</strong></td>
<td>702.5</td>
<td>984.0</td>
<td>281.5</td>
<td>5.8</td>
</tr>
<tr>
<td><strong>NON-REPORTED EMPLOYMENT IN THE MONETARY ECONOMY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CRUDE ESTIMATES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture—wage-earners on small farms</td>
<td>(50.0)</td>
<td>(100.0)</td>
<td>(50.0)</td>
<td>(12)</td>
</tr>
<tr>
<td>Fishing—full-time fishermen producing for the market</td>
<td>11.0</td>
<td>21.0</td>
<td>10.0</td>
<td>11</td>
</tr>
<tr>
<td><strong>TOTAL NON-REPORTED EMPLOYMENT</strong></td>
<td>61.0</td>
<td>121.0</td>
<td>60.0</td>
<td>12</td>
</tr>
<tr>
<td><strong>GRAND TOTAL, ESTIMATED EMPLOYMENT IN THE MONETARY ECONOMY—MALE</strong></td>
<td>660</td>
<td>935</td>
<td>275</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>FEMALE</strong></td>
<td>105</td>
<td>170</td>
<td>65</td>
<td>8.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>765</td>
<td>1,105</td>
<td>340</td>
<td>6.3</td>
</tr>
</tbody>
</table>
**Table 7—The Growth of Employment, 1964 to 1970—(Contd.)**

<table>
<thead>
<tr>
<th>Residual (≡ Labour Force in Subsistence Farming, on Farms Producing Small Quantities of Cash Crops, in Other Activities and Unemployed)(5)</th>
<th>Number of persons, 000's (1)</th>
<th>Change from 1964 to 1970</th>
<th>Compound annual rate of growth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1964</td>
<td>1970</td>
<td>Change</td>
</tr>
<tr>
<td>Male Above as per cent of male labour force or increase therein</td>
<td>64%</td>
<td>1,190</td>
<td>1,265</td>
</tr>
<tr>
<td>Female Above as per cent of female labour force or increase therein</td>
<td>92%</td>
<td>1,245</td>
<td>1,430</td>
</tr>
<tr>
<td>Total Above as per cent of total labour force or increase therein</td>
<td>76%</td>
<td>2,435</td>
<td>2,695</td>
</tr>
</tbody>
</table>

**Note.**—Figures in brackets denote very crude estimates.

1. Rounded to nearest 500.
2. The total labour force is assumed to correspond to 35 per cent of the population. The male labour force is assumed to be about 20·5 per cent of the total population.
3. The Labour Enumeration Surveys include Government construction workers and the E.A.C.S.O. self-contained services (Railways, Harbours, Post and Telecommunications) under Government. An estimate for Government construction workers is included under construction in this table and the E.A.C.S.O. services are included under Transport and communications.
4. Family members whose principal activity is working on the family farm.
5. Includes most of the small farmers who produce small quantities of cash crops (e.g. there are now 250,000 farmers growing coffee.)
35. Since the foregoing figure for the male labour force includes all able-bodied men, the question as to whether the total labour force will increase more or less rapidly than total population depends mainly on whether the participation of women in the labour force changes. Two opposing factors will make themselves felt here: with increasing urbanization a higher proportion of adult women will be living in urban areas where they will not exercise their traditional agricultural occupation; but on the other hand, again with urbanization, many more women will eventually qualify for and seek other types of jobs. In the short run, before improvements in educational levels make themselves fully felt, it is likely that the move to towns will reduce the participation of women in the labour force. One aspect of economic development, the rapid expansion of secondary schools and higher education, will tend to reduce the participation of men and women in the labour force, with special reference to the fifteen to twenty-year age group. Taking all factors into account, employment policy during the next decade can be based on the assumption that the labour force is unlikely to grow more rapidly than the total population.

36. Table 7 shows the numbers of new jobs that should be created during the Plan period. The Government's annual enumeration of employment provides a good basis for projecting job opportunities for wage-paid and salaried workers in non-agricultural activities. However, the survey gives a far from comprehensive picture of employment in small-scale agriculture, and its data on self-employment (working proprietors and persons working on their own account without any hired labour) are likewise incomplete. In order to obtain a realistic picture of the employment situation, it is therefore necessary to make some crude estimates of the present number of hired workers in small-scale agriculture and the self-employed. It is not possible, however, to indicate how many farmers will move from almost exclusively subsistence agriculture to selling significant amounts of crop or livestock products in the market. This should be kept in mind when interpreting Table 7.

37. The table shows that non-agricultural wage-paid and salaried employment should increase by about 135,000 between 1964 and 1970. To this must be added a very crude estimate of increased self-employment—the table suggests about 15,000. This latter estimate excludes ten of thousands of self-employed who are not at present covered by the annual enumeration. These are included with subsistence farmers and unemployed as a residual. Over the Plan period the proportion of the labour force employed in non-agricultural sectors of the economy will rise from 13½ to 15½ per cent, or in other words 25 per cent of the projected growth in the labour force will be absorbed outside agriculture. Assuming that nine-tenths of non-agricultural jobs are held by men, it can be concluded that the proportion of the male labour force employed in non-agricultural activities will rise from 21 to 24 per cent over the Plan period, and that more than 40 per cent of the increase in the male labour force will be absorbed outside agriculture. The employment projections therefore suggest a significant shift in the labour force.
from agricultural to non-agricultural activities. The crucial question is whether this shift will be sufficient to reduce unemployment. This will depend on how much more employment is created in agriculture and related activities (forestry and fisheries).

38. Table 7 shows increased employment of 192,000 persons in agriculture and fishing (excluding persons engaged almost exclusively in subsistence production). This projection is very crude and, as already noted, excludes the more intensive use of agricultural manpower in a large part of the present subsistence farming sector as a result of more production for the market. Thus, while the table includes only 25,000 small farmers in 1964 (of whom 15,000 were settlement farmers), the number of smallholders who grow coffee is around 250,000. The table therefore significantly underestimates the increase in agricultural employment opportunities likely to take place during the Plan period. Nevertheless, it shows that the proportion of the total labour force which is in subsistence farming or unemployed should fall from 76 to 71 per cent and that as much as 57 per cent of the increase in the labour force will be absorbed by jobs in the monetary sector of the economy. The picture is even more striking as regards the male labour force: the proportion in the subsistence sector will fall from 64 to 58 per cent, and four out of five able-bodied men attaining working age should be able to find employment in the monetary economy. As there will undoubtedly be substantial further demand for labour on small farms which will sell several times as much produce in 1970 as in 1964 but which, for statistical reasons, have been included under subsistence farming, it is most likely that the number of unemployed or underemployed will fall during the Plan period. During the first couple of years of the Plan period the impact of the Plan on employment will not be strong enough to reduce unemployment to a tolerable level. In order to reduce existing unemployment the Government will introduce special measures to create more jobs. The rapid acceleration of house building and construction and improvement of certain secondary roads which are included in the Plan, form a part of this policy.

39. While agriculture and related activities will still account for more than half of the additional employment created during the Plan period, it is of interest to see which sectors will create the most employment opportunities outside agriculture. In absolute numbers, Government services will provide the largest number of additional jobs, or about 42,500, excluding Government-employed construction workers and transport and communications staff. The increase will be especially marked in education and health services. The construction industry should be able to employ at least 30,000 additional people and is, apart from Government services, the non-agricultural sector that should help most to solve the employment problem. Three other sectors should create 13,000-20,000 additional jobs each, including self-employment. These are manufacturing, other services (including hotels and restaurants, recreation, and personal and business services), and wholesale and retail trade.
In construction, banking, insurance, and other services, wage and salaried employment should increase faster than in the non-agricultural economy as a whole. The increase in construction employment is projected at 12.5 per cent per year, as against 5.2 per cent in all non-agricultural activities. Employment should grow by between 4 and 5 per cent per year in most other sectors, with two major exceptions: the number of domestic servants is projected to increase by only 1 per cent per year and the number of transport and communications workers by 2 per cent annually. This latter estimate may be on the conservative side but it takes into account the fall in employment in that sector during the preceding decade.

40. Productivity and Income Levels.—Total Gross Domestic Product originating in agriculture, forestry, and fisheries is projected to increase from £17 to £54 million over the Plan period. The agricultural labour force (including unemployed) is projected to grow from 2.77 to 3.22 million. This means that output per head in these primary sectors should grow from £42.1 to £47.8, a rise of 2.2 per cent per year during the Plan period. In the non-agricultural sectors of the economy output is projected to grow from £165 million to £251 million, and employment from 433,000 to 584,000; thus output per employed in these sectors should grow from £380 to £430, a rise of 2.1 per cent annually. For the economy as a whole output per employee should rise from £88 to £106.5, a growth of 3.2 per cent per year. These figures show that as much as 40 per cent of the increase in output per head of the labour force will be due to a shift from jobs of low productivity to jobs of higher productivity. Much of this shift in turn reflects the movement in agriculture from subsistence farming to production for the market.

41. For each of the non-agricultural sectors different assumptions have been made regarding productivity. In construction it has been assumed to increase by 6 per cent per year, and in mining and quarrying by 4 per cent, mainly as a result of presently under-utilized capacity in these two sectors. The productivity growth rate assumed for transport and communications is 5 per cent per year, based on the trends of the last decade. In manufacturing, electricity, and water a figure of 3 per cent has been used, while in all service sectors except domestic services productivity has been assumed to increase by 2 per cent annually. It would be wrong to draw any conclusions from these figures as to the scope for wage improvements in the different sectors. Thus, the “productivity increase” in Government services is purely nominal. It is likely that the wage bill in this sector will grow faster than employment, even if wage rates are not changed, because of promotions and automatic increments. In other sectors productivity increases will frequently manifest themselves through an increase in the proportion of skilled jobs rather than higher output from existing jobs. Finally, in every sector the above projections for increases in output per head are based on the relationship between the growth of value added and the growth of employment. With the modernization of the economy, value added in most sectors will automatically include
larger amounts for servicing of capital, i.e. depreciation charges, interest and profit. In conclusion, the foregoing projections of increase in output per head of the labour force are no substitute for detailed studies which are required, industry by industry, as a guide to future wage policy.

E—Physical Targets

42. Chapters 6 to 11 describe in physical terms what is expected to happen under the Plan in the different sectors of the economy. The data given are based on even more detailed plans broken down by different sectors and individual provinces and districts. To give an overall picture of the physical progress which the Development Plan will bring, some of the more important targets to be reached by 1970 are listed in Table 8. It is not possible to show physical targets for all the important sectors of the economy. Economic development in Kenya is to a large extent dependant on actions by private enterprise and the people themselves, and while reasonably firm targets can be set for some sectors, in others the expected achievements cannot be stated with the same degree of precision. For example, while the Government can ensure that Kenya's hotel and lodge capacity is expanded to receive the projected increase in foreign visitors, physical targets for the manufacturing industries have to be much more vague. The planned expansion of the sugar industry makes it possible to suggest quantitative targets for the output of refined sugar, but it is not possible to foresee how many yards of different types of textiles will be produced, how many rubber tyres will be manufactured in Kenya, nor how many radios will be assembled here. These developments depend on the particular channels through which the general expansion planned for the manufacturing sector happens to flow; and this in turn is subject to many fortuitous circumstances, such as which foreign companies take the initiative to invest in Kenya, what lines of industrial activity attract the ablest local entrepreneurial talent, and so on.

43. Table 8 shows that significant changes will take place in most aspects of the country's economic and social life. Output of some important agricultural crops will increase very substantially. Thus, the coffee crop is expected to grow from less than 39,000 tons in 1964/65 to 70,000 tons in 1969/70; tea production should grow from 46 million lb. to 68 million lb.; while the output of cotton lint should increase from 23,000 bales to nearly 100,000. It is reasonably certain that some of these targets will be achieved. Most of the coffee trees and tea bushes that will bear in 1970 have already been planted, and barring abnormal weather conditions or severe ravages of disease, the target output should be forthcoming. Achievement of the cotton and fisheries targets, on the other hand, depends largely on the response of cotton growers and fishermen, both existing and potential, to the incentives and assistance offered by the Government. Achievement of targets in manufacturing depends not only on Kenya citizens and residents, assisted by the Government; many new industrial units foreseen in the Plan will require foreign capital and initially foreign management to get started. As
business confidence in Kenya is growing, it is hoped that targets for manu-
facturing may not only be achieved but even surpassed. For the substantial
share of the expansion which falls on the shoulders of businessmen resident
in Kenya, progress will once again depend on the willingness and ability
of the people to seize opportunities.

44. Much of the required infra-structure expansion—notably roads, air-
ports, schools, and hospitals—is the responsibility of the Kenya Government
and Local Authorities. In fields such as power, railways and harbours, posts
and telecommunications, and airlines, the Kenya Government participates
with other interests. The targets set out in all these fields should be reached.
There are, however, uncertainties which could lead to shortfalls. As shown
later in this chapter the Government will have to rely heavily on foreign
finance for implementation of many of its programmes. If such finance is
not forthcoming to the extent required, it will be difficult and in some cases
impossible to reach the relevant targets. Moreover, a large number of tech-
nicians are needed to plan and implement the building of roads, schools,
airfields, hospitals, etc., and if the necessary personnel should not be avail-
able locally or from abroad, many targets may prove beyond reach. All
targets have been set, however, on what the Government regards as realistic
assumptions about the inflow of foreign capital and the availability of
technicians.

<table>
<thead>
<tr>
<th>TABLE 8—TARGETS FOR 1970</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Agriculture (Chapter 6)</td>
</tr>
<tr>
<td>Crop production</td>
</tr>
<tr>
<td>Coffee</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Cotton (lint)—smallholders</td>
</tr>
<tr>
<td>Passion fruit (for juice)—smallholders</td>
</tr>
<tr>
<td>Pineapple (for canning)—smallholders</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Pyrethrum—smallholders</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Rice (paddy)—smallholders</td>
</tr>
<tr>
<td>Sugar cane (for white sugar)</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Tea (made)</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Wheat</td>
</tr>
<tr>
<td>of which smallholders and co-op. schemes</td>
</tr>
<tr>
<td>Livestock production (marketed)</td>
</tr>
<tr>
<td>Milk (including butterfat in milk equivalents)</td>
</tr>
<tr>
<td>of which smallholders</td>
</tr>
<tr>
<td>Beef</td>
</tr>
<tr>
<td>of which pastoralists, smallholders and co-op schemes</td>
</tr>
<tr>
<td>Table 8—(continued)</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Agriculture (Chapter 6)—(Contd.)</strong></td>
</tr>
<tr>
<td><strong>Settlement and other land transfer in the former Scheduled Areas</strong></td>
</tr>
<tr>
<td>Area purchased for organized smallholder settlement</td>
</tr>
<tr>
<td>Area of large-scale farms owned by private Africans or Government</td>
</tr>
<tr>
<td>No. smallholder settlers and co-operative farmers</td>
</tr>
<tr>
<td><strong>Irrigation</strong></td>
</tr>
<tr>
<td>Area under organized irrigation settlement</td>
</tr>
<tr>
<td>No. irrigation tenants</td>
</tr>
<tr>
<td><strong>Public agricultural credit outstanding to Kenya citizens (excl. crop finance and settlement)</strong></td>
</tr>
</tbody>
</table>

| **Tourism and Natural Resources** (Chapter 7) |
| **Tourism** |
| **Accommodation** |
| Game lodges | beds | 1964 | 400 | 1,400 |
| Nairobi hotels, international standard | " | 1964 | 1,100 | 1,600 |
| Coastal hotels | " | 1964 | 1,500 | 2,400 |
| Other hotels (Nairobi, up-country) | " | 1964 | 2,800 | 3,000 |
| **Total new beds** | " | " | 5,800 | 8,400 |
| **Net increase in beds** | " | " | " | 2,600 |
| **Existing hotels, additional beds equivalent resulting from modernisation** | " | " | " | 1,200 |
| **Tourist roads** |
| New or improved roads to and within national parks and game reserves | miles | " | " | 1,071 |
| **Tourist traffic** |
| No. of foreign visitors | no. | 1964 | 65,000 | 150,000 |
| Gross foreign exchange earnings | £m. | " | 7.0 | 15.0 |
| Net foreign exchange earnings | " | " | 5.0 | 11.0 |
| **Forestry** |
| Planted forests | acres | 1965 | 200,000 | 300,000 |
| **Fisheries** |
| Output of inland fisheries | tons | 1964 | 15,000 | 40,000 |
| of which Lake Rudolf | " | 1964 | 850 | 15,000 |
| Output of coastal fisheries | " | " | 5,000 | 20,000 |
| Total output fisheries | " | " | 20,000 | 60,000 |
| Full-time fishermen | no. | " | 11,500 | 22,500 |

<p>| <strong>Basic Services (Chapter 9)</strong> |
| <strong>Roads</strong> |
| Bitumen roads (excluding municipalities and townships) | miles | 1964 | 1,037 | 1,750 |
| All-weather gravel trunk roads | &quot; | &quot; | 1,205 | 1,740 |
| All-weather gravel secondary roads | &quot; | &quot; | 667 | 1,250 |
| <strong>Civil Aviation</strong> |
| Nairobi International Airport |
| Passengers handled | no. | 1964 | 418,000 | 950,000 |
| Freight, (incl. mail) | &quot; | &quot; | 1,000kgs. | 10,460 | 22,960 |</p>
<table>
<thead>
<tr>
<th>Social Services (Chapter 10)</th>
<th>Unit</th>
<th>Base year</th>
<th>Base year achievements</th>
<th>1970 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Secondary schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Government maintained and assisted schools only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student enrolment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form I</td>
<td>no.</td>
<td>1965</td>
<td>11,500</td>
<td>17,600</td>
</tr>
<tr>
<td>Form II</td>
<td>&quot;</td>
<td>&quot;</td>
<td>8,700</td>
<td>15,800</td>
</tr>
<tr>
<td>Form III</td>
<td>&quot;</td>
<td>&quot;</td>
<td>6,100</td>
<td>14,300</td>
</tr>
<tr>
<td>Form IV</td>
<td>&quot;</td>
<td>&quot;</td>
<td>5,400</td>
<td>13,000</td>
</tr>
<tr>
<td>Total Forms I-IV</td>
<td>&quot;</td>
<td>&quot;</td>
<td>31,700</td>
<td>60,700</td>
</tr>
<tr>
<td>Form V</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1,100</td>
<td>2,500</td>
</tr>
<tr>
<td>Form VI</td>
<td>&quot;</td>
<td>&quot;</td>
<td>700</td>
<td>2,300</td>
</tr>
<tr>
<td>Total Forms V-VI</td>
<td>&quot;</td>
<td>&quot;</td>
<td>1,800</td>
<td>4,800</td>
</tr>
<tr>
<td>Grand Total, Forms I-VI</td>
<td>&quot;</td>
<td>&quot;</td>
<td>33,500</td>
<td>65,500</td>
</tr>
<tr>
<td>New openings in Form I</td>
<td></td>
<td></td>
<td></td>
<td>433</td>
</tr>
<tr>
<td>Teachers</td>
<td>no.</td>
<td>1965</td>
<td>1,700</td>
<td>2,950</td>
</tr>
<tr>
<td>Teacher training—output per year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary school teachers</td>
<td>no.</td>
<td>1965</td>
<td>2,250</td>
<td>2,900</td>
</tr>
<tr>
<td>Secondary trade and technical schools—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase in student enrolment</td>
<td>per cent</td>
<td></td>
<td>—</td>
<td>84</td>
</tr>
<tr>
<td>Kenya Polytechnic—student enrolment</td>
<td>no.</td>
<td>1965</td>
<td>1,300</td>
<td>2,300</td>
</tr>
<tr>
<td><strong>Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital beds</td>
<td>no.</td>
<td>1964</td>
<td>9,683</td>
<td>11,163</td>
</tr>
<tr>
<td>Health Centres</td>
<td>&quot;</td>
<td>&quot;</td>
<td>160</td>
<td>270</td>
</tr>
<tr>
<td>Health Inspectors</td>
<td>&quot;</td>
<td>&quot;</td>
<td>117</td>
<td>350</td>
</tr>
<tr>
<td>Community nurses qualified per year</td>
<td></td>
<td></td>
<td>1965</td>
<td>none</td>
</tr>
<tr>
<td>Kenya Registered Nurses qualified per year</td>
<td></td>
<td></td>
<td>&quot;</td>
<td>350</td>
</tr>
<tr>
<td>Year</td>
<td>&quot;</td>
<td>&quot;</td>
<td>few</td>
<td>60</td>
</tr>
<tr>
<td>National Youth Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted men</td>
<td>no.</td>
<td>1965</td>
<td>3,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Enlisted women</td>
<td>&quot;</td>
<td>&quot;</td>
<td>nil</td>
<td>200</td>
</tr>
</tbody>
</table>

*Refers in general to the calendar year 1970, in some cases to 1969/70, and in cases where a point of time is indicated, to the end of the Plan period, i.e. 30th June, 1970.

F—Investment

45. Table 9 describes the Gross Fixed Investment expected to be undertaken during the Plan period. The figures for Central Government, E.A.C.S.O. self-contained services, and public and semi-public enterprises and financial institutions are identical with the Plan figures derived from the programmes described in Chapters 6-11. The forecast of Local Authority investment is very approximate, and two-thirds of it has not even been allocated among purposes. For the private sector a few figures are reasonably firm: electricity, East African Airways (included under transport and communications), manufacturing and hotels. These investments are discussed at length in
Chapters 7, 8 and 9*. The overall picture is that Gross Fixed Investment over the Plan period should amount to £320 million, of which £72 million will be undertaken directly by the Central Government, £20 million by Local Authorities, £23 million by the E.A.C.S.O. self-contained services, i.e. railways, harbours, posts and telecommunications, and £30 million will be invested by other public or semi-public organizations, either directly or via loans and equity in private enterprises. Privately financed investment is projected at £180 million, which will probably prove to be on the low side if most of the public investment programme is implemented on schedule. No separate figure has been included for purchase of construction equipment, and the private transport sector may easily invest more than suggested in the table.

46. The question will inevitably be raised whether Kenya has the capacity to implement an investment programme of the magnitude shown in Table 9. Total investment of £325 million means an annual average of £65 million, which is almost twice the level of investment in 1964. Table 10 shows in which sectors investment will be increased, and compares the higher level of Plan investment with levels achieved during the decade 1955-64, by sector and expenditure category. Government investment (including investments undertaken directly by other public and semi-public bodies) should increase from less than £6.5 million in 1964 to almost £20 million annually. It will certainly require determined efforts to achieve this planned increase. On the other hand, it should be pointed out that Government investment reached £12.5 million as early as 1961. Moreover, an examination of the planned expenditure categories shows that the very substantial acceleration planned is not unrealistic: tripling of Government-sponsored housing construction is more a question of finance than of executive capacity; the planned rapid growth of other Government building activities is based on construction of schools, hospitals, and Government administrative buildings, and may perhaps be hampered by shortage of planning capacity, but is not beyond reach; while most of the increased activity under the heading of “construction” pertains to road building, for which several external aid agencies have already pledged financial support or are on the verge of doing so. The programmes for large farms and E.A.C.S.O. self-contained services are below previously attained levels and should not be different to implement. The much increased investment programme for small farms may, on the other hand, be more difficult to realize. Out of total annual investment of £5.5 million given in Table 10, £2.9 million will be financed by the Government. Whether the target for private investment will be reached depends primarily on the response of domestic and foreign investors to prevailing conditions in Kenya, including measures taken by the Government to

*Note that the figures for manufacturing also include an estimate for replacement of existing capital equipment, whereas the figure given in Table 2 of Chapter 8 (£44.5 million) only includes new investment.
<table>
<thead>
<tr>
<th></th>
<th>Central Govt.</th>
<th>Local Authorities</th>
<th>E.A.C.S.O. Self-contained Services</th>
<th>Other Public or Semi-Public</th>
<th>Total Public and Semi-Public</th>
<th>Private</th>
<th>Total</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>3.9</td>
<td>—</td>
<td>—</td>
<td>13.8</td>
<td>17.7</td>
<td>30.0</td>
<td>47.7</td>
<td>14.7</td>
</tr>
<tr>
<td>Livestock</td>
<td>3.0</td>
<td>—</td>
<td>—</td>
<td>1.4</td>
<td>4.4</td>
<td>3.0</td>
<td>7.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Forestry</td>
<td>5.9</td>
<td>—</td>
<td>—</td>
<td>5.9</td>
<td>—</td>
<td>—</td>
<td>6.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Fisheries</td>
<td>0.5</td>
<td>—</td>
<td>—</td>
<td>0.5</td>
<td>2.0</td>
<td>1.0</td>
<td>3.0</td>
<td>0.8</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>0.3</td>
<td>—</td>
<td>—</td>
<td>0.6</td>
<td>1.0</td>
<td>1.3</td>
<td>2.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.2</td>
<td>—</td>
<td>—</td>
<td>8.5</td>
<td>8.7</td>
<td>53.0</td>
<td>61.7</td>
<td>19.0</td>
</tr>
<tr>
<td>Electricity and water</td>
<td>3.7</td>
<td>—</td>
<td>—</td>
<td>3.7</td>
<td>24.0</td>
<td>27.7</td>
<td>8.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Transport and communications</td>
<td>23.0</td>
<td>2.5</td>
<td>22.8</td>
<td>—</td>
<td>48.3</td>
<td>15.0</td>
<td>63.3</td>
<td>19.6</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>—</td>
<td>—</td>
<td>2.0</td>
<td>2.0</td>
<td>5.0</td>
<td>7.0</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>9.1</td>
<td>—</td>
<td>—</td>
<td>4.1</td>
<td>13.2</td>
<td>—</td>
<td>22.1</td>
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<td>Housing (not incl. elsewhere)</td>
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<td>11.1</td>
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<td><strong>29.8</strong></td>
<td><strong>145.0</strong></td>
<td><strong>180.0</strong></td>
<td><strong>325.0</strong></td>
<td><strong>100.0</strong></td>
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</table>

*£7·8m. for housing is included elsewhere.
†Excluding public loans to small traders for investment in stocks.
encourage such investment. Compared with the investment level of £18.5 million reached in 1964 the planned average level of 31.5 million may appear high. But it is not high compared with investment levels in the late 1950's. Much of the increase will be in building and construction, reflecting rapid industrial expansion, construction of the power station at Seven Forks, and expansion of the hotel industry as well as the urgent need for new office buildings.

47. The projected sharp increase in investment activity raises questions concerning the capacity of domestic industry to cope with the higher level of investment demand. This is no problem with transport equipment and other capital goods which have to be imported; rather, it concerns primarily the construction industry. Construction of all types of buildings is projected at an average annual rate of £19 million during the Plan period, as against a previous peak of £18 million in 1955. Due to intervening price changes, the Plan target implies an average volume of physical activity below the 1955 peak, although non-residential construction will be considerably higher (an average of £14 million during the Plan period as against a previous peak of £8.5 million and a 1964 level of £5.5 million). A rapid increase is in store for construction other than building, projected at an average of £18 million per year over the Plan period as against a previous peak of £11.5 million in 1962 and a 1964 level of £7.5 million. However, £3.5 million of the additional annual Plan activity is slated to occur on small farms, where it will not add to the strains on the established construction industry. The overall rise in construction will create a substantial number of new employment opportunities. However, careful forward planning will be required to avoid bottlenecks in the industry, notably by ensuring that technical experts and machinery are available as needed.

48. Table 11 projects capital formation in different sectors over the Plan period. Capital formation increases very sharply from a 1964 level of £35 million to a projected 1966/67 level of £64 million. It should be noted that, of the total increase of £29 million, more than £15 million is projected for the private sector. A substantial part of this rise reflects planned Government-financed activities in agriculture and higher investment by small farmers (almost £5 million in all), while investment in new manufacturing units and power supply will contribute another £7-£8 million. Finally, in 1966/67 East African Airways will take delivery of its VC 10's, Kenya's share accounting for more than £3 million. Of the increased investment (approximately £10 million) to be undertaken directly by the Government and other public bodies, E.A.C.S.O. self-contained services alone account for about £2 million, residential construction more than £1 million, road building close to £3 million, and building of secondary schools and the expansion of University College, Nairobi, about £2 million. Thus, the sharp increase in investment projected for 1966/67 is based on firm plans and may be regarded as feasible in present circumstances.
<table>
<thead>
<tr>
<th>Plan period annual average</th>
<th>1964</th>
<th>Previous Peak level for sector and year(s) achieved</th>
<th>Peak level, individual items and year(s) achieved</th>
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<tr>
<td><strong>GOVERNMENT</strong></td>
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<tr>
<td>Residential buildings</td>
<td>2.35</td>
<td>0.71</td>
<td>3.11 (1961)</td>
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<td>Other buildings</td>
<td>6.00</td>
<td>1.23</td>
<td>2.99 (1957)</td>
</tr>
<tr>
<td>Non-building construction</td>
<td>7.70</td>
<td>3.23</td>
<td>5.56 (1960)</td>
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<td>Transport equipment</td>
<td>0.85</td>
<td>0.63</td>
<td>0.74 (1961-62)</td>
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<td>0.69</td>
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<td><strong>SMALL FARMS</strong></td>
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<tr>
<td>Construction</td>
<td>3.40</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>0.40</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
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<td>n.a.</td>
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<td>6.82 (1956)</td>
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<td>4.22 (1956)</td>
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<td>3.52 (1962)</td>
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<td>1.08 (1955)</td>
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<td>0.41</td>
<td>0.72 (1957)</td>
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<td>0.57</td>
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<td></td>
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<td><strong>Total</strong></td>
<td>4.56</td>
<td>3.92</td>
<td>9.17 (1955)</td>
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<td><strong>E.A.C.S.O.</strong></td>
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<tr>
<td>Construction</td>
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<td>0.98</td>
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<td>Commercial transport</td>
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<td>Other equipment</td>
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<td>0.57</td>
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<td><strong>Total</strong></td>
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<td><strong>TOTAL INVESTMENT</strong></td>
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**Notes.**—General—The breakdown of projected investments between expenditure categories is approximate.

The item 'Unallocated' covers expenditure on items such as architectural and engineering services.

*Figures in these categories (small farms, large farms, and private non-agricultural) include investment financed by Government, which is especially significant in the case of small farms.

†Included under private non-agricultural.
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<td>£million</td>
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<td>C. Central Government</td>
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<td>16.5</td>
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<td>17.2</td>
<td>18.2</td>
<td>72.1</td>
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<td>3.3</td>
<td>5.0</td>
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<td>F. Grand Total, Capital Formation, Private and Public</td>
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<td>64.0</td>
<td>66.0</td>
<td>72.0</td>
<td>81.0</td>
<td>325.0</td>
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</table>

*The estimates of capital formation under the Central Government Development Budget take into account likely delays in implementation during 1965/66 and 1966/67 (see further explanation in para. 55 below), and to that extent differ from the estimates of capital formation in Table 12.
G—Financing the Development Plan

49. In Section B on the use of the nation’s resources it was estimated that the current balance of payments deficit, which must be financed by a net inflow of transfers and foreign capital, should increase from £2 million in 1964 to £28 million in 1970. The inflow in 1970 together with national savings during the same year should be sufficient to finance the 1970 development effort. This figure alone, however, does not tell the full story of the Plan financial requirements. Three aspects have to be taken into account: (i) phasing of Plan expenditure; (ii) the extent to which national savings can be channelled into desirable investment projects; and (iii) transfer of capital abroad.

50. The Plan programmes for most sectors of the economy have one thing in common: development expenditure is planned to rise sharply, reach a very high level already in 1966/67, and subsequently rise more slowly. In some cases it is planned to remain at the 1966/67 level, or even taper off. Only in a few sectors do planned expenditures show a tendency to rise throughout the Plan period. Table 11 in Section F summarizes the planned capital expenditure of public and semi-public agencies and includes tentative figures for private investment. The table shows public sector expenditure attaining a very high level already in 1967, then rising slowly during the rest of the Plan period. The reason for this steep acceleration of expenditure is that since Independence all ministries and public and semi-public organizations have concentrated on planning new development projects, and within most ministries major projects are now getting ready for implementation. It is desirable that these projects should start as soon as possible, even if it implies a sharp increase in development expenditure. Most public sector projects will be financed largely through foreign aid of one type or another, and capital imports will therefore rise in line with higher investment. Two bottlenecks may occur: (i) the demand for local finance may rise faster than can be met from domestic resources; and (ii) if many projects which require the same kinds of skilled manpower get underway simultaneously, there may be shortages of such manpower. The Government will do its utmost to start different projects at the times shown in the Plan, but the difficulties listed above may lead to some postponement by six months to a year. Consequently, the acceleration of development expenditure will probably become less pronounced than is implied in the figures for individual sections of the Plan. Table 11 shows the effects of possible delays in the implementation of parts of the Plan, and the analysis in this section is based on the assumption that some expenditure will be postponed as shown in Table 11.

51. The time-phasing of the development expenditure means that investment will outrun domestic saving substantially from 1967 onwards. While
Gross Domestic Savings* have recently been higher than Gross Domestic Investment, it is likely that investment will exceed savings by more than £10 million in 1967 and close to £10 million in 1968 and 1969. Taking into account investment income payments to abroad this means that Kenya may have a current balance of payments deficit (excluding transfers) of the order of £26 to £28 million each year from 1967 to 1970. Inflow of foreign capital should be adequate to cover these deficits (see Table 13). If a substantial current balance of payments deficit occurs during the next couple of years, it will be a sign of full implementation of the Plan, rather than an indication of an upcoming balance of payments crisis, which will develop only if imports rise while exports and the economy as a whole stagnate. The balance of payments situation must be kept under constant review, but an increasing deficit is in itself no reason for concern.

52. About one-fourth of Gross Domestic Savings in 1964 represented earnings by foreign companies and institutions and non-residents of Kenya on their investments in Kenya. This investment income payable abroad may either be transferred abroad or reinvested in Kenya. Technically speaking, such reinvestment constitutes capital import. An estimated 30 per cent of 1964 Gross Domestic Savings represented depreciation allowances. Normally an enterprise sets aside depreciation allowances in order to finance replacement of existing buildings and equipment at some later date, or else uses the money for new investment or repayment of loans. In recent years, however, many enterprises in Kenya have tended to run down their capital and transfer abroad as much as possible of their current gross earnings, including depreciation allowances. During the Plan period it is likely that foreign-owned enterprises will invest part of their profits in Kenya, probably between £5 million and £10 million annually. This will constitute a significant part of the capital import. Of the remaining 40-45 per cent of Gross Domestic Savings, part will be reinvested in the same enterprises, part invested in other activities and part transferred abroad. During the Plan period it is essential that all Gross National Savings—i.e. savings of Kenya citizens and enterprises owned by them—should be mobilized for financing the Plan. Reinvestment in productive enterprises is normally something to be encouraged in the interests of development. However, because of a relatively slow expansion of demand for certain goods and services, some enterprises will not need to expand as rapidly as their internal savings permit. Investment within the firm may in such cases merely involve purchase of labour-saving

*Gross Domestic Savings equal G.D.P. less private and government consumption. It includes, therefore, income arising from foreign investments in Kenya and depreciation allowances. Gross National Savings is obtained by deducting investment income payments abroad from Gross Domestic Savings. Both figures can be compared with Gross Domestic Investment: Gross National Savings is domestic finance available for investment, while Gross Domestic Savings is local finance available for investment if profits on foreign investment are reinvested in Kenya. In fact, a significant part of such profits will be reinvested (although another significant part will be paid abroad as dividends and contractual interest on loans).
equipment and a reduction in employment. While the Government encourages modernization of the nation's productive capacity, premature introduction of labour-saving equipment is undesirable for several reasons. Surplus savings should therefore preferably be invested in enterprises whose market is expanding rapidly or in economic and social infra-structure. This can be done by channelling savings into financial institutions which in turn invest the money in Plan projects. The strengthening of financial institutions which forms an essential part of the Plan is intended to facilitate the channelling of all types of savings into the planned development effort. A large part of savings by smaller enterprises will take the form of repayment of debt, thus financing external obligations of the agencies which received the original loans from abroad, or making finance available for new lending under the Plan. A growing number of wage-earners deposit their savings in savings banks or other financial institutions. On the other hand, many small savers traditionally keep their savings in the form of currency. Especially where bank notes are involved this practice does not immobilize the savings in question because, for the sake of preserving liquidity, the Central Bank can make equivalent credit available to either the public or private sector. However, the contribution of small savers will at best form a small fraction of the finance required for the Plan, whose success therefore depends to a considerable extent on whether the savings of medium to large-scale enterprises in agriculture, industry, trade, transport and other services find their way into financing the Plan rather than into investments with a low development priority or to foreign countries. Part of these savings must become available to the Government, e.g. through subscriptions to Government loans.

53. In recent years large sums of money have been transferred abroad, legally or through foreign exchange manipulations, by individuals and companies resident in Kenya. Some of these transfers have been linked with emigration from Kenya, but most have been made by people who are planning for the contingency that they may want to emigrate and retire or set up enterprises elsewhere at some future time. Such transfers have been made partly out of current net income, but as pointed out in paragraph 52, part of what normally should have been set aside as depreciation allowances has been sent abroad, and accumulated savings have also left the country. The Government recognizes the right of approved foreign investors to repatriate their earnings and invested capital. This policy is fundamental in order to encourage new foreign private investment in Kenya. On the other hand, the Government is encouraged to see a number of foreign investors retaining a major part of their earnings in Kenya and reinvesting them locally. In so doing these investors are helping the nation to progress economically, and thus indirectly helping themselves. It is hoped that this pattern of reinvestment will become even more widespread during the Plan period.

54. The Government will continue its policy of allowing bona fide emigrants to benefit from their investments in Kenya. But there are no objective reasons whatsoever why Kenya residents and Kenya-based companies should
not invest their savings in Kenya, where they can evaluate investment opportunities much better than in some distant land. If the outflow of local private capital were to continue, much of the inflow of fresh capital projected in the Plan would be immobilized, because it would merely fill the gap created by the capital outflow. Confidence in Kenya's economic future is high, as shown by the fact that much foreign private capital is being invested in old and new enterprises, and foreign governments and international organizations are committing themselves to large loans and grants to Kenya. In this situation the outflow of local private capital is an anomaly which—if it continues—will force the Government to adopt even stricter controls on such movements.

**Financing Central Government Development Expenditure**

55. Total public expenditure on projects and programmes included in the various chapters of the Plan amounts to £143.5 million (see Table 12). This figure excludes most expenditure on land transfer and development in the former Scheduled Areas (for excluded items see Table 1, Chapter 6); it also excludes investment to be undertaken by Local Authorities out of their own resources, e.g. building of primary schools, roads, health centres, housing and various communal amenities. Some 64 percent of the total, or £92 million, will be financed under the Central Government's annual Development Budgets, for which at least £61 million should be forthcoming as loans and grants from foreign countries and international organizations, leaving £31 million to be found from local resources. The annual claim on local resources is projected as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Development* Budget</th>
<th>Estimated expenditure</th>
<th>Foreign resources</th>
<th>Local resources</th>
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<tr>
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<td>£13.8</td>
<td>£11.0</td>
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<td>1966/67</td>
<td>£19.3</td>
<td>£16.0</td>
<td>£11.0</td>
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<td>1967/68</td>
<td>£20.7</td>
<td>£20.0</td>
<td>£12.5</td>
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<tr>
<td>1968/69</td>
<td>£19.0</td>
<td>£21.5</td>
<td>£14.0</td>
<td>£7.5</td>
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<tr>
<td>1969/70</td>
<td>£19.4</td>
<td>£23.5</td>
<td>£15.5</td>
<td>£8.0</td>
</tr>
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<td><strong>Total</strong></td>
<td><strong>92.2</strong></td>
<td><strong>92.0</strong></td>
<td><strong>61.0</strong></td>
<td><strong>31.0</strong></td>
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*Based on Table 12 (excluding expenditure on land transfer and development in the former Scheduled Areas).

Actual expenditure under the 1964/65 Development Budget came to about 80 percent of the Budget total. No exact data are available for the financial year 1965/66, but Exchequer Return figures suggest that actual expenditure during this year will also fall substantially short of the Budget. It is likely that this situation will also prevail during 1966/67, whose budget figures will be substantially higher than those for 1965/66. These "shortfalls" represent to some extent inadequate forward planning and implementation and are typical of nearly all countries embarked on a major development programme. It is desirable to reduce this discrepancy to a minimum, but during a period in which the Government is striving to raise development
expenditure rapidly, annual shortfalls are bound to be substantial. Stricter budgeting would eliminate some, but not all, of the shortfalls, but at the same time it would probably necessitate frequent supplementary estimates in order to make possible the implementation of projects which prove to be ready sooner than expected. Thus, an equally good solution is to provide for rates of expenditure on individual projects which add up to a global budget figure somewhat higher than the expected total rate of implementation, resulting in an apparent need for local financial resources higher than actual requirements. In terms of implementation of the Plan, shortfalls in the earlier years merely mean that certain expenditures are postponed for some time, usually less than a year. Taking into account such delays, over the Plan period the need for local resources should grow from about £3 million in 1965/66 to £8-£9 million in 1969/70.

56. Assuming that all recurrent revenue is included in the recurrent budget, the Government's domestic financial resources consist of the surplus of recurrent revenue over recurrent expenditure, domestic borrowing, and the sale of Government assets. Some recurrent revenue—e.g. income from development projects—may, of course, be allocated directly to the Development Budget, but such an accounting device does not change the fundamental picture set out above. For the two financial years 1964/65 and 1965/66 taken together, recurrent Government revenue and expenditure were roughly in balance. The Plan will lead to a rapid expansion of many types of recurrent government expenditure (extension services for agriculture, annual recurrent expenditure on education and health, etc.) and it may be some time before the Government will be able to achieve a surplus in the recurrent budget. It would be unsafe to count on any significant recurrent surplus during the first four years of the Plan. It is hoped, however, that towards the end of the Plan period the Government's tax revenue base will have expanded so much that a modest surplus of about £3 million will be attained during 1969/70. This leaves nearly £28 million to be found through domestic borrowing, as sale of assets will not contribute a significant amount. Government borrowing will take several forms: borrowing from the banking system, insurance companies and the National Social Security Fund; and sale of bonds. Some Government-controlled institutions hold their assets in foreign bonds, and these can be exchanged for Kenya Government Stock, thus further enhancing the borrowing opportunities. Finally, the Central Bank will have to increase the fiduciary issue in step with the rising domestic demand for cash associated with expansion of the monetary economy; this will be done to a considerable extent through purchase of Treasury Bills and Government Stock, thus making additional finance available to the Government. During the Plan period the Government should easily be able to raise the required £28 million in additional credit without having to resort to inflationary means of financing. Account must also be taken of conversion of existing debt, which is estimated at no more than £4.5 million for the period 1966/70 and therefore does not represent any major problem.
<table>
<thead>
<tr>
<th>TABLE 12—PUBLIC SECTOR DEVELOPMENT EXPENDITURE (£1,000)</th>
<th>1965/66</th>
<th>1966/67</th>
<th>1967/68</th>
<th>1968/69</th>
<th>1969/70</th>
<th>Total</th>
<th>Per Cent</th>
<th>Total Central Government only</th>
<th>Per Cent</th>
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<tr>
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<td>6,504</td>
<td>7,510</td>
<td>6,730</td>
<td>5,840</td>
<td>6,210</td>
<td>32,794</td>
<td>22·9</td>
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<td>21·5</td>
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<td>1,835</td>
<td>2,040</td>
<td>6,383</td>
<td>4·4</td>
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<td><strong>Total—Agriculture</strong></td>
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<td>8,290</td>
<td>7,995</td>
<td>7,675</td>
<td>8,250</td>
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<td><strong>Total—Natural Resources</strong></td>
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<td>1,907</td>
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<td>835</td>
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<td>87</td>
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<td>496</td>
<td>601</td>
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<td>990</td>
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<td>2,545</td>
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<td>10,135</td>
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**Table 12—Public Sector Development Expenditure—(Contd.)**

(£1,000)

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<tr>
<th></th>
<th>1965/66</th>
<th>1966/67</th>
<th>1967/68</th>
<th>1968/69</th>
<th>1969/70</th>
<th>Total</th>
<th>Per Cent</th>
<th>Total Central Government only</th>
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<td><strong>Basic Services</strong></td>
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<td><strong>Total—Basic Services</strong></td>
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<td>120</td>
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<td>13</td>
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121
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<td>Armed Forces</td>
<td>219</td>
<td>157</td>
<td>426</td>
<td>396</td>
<td>332</td>
<td>1,530</td>
<td>1·1</td>
<td>1,530</td>
<td>1·6</td>
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<tr>
<td>Police</td>
<td>195</td>
<td>295</td>
<td>277</td>
<td>150</td>
<td>150</td>
<td>1,067</td>
<td>0·7</td>
<td>1,067</td>
<td>1·2</td>
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<tr>
<td>Prisons</td>
<td>60</td>
<td>183</td>
<td>224</td>
<td>203</td>
<td>118</td>
<td>788</td>
<td>0·5</td>
<td>788</td>
<td>0·8</td>
</tr>
<tr>
<td>Approved Schools</td>
<td>10</td>
<td>53</td>
<td>53</td>
<td>12</td>
<td>9</td>
<td>137</td>
<td>0·1</td>
<td>137</td>
<td>0·1</td>
</tr>
<tr>
<td><strong>Total—Security and Defence</strong></td>
<td><strong>484</strong></td>
<td><strong>688</strong></td>
<td><strong>980</strong></td>
<td><strong>761</strong></td>
<td><strong>609</strong></td>
<td><strong>3,522</strong></td>
<td><strong>2·4</strong></td>
<td><strong>3,522</strong></td>
<td><strong>3·7</strong></td>
</tr>
</tbody>
</table>

| Total Public Sector Expenditure* | 22,213 | 31,495 | 30,629 | 28,078 | 31,187 | 143,602 | 100 | 92,299 | 100 |

*Excluding land transfer and development in former Scheduled Areas, and expenditure by Local Authorities not financed by the Central Government.

**Less:** Expenditure by public bodies excluding Central Government. 

**equals**

| Central Government Development Expenditure* | 13,728 | 19,398 | 20,712 | 18,988 | 19,473 | 92,299 | 64·2 | 92,299 | 100 |

**Less:** Transfer and recurrent-type outlays. 

**equals**

| Central Government Capital Formation Under Development Budget† | 4,254 | 5,876 | 5,376 | 5,752 | 6,281 | 27,537 | — | 27,537 | 29·9 |

| Central Government Expenditure on Land Transfer and Development in Former Scheduled Areas | 4,240 | 3,685 | 2,785 | 1,835 | 1,845 | 14,390 | — | 14,390 | — |

†Excluding items of capital formation in Government expenditure on land transfer and development in former Scheduled Areas, and of course, also those included in the Recurrent Expenditure Budget.)
Inflow of Foreign Capital

57. As mentioned in paragraph 55, the Central Government is expected to receive about £61 million in project aid (loans and grants) covering two-thirds of the Development Budget (excluding land transfer and development in the former Scheduled Areas, for which an additional £14 million in foreign aid has already been negotiated.) The total inflow of foreign capital will be much larger, however. Table 13 shows projected receipts of long-term foreign capital by the Government, Government-controlled organizations and the private sector, expected to reach about £181 million over the Plan period. This figure compares with an estimated total deficit of about £125 million on the current balance of payments (excluding transfers) during the Plan period. Thus the capital inflow, including foreign grants to the Government, should exceed the current deficit by about £55 million, which should be more than sufficient to cover contractual repayments of capital. Short-term commercial credits, which will increase more or less in proportion to rising imports, will constitute yet another source of foreign exchange. All told, the foreign capital inflow, projected at a level sufficient to finance two-thirds of Central Government investment, 40 per cent of private investment, and one-half of total Plan investment, should at the same time enable the country to meet its foreign exchange obligations and maintain a prudent level of foreign reserves.

Table 13—Inflow of Foreign Capital (Government Grants, Loans and Direct Investments)

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<tr>
<td>Through Development Budget</td>
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<tr>
<td>1. Committed aid</td>
<td>4.8</td>
<td>3.0</td>
<td>1.0</td>
<td>0.2</td>
<td>—</td>
<td>9.1</td>
</tr>
<tr>
<td>2. Aid under negotiation</td>
<td>2.2</td>
<td>5.2</td>
<td>5.5</td>
<td>6.0</td>
<td>6.0</td>
<td>24.9</td>
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<tr>
<td>3. Probable aid</td>
<td>0.8</td>
<td>2.8</td>
<td>5.7</td>
<td>8.0</td>
<td>9.7</td>
<td>27.0</td>
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<tr>
<td><strong>Sub-total</strong></td>
<td>7.9</td>
<td>11.1</td>
<td>12.2</td>
<td>14.2</td>
<td>15.7</td>
<td>61.0</td>
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<tr>
<td>4. Aid for land transfer etc. in former Scheduled Areas, committed</td>
<td>4.2</td>
<td>3.7</td>
<td>2.8</td>
<td>1.8</td>
<td>1.8</td>
<td>14.4</td>
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<tr>
<td><strong>Total Central Government</strong></td>
<td>12.1</td>
<td>14.8</td>
<td>14.9</td>
<td>16.0</td>
<td>17.5</td>
<td>75.3</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>1. Committed aid</td>
<td>3.4</td>
<td>5.7</td>
<td>3.5</td>
<td>0.3</td>
<td>0.3</td>
<td>13.2</td>
</tr>
<tr>
<td>2. Aid under negotiation</td>
<td>0.3</td>
<td>1.4</td>
<td>2.2</td>
<td>3.9</td>
<td>4.8</td>
<td>12.5</td>
</tr>
<tr>
<td>3. Probable aid</td>
<td>0.5</td>
<td>0.5</td>
<td>1.1</td>
<td>1.6</td>
<td>1.7</td>
<td>5.4</td>
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<tr>
<td><strong>Total other public</strong></td>
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<td>7.6</td>
<td>6.7</td>
<td>5.9</td>
<td>6.7</td>
<td>31.1</td>
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<td><strong>PRIVATE SECTOR</strong> (Projected)</td>
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<tr>
<td>1. Reinvested capital</td>
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<td>6.0</td>
<td>7.0</td>
<td>8.0</td>
<td>9.0</td>
<td>35.0</td>
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<tr>
<td>2. Direct investment</td>
<td>2.0</td>
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<td>4.5</td>
<td>4.5</td>
<td>6.8</td>
<td>21.5</td>
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<tr>
<td>3. Long-term credits</td>
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<td>5.0</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>18.0</td>
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<tr>
<td><strong>Total private sector</strong></td>
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<td>14.7</td>
<td>15.0</td>
<td>16.0</td>
<td>19.3</td>
<td>74.5</td>
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<tr>
<td><strong>GRAND TOTAL</strong></td>
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<td>37.0</td>
<td>36.5</td>
<td>38.0</td>
<td>43.5</td>
<td>181.0</td>
</tr>
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</table>
CHAPTER 6—AGRICULTURE, LIVESTOCK AND CO-OPERATIVES

A—Agriculture

1. By virtue of its contribution to national product and, to an even greater extent, employment and foreign exchange earnings, agriculture is and will remain for many years to come the most important sector in Kenya's economy. During the decade 1954-64 agriculture (including subsistence output) contributed 39-40 per cent of Gross Domestic Product, and its share in monetary Gross Product was 20-22 per cent; 1.2 million of Kenya's 1.6 million families earn their living from agriculture and animal husbandry (including 200,000 wage-earners on large farms); and in 1964 62.5 per cent of Kenya's total exports, including sales to Tanzania and Uganda, were raw or processed agricultural and livestock products. During the Plan period agriculture and livestock will maintain its share in monetary Gross Domestic Product, the projected growth in which will depend to a large extent on a rapid increase in the output of crop and livestock products; at the same time three out of five men who reach working age will find their employment in agriculture. Over 60 per cent of the increased exports will be raw or processed goods from this key sector of the economy.

Agricultural Development Policy

2. Once the outcome of Kenya's struggle for freedom had become clear, the existence of a large area of agricultural land reserved for the exclusive ownership of Europeans—the former Scheduled Areas—loomed as the principal anomaly in the national life. Legal restrictions on non-European ownership of this land were quickly abolished, but this did not help to solve the social, economic and political problems arising from the juxtaposition of the prosperous "White Highlands" and overcrowded, economically deprived peasant farming areas. The Government therefore gave first priority to a policy which would enable African farmers to purchase European-owned land. To this end agreement was reached with the British Government on a programme, mainly financed by U.K. loans and grants, which consisted of buying over 1 million acres of European-owned mixed farming land adjacent to densely populated African areas and dividing it into smallholdings to be settled by African farmers.

3. The last settlers under this programme will have taken up their holdings by June 1966. The cost of the programme has been very large, accounting for half of Government expenditure on agriculture during the three years since it was inaugurated. It would be premature to pass any judgment on the economic success of the programme, which involves a fundamental change from large-scale to small-scale farming methods. The period of transformation to full production under settlement is expected to take at least four years for any individual scheme, and no scheme has functioned that long yet. Difficulties such as a decline in production and
arrears in settler repayments on loans for land purchase and development, although fairly widespread, must be regarded as temporary problems which will be overcome gradually.

4. Parallel with smallholder settlement in the former Scheduled Areas, several continuing programmes assist Africans to take over large-scale farms intact. These include the Compassionate Farms and Assisted Owner Schemes financed by the British Government; and loans made by the Land Bank,* supplemented by Agricultural Finance Corporation loans for loose assets, whereby farms change hands on a willing buyer-willing seller basis. As at 31st December 1965 approximately 550,000 acres in the former Scheduled Areas had come into African ownership under these various schemes. As in the case of settlement, it is too early to judge the ultimate economic result of this land transfer. A substantial number of the new African large-scale farmers began operations with little previous experience in this type of farming, and insufficient working capital to run the farms at a high level of production. A later section of this chapter discusses measures now being taken by the Government to remedy this situation.

5. By 30th June 1965, 24,000 smallholders owned land in the former Scheduled Areas, either individually or through co-operative organizations, and 750 large-scale farms were owned by Africans individually or in companies, partnerships, etc. The grand total was expected to rise to 35,000 in another year. This settlement programme has had an important psychological impact. To the landless African it has demonstrated the determination of the Government to open up new farming opportunities in the once forbidden areas, while at the same time it has given the European farmers an important measure of economic security, thus encouraging most of those remaining to continue efficient farming. Having largely attained the declared objectives of settlement, the Government will henceforward devote more of its efforts to forms of agricultural development that serve Kenya's long-run economic interests more efficiently. In this vein the Sessional Paper on African Socialism announced that first priority would henceforth be given to agricultural development in the former African areas, both in order to exploit the large possibilities for higher output that exist in those areas, and to bring the majority of the population into direct touch with the development process.

6. There is sound economic justification for the shift in emphasis to development of the former African areas: fully 80 per cent of the rural population inhabits those areas; most of the approximately 400,000 new agricultural jobs required by 1970 must be found there, since it is unlikely that more than 50,000 can be accommodated in the former Scheduled Areas; and the former African areas contain 80 per cent of Kenya's high potential agricultural land. (The distribution by district and province of Kenya's high, medium and low potential and nomadic pastoral

land is shown in Appendix Table 1, which also defines these land categories. Thus, to improve the living standard of the masses of the population as well as to create the necessary new jobs, the Government must devote substantial resources toward increasing productivity, income, and employment in the peasant farming and pastoral areas.

7. It has been clearly established that productivity in the peasant farming sector will respond to economic incentives, with the help of agricultural credit and extension services. Once legal restrictions on the planting of coffee had been removed (and before they were reimposed in 1964 under the International Coffee Agreement) the number of smallholders growing coffee rose from 15,000 in 1953 to approximately 250,000 in 1964. Over the same period smallholder coffee acreage increased from roughly 4,000 to 120,000. The value of recorded marketed output from small-scale farms increased on the average by 12 per cent per year from £5.1 million in 1955 to £14.0 million in 1964; coffee accounted for 55 per cent of this increase. Because of its extremely high profitability, coffee was exceptional in the rapid expansion which resulted from merely permissive and advisory measures on the part of Government. Expansion of other products will require relatively more investment by the Government in land consolidation, credit and extension services.

8. It is hardly necessary to point out that the potential effect on output of investing a given amount of money in the African areas is much larger than in the former Scheduled Areas. In the case of settlement the minimum Government investment required to bring about a net positive impact on development averages £750 per family and £25 per acre (including £12 for predevelopment items such as land purchase and breaking up large farms into smallholdings). Any less expenditure would make it impossible for the settlers as a whole to generate enough income to repay their loans. In the former African areas, on the other hand, a very much smaller expenditure on land consolidation and registration (£1-£2 per acre and £5-£50 per family) establishes important preconditions for development on a vastly greater number of farms. It has been proved in the past that, for a significant number of farmers, registration and, where appropriate, consolidation of their holdings stimulates increases in efficiency and output far out of proportion to the cost of the process. Thus, the farmer will be able to enclose his land and, among other things, keep grade cattle on it; he will have a better chance of obtaining credit; he may save resources now devoted to land litigation; and, if land consolidation is involved, he will be saved much unproductive labour time.

9. All told, it is clear that, for the same total expenditure, development of the former African areas will provide employment for, and increase the living standards of, a much larger number of people than settlement. Accordingly, the major share of public investment in agriculture over the 1965/70 Plan period will go into the former African areas, as shown in Table 1, which breaks down Government expenditures by programmes
## Table 1.—Central Government Development Expenditure on Agriculture and Livestock, Including Land Registration and Settlement (£'000)

<table>
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<tr>
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<td><strong>Former African Areas</strong></td>
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<td>Land consolidation and registration...</td>
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<td>700</td>
<td>850</td>
<td>1,000</td>
<td>1,200</td>
<td>4,360</td>
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<td>Smallholder credit (Agricultural Finance Corporation)...</td>
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<td>500</td>
<td>800</td>
<td>1,200</td>
<td>1,500</td>
<td>4,300</td>
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<tr>
<td>Development of pastoral areas (partly A.F.C.)...</td>
<td>94</td>
<td>90</td>
<td>400</td>
<td>970</td>
<td>870</td>
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<td>Irrigation (National Irrigation Board)...</td>
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<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>1,800</td>
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<td>Other land reclamation—tsetse control...</td>
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<td>70</td>
<td>90</td>
<td>85</td>
<td>85</td>
<td>400</td>
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<tr>
<td>Settlement...</td>
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<td>65</td>
<td>70</td>
<td>75</td>
<td>80</td>
<td>353</td>
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<td>Rural development schemes...</td>
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<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>122</td>
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<td><strong>Total Former African Areas</strong>...</td>
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<td>2,000</td>
<td>1,000</td>
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<td>1966/70 programme...</td>
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<td>500</td>
<td>4,950</td>
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<td><strong>Total Settlement</strong>...</td>
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<td>8,500</td>
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<td>Land transfer to large-scale farmers (Land Bank and A.F.C.)...</td>
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<td>525</td>
<td>525</td>
<td>525</td>
<td>525</td>
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<td>National and transitional farms (Agricultural Development Corp.)...</td>
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<td>700</td>
<td>700</td>
<td>700</td>
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<td>2,940</td>
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<td>Compassionate Case farms...</td>
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<td>200</td>
<td>200</td>
<td>200</td>
<td>160</td>
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<td>Abandoned and mismanaged farms (partly A.D.C.)...</td>
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<td>250</td>
<td>200</td>
<td>150</td>
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<td>1,200</td>
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<td>Credit (A.F.C.—not included elsewhere)...</td>
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<td>250</td>
<td>250</td>
<td>250</td>
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<td>45</td>
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<td>125</td>
<td>50</td>
<td>50</td>
<td>600</td>
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<td>A.D.C.—administration and projects not included elsewhere...</td>
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<td>150</td>
<td>150</td>
<td>150</td>
<td>150</td>
<td>650</td>
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<td>Soil conservation...</td>
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<td>65</td>
<td>45</td>
<td>45</td>
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<td>530</td>
<td>535</td>
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Table 1.—Central Government Development Expenditure on Agriculture and Livestock,
Including Land Registration and Settlement—(Contd.) (£'000)

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<td>Passion fruit (A.D.C.)</td>
<td>35</td>
<td>—</td>
<td>—</td>
<td>40</td>
<td>40</td>
<td>80</td>
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<tr>
<td>Pineapple</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>30</td>
<td>30</td>
<td>60</td>
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<td>Tea (Kenya Tea Development Authority)</td>
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<td>300</td>
<td>450</td>
<td>300</td>
<td>300</td>
<td>1,600</td>
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<td>Sugar (A.D.C.)</td>
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<td>800</td>
<td>100</td>
<td>—</td>
<td>—</td>
<td>1,400</td>
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<td>Wheat (A.D.C.)</td>
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<td>25</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>150</td>
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<td><strong>TOTAL CROP ACTIVITIES</strong></td>
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<td>580</td>
<td>370</td>
<td>370</td>
<td>3,265</td>
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<td>Dairying</td>
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<td>120</td>
<td>70</td>
<td>80</td>
<td>20</td>
<td>341</td>
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<td>Beef</td>
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<td>40</td>
<td>150</td>
<td>280</td>
<td>610</td>
<td>1,094</td>
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<tr>
<td>Pigs</td>
<td>—</td>
<td>25</td>
<td>25</td>
<td>20</td>
<td>20</td>
<td>90</td>
</tr>
<tr>
<td>Sheep and goats</td>
<td>—</td>
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<td>20</td>
<td>60</td>
<td>30</td>
<td>130</td>
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<tr>
<td>Other</td>
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<td>15</td>
<td>35</td>
<td>50</td>
<td>50</td>
<td>191</td>
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<tr>
<td><strong>TOTAL LIVESTOCK ACTIVITIES</strong></td>
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<td>220</td>
<td>300</td>
<td>490</td>
<td>730</td>
<td>1,846</td>
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<td><strong>GRAND TOTAL</strong></td>
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<td>7,145</td>
<td>7,170</td>
<td>7,780</td>
<td>38,429</td>
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**Less:**

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<tbody>
<tr>
<td>Settlement</td>
<td>4,000</td>
<td>2,300</td>
<td>1,400</td>
<td>450</td>
<td>500</td>
<td>8,650</td>
</tr>
<tr>
<td>Land transfer to large-scale farmers*</td>
<td>—</td>
<td>525</td>
<td>525</td>
<td>525</td>
<td>525</td>
<td>2,100</td>
</tr>
<tr>
<td>National and transitional farms*</td>
<td>—</td>
<td>660</td>
<td>660</td>
<td>660</td>
<td>660</td>
<td>2,640</td>
</tr>
<tr>
<td>Compassionate case farms</td>
<td>240</td>
<td>200</td>
<td>200</td>
<td>200</td>
<td>160</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>TOTAL LAND TRANSFER ETC.</strong></td>
<td>4,240</td>
<td>3,685</td>
<td>2,785</td>
<td>1,835</td>
<td>1,845</td>
<td>14,390</td>
</tr>
</tbody>
</table>

| CENTRAL GOVERNMENT DEVELOPMENT BUDGET                                   | 4,124   | 4,285   | 4,360   | 5,335   | 5,935   | 24,039|

**Notes:**

**General**—In categories where the Government plans to channel a substantial portion or all of its expenditure through a statutory body, the name of the body in question is given in parentheses.

*Excludes items not part of U.K.-financed 1966/70 land transfer and development programme.
in the former African areas; in the former Scheduled Areas; functional activities affecting all areas; and activities concerned with particular crops and livestock. Taking into account only programmes allocated to the former African or Scheduled Areas, plus certain crop activities which lend themselves to such allocation, the proportion of relevant expenditures scheduled for the former African areas rises from 28 per cent in 1965/66 to 69 per cent in 1969/70.

**Agricultural Development of the Former African Areas**

10. The following public expenditure programmes come under this heading: land consolidation and registration, agricultural credit to smallholders, range development, irrigation, settlement schemes in the former African areas, and land reclamation. In addition, during the Plan period nearly all public expenditure in respect of the following crops will be confined to the former African areas: coffee, tea, sugar, cotton, wheat, rice, legumes, pineapples, passion fruit, and a number of minor crops. Over 50 per cent of public investment in the dairy industry will also take place in the former African areas. In the case of certain of these activities public expenditure will be financed under programmes identified here with the former African areas, in other cases special financial arrangements will apply and are discussed under the appropriate crop and livestock headings.

**Land Consolidation and Registration**

11. It has long been accepted that a necessary prerequisite to the development of much of the peasant farming areas is reform of the tribal system of land tenure by registration of title, preceded by enclosure and, in many instances, consolidation of fragmented holdings. While the system of land tenure varies from one part of Kenya to another, in every case registration of title is a recent phenomenon associated with a modern legal system. To fill its proper role in a modern economy, land must be legally registered, thereby becoming a marketable and taxable asset, as well as a suitable security for credit.

12. Land consolidation and registration is an integral part of the Government’s programme for developing smallholder agriculture. In order that its full beneficial impact may be realized, land consolidation and registration must be followed up with land improvement, agricultural credit and extension services. The agrarian revolution now in progress in the Central Province is a result of these three joint actions, assisted by other factors including ecology, the general level of education and energy, and the proximity of the Nairobi market. However, observation of the development of this area permits several qualitative conclusions to be drawn regarding the benefits of land consolidation and registration as such.

(i) Increased Productivity.—Fragmentation of land leads to waste of labour in moving between holdings; waste of land used for extra borders,
paths, etc.; and unused land because smaller, isolated plots may not be worth cultivating. Since much cultivation is done by women, consolidation has incidentally helped to improve the health of women and children.

(ii) Improved Communications.—The laying out of access roads to all holdings is an integral part of the process of land consolidation and registration. Such roads facilitate the marketing of produce, transport of farm supplies, and visits by extension personnel.

(iii) Reduced Land Litigation.—Protracted litigation over land rights and boundaries is an important problem in many districts, involving high direct costs and loss of working time. In the Central Province such litigation is now virtually eliminated.

(iv) Investment Incentives.—Legal registration of land means security of ownership, which is a key incentive to improvement of holdings. No farmer can afford to invest in grade cattle unless he is sufficiently secure in the ownership of his land to enclose it, and in many cases registration is a prerequisite for this.

(v) Availability of Credit.—Registration of title is a desirable, though by no means sufficient, basis for agricultural credit. The Government is facing a serious problem of arrears in repayments of loans not secured by title, and will therefore give more emphasis to loans in areas where land consolidation and registration is complete. The World Bank has similarly made this a condition of its pending loan for smallholder credit.

(vi) Employment.—Land consolidation in some instances has led to eviction of tenants on fragments of a holding that the owner previously could not cultivate himself. However, the more intensive use of land that follows from consolidation and registration creates many additional job opportunities. Thus, the expansion of coffee and tea growing and dairying in Nyeri has led to an estimated 10,000 new employment opportunities in a district populated by roughly 50,000 families.

(vii) Planning Data.—Land registration provides statistics regarding farm size and ownership which are essential for intelligent planning of an area's development. Among other things these data indicate the number of persons owning economic farm units, and conversely the potential hired labour pool in an area.

13. Appendix Table 2 gives a breakdown by district of the progress of the various stages of land consolidation and registration as at 31st December 1965. During 1965/66 registration was proceeding at an annual rate of approximately 360,000 acres. It is estimated that roughly 25 million acres of agricultural land in Kenya should undergo some form of consolidation and registration (this excludes most of the semi-arid areas of the Coast and North-Eastern Provinces and the northern parts of the Eastern and Rift Valley Provinces). Approximately 13 million acres of the 25 million total are suitable only for ranching in large-size units, where survey and
registration will take less time and cost less money than in more densely populated areas of greater agricultural potential. The Government is determined to accelerate the process and complete as much of the remaining area as possible, particularly all medium and high potential land, within the next ten years.

14. This means that the process must cover a much larger acreage per year than at present, and during the Plan period substantial additional resources, both finance and skilled manpower, will be allocated to land consolidation and registration. Most of the budgeted expenditure of £605,000 in 1965/66 is being financed under a U.K. Government loan. Fee collections from land owners are running at an annual rate of £50,000. The British Government, accepting the high priority which the Kenya Government attaches to accelerated land consolidation and registration, has agreed in principle to help finance this expansion.

15. Numerous problems must be solved before the process can be speeded up. First of all, there is a shortage of professional survey staff for the preparation of maps and bearings. It is hoped this may be overcome by simplifying present procedures so as to spread professional skills over a larger acreage. Simplification of procedures will also reduce the cost of land registration. At present a major cost element to Government is demarcation of holdings by hedges, legally the responsibility of the land-owner, who must be more effectively induced to carry it out with his own or hired labour. Demarcation and registration in the pastoral areas will require modification of procedures followed in peasant farming areas. Moreover, analysis is required of the relationship between land registration, follow-up credit and extension services, and increased productivity in order to determine the amount of follow-up required once an area is registered. Special problems of land tenure in the Coast Province must be examined closely.

16. In order to solve these and other problems the Kenya Government, with the assistance of the British Government, has set up a commission of experts which was engaged in a full-time, three-month study of land consolidation and registration as this Plan went to press. The Government’s detailed programme for land consolidation and registration over the next ten years will be based on the report of this commission, due in April 1966. It is thus not yet possible to state how much acreage in each district will be consolidated and registered during the Plan period. The total Plan cost is estimated provisionally to be about £4.4 million.

**Agricultural Credit**

17. On 30th June 1965 more than £2 million of agricultural credit to smallholders was outstanding from the commercial banks and various public agencies. Over half of this (in the case of the banks, as much as 90 per cent) was outstanding in the Central Province, where land registration and consolidation is nearly complete. The scope for commercial bank
lending to smallholders will continue to expand as land registration progresses and an increasing number of peasant farmers produce goods for sale, but the banks are not a substitute for public credit to smallholders. They are of necessity short-term lenders, and have rarely lent to smallholders for longer than three years (the median term is around 18 months). Loans to smallholders have several disadvantages from the banks’ viewpoint, including very high administrative costs and a substantial element of risk. While these problems will diminish over time, it is evident that an expansion of public credit is needed to supplement the commercial banks and to cater for needs which they are unable to meet.

18. Most public credit to smallholders up to now has been provided through the former “agrarian loans” programme of the Ministry of Agriculture, administered by the Agricultural Finance Corporation as agent. These loans have mostly been made under chattels mortgages, the percentage loaned on security of land title being less than 20 per cent overall and almost nil outside the Central Province and Embu District. In practice chattels mortgages have proven ineffective security for these loans, whose collection has up to now depended mainly on prodding by Agricultural Department staff and a form of collective sanctions whereby districts with more than a certain proportion of their loans in arrears had their allocation for new loans reduced by specific percentages. Appendix Table 3 shows the position of arrears in A.F.C.—administered loans to smallholders by districts as at 30th June 1964, the latest date for which summary figures are available. In order to improve the situation collection of repayments has been made the responsibility of an expanded A.F.C. field staff, and the A.F.C. has become principal for loans made from 1965/66 onward.

19. Kenya is now on the verge of a many-fold expansion of public credit to smallholder agriculture. The Government will shortly negotiate a loan with the World Bank for relending to some 30,000 farmers in 18 districts over the last four years of the Plan period. The Government will also negotiate with other aid sources to secure their participation in this programme as well as in providing loans to farmers who will not be eligible to participate in it. These loans will principally be made to stimulate output of dairying, beef cattle, cotton, groundnuts, hybrid maize, beans, pineapple, and potatoes. Sample budgets have been prepared for six basic farm types covering four different ecological zones. Average gross output of these farms, including subsistence, is currently estimated at £65, or about £2.0 million over 30,000 farms. The credit programme, together with the supervision that will accompany it, is projected to increase this gross output to £15 million at maturity, which will fall toward the middle of the 1970’s. This target implies an increase in cash sales alone nearly equal to total marketed small-farm production in 1964.

20. A 30 per cent increase in the present establishment of Government technical personnel (agricultural and veterinary officers and their assistants) will be required to carry out this programme by assisting each borrower
to work out an acceptable farm plan and budget, showing him how to carry
out new activities, and checking his performance in applying the loan. The
burden of increased loan administration will require the A.F.C. to triple its
establishment of loans officers from 25 to 75.

21. Ambitious as it is, this programme will benefit only about 3 per cent
of Kenya’s land-owning peasantry (excluding pastoralists); the 3 per cent
comprising, moreover, relatively progressive smallholders who are by defini-
tion already much better off than the rest. Thus the programme is only a
first step in Kenya’s agrarian revolution. If the credit scheme is successful,
the Government is confident that funds can be raised to expand it to cover
eventually up to one-half of the peasant population. The success or failure
of the initial World Bank-financed credit programme therefore has far-
reaching implications. An important measure of success will be how faithfully
borrowers meet their debt-servicing obligations. It is far beyond the Govern-
ment’s financial resources to run smallholder credit as a programme of
hand-outs to the more progressive peasantry, and no foreign aid will be
available for this purpose. Apart from the accompanying agricultural
extension services, which are customarily financed out of general revenue,
smallholder credit is economic only if it is by and large self-financing. A
high percentage of borrowers defaulting on their repayments would seriously
delay expansion of the programme and possibly even prevent its continuation
in the foreseeable future. The Government is therefore determined to ensure
that borrowers keep their payments up to date, and will instruct the A.F.C.
to move forcefully to foreclose on the land of borrowers who default on
any grounds under their own control. The need for forceful action in this
regard is recognized by the Sessional Paper on African Socialism, which
states (para. 105): “The need for discipline in implementing agricultural
development is apparent, and appropriate legislation and strict enforcement
of existing legislation is necessary to ensure that—(i) loans for development are
properly used; and (ii) loans are repaid promptly and delinquents appro-
priately and promptly punished. . . .”

Development of the Pastoral Areas

22. According to Appendix Table 1, 80 per cent of Kenya’s land
surface receives less than 25-30 inches of rainfall per year; moreover one-
quarter of this receives less than 12 in. and is classed as semi-desert. With
the exception of some areas suited to growing sisal, commercial prospects for
which are deteriorating, and about 250,000 acres of irrigable land, this
enormous area is not suitable for cultivation, but rather for stock raising
or wildlife with its associated industry of tourism. Living in these dry areas
are roughly 1¼ million people, or 17 per cent of Kenya’s population, of
whom 750,000 are pastoralists who derive their living almost exclusively
from milk and meat; 270,000 are semi-pastoralists, whose ancestors were
pastoralists but who are being forced increasingly by population pressure
to rely on cultivation of crops; and 450,000 are primarily subsistence cultivators who derive a minor part of their food and income from stock (of which they often keep large but unproductive herds).

23. Gross annual output of the dry areas, excluding commercial ranches and national irrigation schemes, is estimated at £13.5 million, of which £11.5 million represents livestock products and £2 million crops. Deliveries of livestock products from these areas are estimated at £1.5 million and of other commodities at £0.5 million; the remainder of the output is consumed for subsistence or traded and bartered locally. It is estimated that the gross output per acre in strictly pastoral areas is slightly less than Sh. 2, in semi-pastoralist and subsistence cultivator areas just under Sh. 4. This contrasts with an average of Sh. 12 per acre obtained on commercial ranches.

24. Kenya's range country at present constitutes both a liability and an asset. Outside the 2.6 million acres of rangeland developed successfully under commercial ranches, increases in human and stock population have not been matched by social and technological advances. Over-grazing and other forms of mismanagement have led to bush encroachment and a reduction in grass vigour, with the result that famine relief is becoming an increasing commitment in certain areas. Thus, in the difficult year 1961/62 several million pounds was distributed as famine relief in the range areas. This state of affairs has arisen partly as a result of the fact that public resources for agricultural development have in the past been directed principally to areas of high potential for arable agriculture. The Government is now determined to rectify this imbalance, and will undertake major investments in the range areas during the Plan period.

25. These investments will be designed to exploit the very real assets which exist in the range areas, namely their beef and game potential. With proper management, on 11 million acres of 25-35 inch rainfall land 10 acres or less per stock unit are needed, on 75 million acres of 12-25 inch land 15-25 acres, and in the semi-desert over 30 acres per stock unit. At present the annual percentage off-take (i.e. slaughtered animals in relation to the livestock population) is estimated at 9 per cent among pastoralists and 14 per cent among semi-pastoralists and subsistence cultivators, as against 19 per cent for commercial ranches. The weight and quality of animals supplied from the pastoral areas are much lower than from commercial ranches—over the six years 1959-64 the average cold dressed weight of cattle delivered to the Kenya Meat Commission from pastoral areas was 278 lb. as compared with 432 lb. from ranches, and the percentage of African-owned cattle classified in the top three grades was 0.7 per cent as against 57 per cent for the ranches. There is no reason why the present offtake rate and average meat weight of commercial ranches cannot be achieved and even surpassed in the pastoral areas. The value of potential livestock shipments from these areas, at the level of technology already achieved by commercial ranches and allowing for subsistence needs of the pastoral
population, would be around £10 million, or better than six times the present level, although it would obviously take many years to achieve. On the question of game, apart from its value as a tourist attraction, the Government has already established an elephant-cropping scheme on Galana River in the Coast Province, and hopes to proceed with other game-cropping schemes during the Plan period. Discussions are under way with foreign investment groups regarding possible projects in the Coast Province which would involve a combination of cattle ranching, tourism, and game-cropping over presently unoccupied areas of up to 2 million acres.

26. The Government's development programme for the pastoral areas will receive massive assistance from several external aid agencies. Technicians, equipment, and training fellowships in the fields of planning, pre-investment surveys, range extension and education, and research will be provided by the U.N. Special Fund and U.S.A.I.D.; the contribution of the Special Fund alone will be worth approximately £700,000 over a five-year period beginning before June 1966. Private organizations in Kenya and abroad will assist in the training of pastoralists. It is hoped that foreign aid can be obtained for a central range research station. Application is being made to the World Bank for a loan to finance a variety of capital projects, involving three different types of ranches in the pastoral areas, as well as community grazing schemes; water development in the North-Eastern Province; improvement of stock routes, quarantine and marketing facilities; related planning and other staff services; and loans to private commercial ranches in the former Scheduled Areas. Of the four different types of enterprise to be developed in the pastoral areas, the first two aim at exploiting currently unused land, while the last two aim at more efficient utilization of land already occupied, some of it quite densely. These types are:

(i) Government or Joint Government/Private Commercial Ranches.—Five of these are to be set up in unoccupied areas of the Coast Province hinterland, comprising mainly Government-owned land. The Government is negotiating with several private firms which have expressed interest in possible joint enterprises. Where private participation cannot be attracted on reasonable terms the Government intends to establish wholly state-owned ranches.

(ii) Ranching Co-operatives.—To all intents and purposes, these will be ranching companies established on unoccupied, mainly Government-owned land in the Coast and Eastern Provinces (principally Kitui, Meru and Taita Districts). The shareholders will be drawn primarily from among residents of the neighbouring land units who will contribute their own cattle as share capital. The ranches will be run along commercial lines by paid managers with subordinate staff, and most members will not live on the ranches. Four such ranches already exist.

(iii) Group and Individual Ranches.—These schemes are designed to upgrade the animal husbandry and general economy of areas now occupied by pastoralists. A progressive pastoralist with substantial assets and claim
to a sizable land area may be assisted to develop a modern ranching enterprise under his sole ownership. However, this will be the exception, the normal case being a group ranch whose participants comprise a clan, extended family, or other compatible grouping. Stock will continue to be individually owned but an elected committee will be registered as a body corporate and will run the ranch, managing its funds, contracting loans, and enforcing regulations in regard to dipping, grazing, rotation, etc. The improved management and supervision made possible by the group enterprise will lead to reduction of losses, increased calving rates, better use of grazing, and a gradual reduction in the number of female breeding stock to make way for fattening animals. About 70 per cent of the acreage to be developed under these ranches will be in Masailand, whose elders have already allocated 1 million acres to group ranches ranging in size from 20,000 to 100,000 acres and from 36 to 200 members. It is hoped to establish similar schemes in other areas of the Rift Valley Province and KwaI, Kilifi and Kitui Districts in the Coast and Eastern Provinces.

(iv) Community Grazing Schemes.—In areas where the people are not yet ready to participate in organized ranches, a more modest but still significant degree of improvement in present conditions will be sought by controlling numbers of stock, implementing rules for grazing rotation and introducing water supplies and other facilities. These schemes will be located in the Coast, Eastern and Rift Valley Provinces, notably Kitui, Marsabit, Turkana, Samburu and Baringo Districts.

27. Appendix Table 4 gives a summary picture of the number of ranching projects, their acreages and their distribution by Districts. The scheduled breakdown of development expenditure is as follows: water supplies—31 per cent; fattening stock—23 per cent; breeding stock—13 per cent; buildings, dips, machinery and bush clearing—14 per cent; land—1 per cent; initial operating deficits of ranches—8 per cent; and Government staff emoluments—10 per cent. (This does not include the value of participants' cattle, projected at £12.5 million.) Clearly the programme will take many years to implement, and not all projects will be under way by the end of the Plan period. However, it is hoped that development worth approximately £2.4 million will take place within the Plan period.

Irrigation

28. In a relatively dry country such as Kenya, where most of the land surface receives less than 35 in. of rainfall and areas with high average rainfall are subject to periodic drought, it is natural to look to large-scale irrigation as the salvation of agriculture. Unfortunately, however, the topography of the country in relation to lakes and rivers which could supply irrigation water is so unfavourable that, over the whole country, the maximum area that could be developed economically under large-scale (settlement) irrigation is presently estimated at about 400,000 acres. 60 per cent of this lies in the Lower Tana
River Basin, where topography and soil conditions are such as to make irrigation development a highly capital-intensive exercise. On the other hand, there is a substantial additional area of the country consisting of scattered plots which can be irrigated from streams, ponds and boreholes by pumping water through pipes. This type of irrigation development necessarily depends on the enterprise of individual farmers more than on the initiative of the State.

29. Even if irrigation is not a panacea for Kenya's agriculture, it can make a significant contribution to production, income, foreign exchange earnings and employment. At the present time organized irrigation, which is only twelve years old in Kenya, produces 70 per cent of the country's rice output and provides a livelihood for some 30,000 people on 8,350 acres of land which was previously unused and, without irrigation, virtually unusable. If the Tana Basin irrigation scheme proves to be feasible, when completed it could produce half a million tons of sugar (as compared with present Kenya output of less than 40,000 tons and 1970 target production of about 150,000 tons), 140,000 bales of cotton lint (as compared with present output of less than 25,000 bales and 1970 target production of 95,000 bales), and substantial quantities of other crops now grown in Kenya to a very limited extent, if at all. At its limit, organized irrigation in Kenya would provide direct employment to roughly 150,000 persons and thus a direct livelihood for nearly 1,000,000 people, not counting those in other sectors of the economy who would benefit indirectly.

30. Existing Irrigation Schemes.—Three national irrigation schemes are presently operating in Kenya: Mwea (Kirinyaga District), Perkerra (Baringo) and Galole (Tana River). Summary data on these schemes are given in Appendix Table 5. All three schemes, plus one or two others which have yet to grow a crop, were undertaken during the Emergency of the 1950's, when the colonial government was seeking projects on which to employ thousands of detainees. Long-term economic feasibility was thus not the most important consideration, and it is more by good fortune than careful planning that one of the schemes, Mwea, has proved to be economically sound. Only Mwea is now earning or has ever earned an operating surplus, and it has done so in each of the last four years. In 1964/65 payments by the scheme, net of depreciation, into one or another public account (including County Council Cess Fund and Rice Stabilization Fund) totalled £87,107, or 8.7 per cent of Government investment as shown in Appendix Table 5. Mwea's sound economic position is attributable to two major factors: the topography of the Mwea Plains, where over 10,000 acres of rice land can be irrigated from the run of the Thiba River, eliminating the need for expensive storage facilities and making the capital cost per acre, at around £130, the lowest in Kenya; and the results of four years of sound management, whereby the tenants have come to accept the high standard of discipline required for the success of an irrigation scheme. The other two schemes incur annual operating deficits totalling about £80,000, i.e. roughly £125 per tenant, or £40 per full-time job including Government
officials on the schemes. This loss has to be met out of general Government revenues. Perkerra, which is based on an onion/maize economy, is probably too small ever to earn a significant return on invested capital, but with drastic improvements in management and tenant discipline it could break even. Galole is far too small to carry either the cost of pumping water out of the Tana River or the considerable overheads associated with its isolated location. Up to 1965 the value of the scheme's gross output of cotton, its sole cash crop, was less than gross operating costs to Government. Then, as a result of earlier planting on advice from F.A.O. consultants, the average yield went up by 45 per cent (though Government's loss was the same because tenants' charges remained constant). With reorganization of management and increased charges the annual loss could be reduced to £20,000; however, the sole economic rationale for maintaining Galole is that it should serve as a pilot and training project for major development of the Lower Tana Basin, which it has not done up to now.

31. The existing state of irrigation in Kenya, and lessons learnt in other countries, offer a guide to certain key principles of irrigation development on which the Government's policies will be based. Firstly, in evaluating a proposed investment in irrigation, one should take account of several long-term economic factors which are not immediately obvious but whose neglect may lead to very costly mistakes. Thus, major irrigation schemes always take a long time—usually not less than thirty years and often more than fifty—to amortize themselves. If the loan capital out of which a scheme is financed must be amortized more quickly, the debt-servicing costs will impose a heavy foreign exchange burden on other sectors of the economy. Moreover, because of the long-term character of the investment, the output from an irrigation scheme must be sufficient to cover labour and other operating costs in a distant future when these costs may be far higher than at present, owing to a rising national income and standard of living. If conditions during the life of a scheme will necessitate a shift from labour-intensive to labour-saving techniques, the employment impact and operating surplus may be seriously over-estimated in the initial evaluation.

32. Secondly, it is clear that irrigation is about the most expensive type of agricultural development thus far attempted in Kenya. The per-acre capital cost of the cheapest scheme, Mwea, is more than five times the cost of settlement in the former Scheduled Areas, including purchase of land, and more than ten times as expensive as registering the land and providing a comparable amount of credit in the African areas. Such capital-intensive development can be justified only in relation to its return, in terms of gross output, personal income, employment and surplus to Government. The percentage return is reasonable in the case of Mwea because the present yield of paddy is worth about £48 per acre, which is about six times the anticipated yield per acre in low density settlement or comparable credit schemes in the African areas. The saving of foreign exchange resulting from production of rice at Mwea should
also be considered on the return side. As for employment, it is estimated that extension of the Mwea irrigation scheme will result in the creation of one full-time job per £220-£230 of capital investment. This is on the same order of magnitude as investment per job in low density settlement, somewhat more than investment per job in smallholder credit schemes but less than a tenth of the investment per job in the average manufacturing industry. There is thus no doubt that maximum extension of the Mwea irrigation scheme at the indicated cost level is an economic use of resources in Kenya. On the other hand, the situation of Mwea is substantially more favourable than not only the two other existing national schemes but also all other proposed major schemes in Kenya.

33. In order to ensure economic use of the country's resources, and thus accelerate Kenya's development as rapidly as possible, it is important to carry out detailed pre-investment studies of proposed irrigation schemes and establish what the returns from them will be in relation to other possible investments. To obtain such information it is not sufficient merely to conduct a few experimental plots and make assumptions about tenant performance based on observation of existing schemes. Rather, any major development must be preceded by a pilot project in which tenant performance is observed under conditions identical to those which are projected for the major scheme. Detailed feasibility studies and pilot projects are essential not only on their merits but because Kenya cannot finance such schemes out of her own resources and will have to rely instead on raising finance from overseas aid sources, nearly all of which require strong evidence of a project's viability before investing in it.

34. Experience in Kenya and elsewhere has shown that irrigation settlement without strict discipline is bound to fail. The very heavy capital costs of irrigation development make it mandatory that maximum production be obtained from irrigated land. Thus, there is no room for inefficient producers on irrigation schemes, and a scheme must be able to expel any settler who fails to meet his obligations. For this reason freehold title on national irrigation schemes cannot be considered and security of tenure must be tied solely to performance. If a national irrigation scheme is to be established in an inhabited area where individual land rights exist, these must be extinguished or indefinitely suspended, subject to compensation as guaranteed in the Constitution. Holders of land rights should be given preference in the selection of tenants for the scheme, but they must be subject to the same discipline and ultimate penalty of expulsion as are outsiders. Also to be stressed in future irrigation development is the great importance of management on the ground. Kenya experience has shown that it is the quality of the supervisory staff which determines whether or not an irrigation scheme realizes its economic potential. Personnel policies must be designed to attract competent managers who are willing to work hard under the difficult living conditions that prevail on most irrigation schemes.
35. *Irrigation Development During the Plan Period.*—To improve the organization and supervision of national irrigation schemes the Government has decided to establish a National Irrigation Board which will own and operate the three existing schemes and any new ones in which the Government has a substantial interest. The Board will also advise the Government on lesser schemes of a self-help character involving minor Government assistance. The National Irrigation Board will take a business-like approach toward schemes, beginning by putting each scheme’s financial accounts onto a commercial basis and ensuring that schemes cease to become a drain on public revenues but instead, where possible, earn a reasonable return on invested capital.

36. The development work to be undertaken by the National Irrigation Board under the Plan will have two major components: (i) extension and reorganization of existing schemes; and (ii) organization of feasibility studies and pilot projects in respect of new schemes. Only in the case of the Nile Basin is it likely that preparatory work will proceed far enough to permit any major development of new schemes to get under way during the present Plan. However, it is hoped that sufficient groundwork will be done during the Plan period to enable additional schemes to be launched early in the 1970’s.

**Development of Existing Schemes**

37. *Mwea.*—Work is presently going ahead on a 2,000-acre extension at Mwea, financed by the U.K. Freedom from Hunger Campaign. By the end of 1965 about 1,000 acres had been completed, of which 600 were planted to paddy in 1965 and will be harvested in early 1966. The remaining 1,000 acres will be completed by early 1967, and the entire extension will yield a harvest in 1968. Meanwhile, investigations have been completed in respect of a further 3,000 acres of black cotton soil which can be irrigated from the run of the Thiba River. The Government is already negotiating for external aid to carry out this extension, which it is hoped to complete in 1969. Development of this 3,000 acres, estimated to cost about £350,000, will bring the total scheme acreage to 10,360 acres and the total number of tenants to 2,590. The extension itself will increase production of paddy by about 6,400 tons per annum, worth nearly £160,000 before milling. Considerable work with pilot holdings has been done on yet another 1,750 acres at Mwea, consisting of red soils under command of the Nyamindi River. This area would be suited to vegetables and possibly cotton. The unit capital cost for red soil development will be less than for the black soil, but annual operating costs are correspondingly higher. External aid will be sought for the red soil development, which is expected to cost about £125,000.

38. The present arrangements for processing the Mwea paddy crop are inefficient and wasteful. The paddy is now allocated to five mills which function at less than 30 per cent of capacity on average. Moreover, three of the mills are in Mombasa, which means that each year over a thousand
tons of waste (husk) from Mwea is transported 400 miles. It is Government policy to rationalize the rice industry by establishing at Mwea a modern rice factory which will be able to process the entire Mwea paddy crop. The Mwea rice growers have already raised £25,000 toward the financing of the mill, which is expected to cost about £180,000. The Government, which will own the mill jointly with the growers through the National Irrigation Board, will arrange for the remaining finance, part of which will come from overseas. It is hoped to construct the mill in time to process part of the 1966/67 paddy crop.

39. Perkerra.—No extension of this scheme on the basis of the present headworks is possible due to lack of water in the river in the dry season. Extension of the scheme would require constructing new storage facilities at a cost of over £1 million. The soils which would come into any extension present technical difficulties due to high salt content. Under these circumstances it is not planned to extend Perkerra during the Plan period but rather to concentrate on reorganizing the existing scheme and increasing tenant discipline and productivity so as to eliminate the annual operating loss to Government by 1970. It is believed that giving the Perkerra tenants extension service coverage comparable to that provided at Mwea would double present onion yields.

New Schemes: Feasibility Studies and Pilot Projects

40. Tana Basin.—The U.N. Special Fund/F.A.O. consultants engaged in the Tana Basin survey issued an interim report in late 1965, and will produce their final report in late 1966. From the interim report it appears that it would be technically feasible to irrigate up to 250,000 acres on the west side of the Lower Tana between Galole and Bura. Utilization of this potential would depend on gaining maximum regulation of the Tana River flow by means of storage facilities at several points on the river as far up-stream as Seven Forks, which is 240 river miles from Bura. Fortunately, it appears that storage facilities required for maximum utilization of the hydro-electric power potential of the river would at the same time largely satisfy the needs of irrigation. However, even if the electric power industry were to bear the full cost of all storage facilities on the Upper Tana the interim report suggests that all other development required to realize the full irrigation potential would cost £120 million or more, or around £600 per acre. The considerable discrepancy between the projected capital cost in the Tana Basin and at Mwea is partly a result of topographical and soil conditions necessitating a very long storage barrage at Korokora and a 38-mile-long canal to the nearest point in the irrigation scheme. Another significant factor affecting development costs in the Tana Basin is the area's isolation from the present centres of economic activity in Kenya. Among other things, this necessitates the construction of a major road, 260 miles long, connecting the scheme with Mombasa, estimated to cost £11 million. There is virtually no economic justification for such a road apart from the proposed scheme. Against these substantial costs one must balance the benefits which would accrue to the national economy from the
Tana Basin irrigation scheme. Under an intensive cropping pattern, the scheme would produce a substantial share of Kenya's requirements for sugar, cotton, soft fibres and other commodities. On the employment side, it would accommodate about 50,000 tenants and at least as many hired labourers, plus several thousand factory workers, Government staff, private service personnel, etc. When all relevant information on the scheme has been collected the Government will carefully weigh its costs and benefits against those of other possible investments, in agriculture as well as other sectors, which would have to be held in abeyance during the twenty-odd years while available resources were being channelled into the Tana Basin.

41. Feasibility study and pilot development for the Tana Basin scheme will not come to an end with the submission of the F.A.O. consultants' final report. Under the terms of reference for the survey this report will be based on only two years of crop results, whereas it is now recognized that a longer period of time, with the additional experimentation it makes possible, is required in order to lay a basis for an optimum agricultural programme. Moreover, while agronomic experimentation has been going on at Galole adjacent to tenant holdings on the existing irrigation scheme, no attempt has been made—again because the survey terms of reference did not call for it—to see whether cultivators of average ability can adhere to the pattern of activity which must prevail on the major scheme. The Government has therefore decided to continue feasibility work at Galole for another three years, and a major aspect of this work will be to reorganize Galole to serve as a true pilot and training scheme. The Netherlands Government has agreed to assist this activity, estimated to cost £350,000 over the first three years of the Plan period. Inasmuch as negotiations for the necessary outside capital to launch the major scheme would take many months from the Government's final decision on its feasibility, it is not anticipated that full-scale development would proceed during the present Plan period.

42. Nile Basin.—Preliminary engineering studies have indicated a potential of 134,000 acres for irrigation and reclamation in the Nile Basin of Western Kenya, comprising those areas which drain into Lake Victoria. Work will proceed during the Plan period on two separate feasibility studies and pilot projects in the area, although it is likely that major development will occur within an integrated programme. The two schemes are:

43. Yala Swamp.—This project originally called for development of a 500-acre pilot irrigation scheme on the high ground bordering the Yala Swamp in Central Nyanza and Busia Districts, together with reclamation of 50 acres of the swamp. Supported by the U.N. Special Fund, the project got under way at the end of 1965. Already evidence has been found to suggest that greater emphasis should be laid on the swamp reclamation aspect, which offers the possibility of bringing 35,000 acres under irrigated agriculture. The uninhabited swampland could accommodate surplus population from nearby densely populated areas. In view of these findings the 50-acre pilot swamp
reclamation scheme has been replanned to a size of 500 acres. The 500-acre pilot scheme on high ground is located in an inhabited area (Bunyala Location) where traditional land rights exist. This is the first time that the problem of existing land rights has been encountered in irrigation development organized by the Kenya Government. In accordance with the principle stated above, these rights will have to be extinguished or suspended indefinitely subject to compensation. The Bunyala pilot scheme will afford Government useful small-scale experience in resolving the problems of land rights and selection of tenants before tackling the same questions on a much larger scale in other areas.

44. Kano Plains and Other Nyanza Schemes.—The irrigable potential in Nyanza Province comprises 70,000 acres in the Central Nyanza sugar belt, 30,000 acres in the Kano Plains, and a number of smaller areas in both Central and South Nyanza. Irrigation water may be obtained by gravity flow from various rivers, notably the Nyando, Kibos and Sondu, and by pumping out of Lake Victoria. Either source is feasible in the Kano Plains, where pumping would involve a lower capital cost but higher operating charges. The entire irrigable area features variable rainfall and periodic drought, and part of it is also subject to periodic flooding. The soils are characterized by heavy clay and cannot be satisfactorily worked with hand tools. The evidence thus suggests that irrigation together with mechanization is the key to agricultural development of the area, even though capital costs will be substantially higher than at Mwea, in part because of the need for expensive drainage works. The Government has therefore decided to proceed with one or more pilot schemes during 1966. As the Plan went to press negotiations toward this end were in progress with engineering consultants and a number of external aid agencies.

Most of the relevant area is densely populated with a largely subsistence economy. Here as in Yala the problem of extinguishing traditional land rights and resettling part of the population will have to be met.

45. Taveta.—Preliminary estimates indicate an irrigable potential of 12-14,000 acres in this area of Taita District, near the Tanzania border. Development of Taveta would not require expensive storage structures since there is a plentiful supply of good spring water, some of which is already being used on three small irrigation schemes controlled by the local county council. However, the scheme faces two major problems: alienation of land—most of the land best suited to irrigation is owned by a sisal company—and wide soil variability. Some of the Taveta soil types are nearly toxic to plant growth because of salinity. Careless irrigation on the existing small schemes has led to rapid spread of brack. Any irrigation development at Taveta will require expensive deep drainage facilities. Here again a detailed feasibility study and pilot scheme is required, and it is unlikely that work will proceed on the main scheme before 1970.
46. Minor Irrigation Schemes.—There are a number of areas of up to a thousand acres, located in at least four different districts of Kenya, which can be developed for irrigation at fairly modest cost. However, none of these schemes is capable of carrying the overhead costs of organized irrigation settlement. It is proposed that development of these areas should normally be carried out on an aided self-help basis. Work will proceed during the Plan period on at least two of these schemes, one drawing water from the Yatta Furrow in Machakos District, and the other based on wells along the Turkwell River in Turkana District. The latter scheme is planned to accommodate initially up to 250 families who are now subsisting on famine relief. The capital cost of establishing and running the scheme for four years is estimated at £170,000. The Misereor Foundation of Germany has offered to pay part of this cost.

Other Land Reclamation—Tsetse Control

47. It is estimated that over 40,000 square miles of Kenya’s land surface is infested with either or both of two species of tsetse fly, Glossina fuscipes and Glossina pallidipes. G. fuscipes is a vector of human sleeping sickness, caused by two species of parasites known as trypanosomes. G. pallidipes is a vector of both human sleeping sickness and animal trypanosomiasis, a serious disease of cattle and other domestic animals. Where G. pallidipes is present in low density, cattle must be maintained on a constant drug régime, and even then the economic value of infected animals is much reduced owing to the effect of the disease on milk output and meat formation. As the density of pallidipes increases, any form of livestock raising, even for subsistence, becomes uneconomic. G. fuscipes is presently distributed mainly over riverine and lakeshore areas of Central and South Nyanza and Busia Districts in Western Kenya, although it has recently spread away from bodies of water into vegetation around huts and waterholes. G. pallidipes has a more varied habitat, including many of the same areas of Western Kenya, but in addition a very much larger area in the Coast, Eastern and Rift Valley Provinces. So far as is known at present, G. pallidipes does not carry human trypanosomes except in Western Kenya, although it is a vector of bovine trypanosomiasis wherever it is found in Kenya.

48. Economically, the tsetse fly is significant on account of the costs of trypanosomiasis in both humans and domestic animals, as well as its effect on land use over substantial areas of the country. As regards the latter, it is estimated that 100,000 acres of good grazing land in Central Nyanza carries no livestock on account of the fly, and the same holds for 20,000 acres in the Lambwe Valley of South Nyanza. If the tsetse fly could be eradicated in these areas, population pressure would lead to full stocking within a few years (and indeed overstocking in the absence of Government control measures). At the present average annual return of Sh. 12 per acre from raising beef cattle on similar land the eradication of tsetse would very soon make possible additional gross livestock output of £70,000 per annum in Central and South Nyanza. With improvements in breeding and other aspects of animal husbandry which
it is hoped to achieve through such programmes as supervised smallholder credit, the potential increase in output is several times larger. Tentative plans have been made to establish a Government stock farm in the Lambwe Valley as part of the land use following tsetse eradication; from the 20,000 acres of good grassland in the valley the farm could sell 1,000 in-calf dairy heifers and 1,000 weaner steers per annum for a gross income exceeding £50,000. It is estimated that tsetse eradication in the Coast, Eastern and Rift Valley Provinces would make room for an additional 1½ million cattle, from which an annual offtake worth about £5 million would be possible.

49. The tsetse fly also affects arable agriculture, by driving away or deterring settlement by persons who are afraid of contracting the disease or unwilling to live in areas where they cannot maintain livestock. It is estimated that an area of 50,000 acres in Central Nyanza is completely uninhabited due to trypanosomiasis, and that 40 per cent of this area would be cropped in any year if it was inhabited to the average density of neighbouring locations. At a typical value of £10 per acre, gross output on this land would be £200,000 per annum. Tsetse fly is also an important obstacle to the development of some 5,000 acres of arable land in the Lambwe Valley, from which another £50,000 of annual gross output could be obtained. The extent of tsetse infestation in the Yala Swamp is not yet known, but it is likely that tsetse eradication is a prerequisite to the reclamation of that area as well. Arable agriculture is less significant in other tsetse-infested districts of Kenya, where, mainly because of low rainfall, stock raising is the most economic form of land use.

50. Because of the serious incidence of human sleeping sickness in Western Kenya, and because of the serious threat that trypanosomes causing this disease may spread to other palidipes-infested areas if it is not quickly eradicated, resources for combating tsetse and trypanosomiasis must be concentrated in Western Kenya for the time being. In the last few years the Government has succeeded in eradicating G. fuscipes from a number of riverine areas in Central and South Nyanza by intensive spraying with insecticides. At the start of the Plan period control operations costing over £60,000 per annum were under way in areas with serious incidence of sleeping sickness. However, these were emergency operations of insufficient scope to eradicate trypanosomiasis altogether in Western Kenya, and in the absence of such eradication the Government would have to continue these operations indefinitely, more or less at their present levels, in order to forestall periodic epidemics.

51. In recent years a number of foreign and international aid agencies have become interested in helping to combat the trypanosomiasis problem in Africa, to which it is unique. During 1965 the World Health Organization and Food and Agriculture Organization of the United Nations assisted the Government in drawing up a five-year programme which has as its goal nothing less than total eradication of trypanosomiasis from Western Kenya. The U.N. Special Fund has been asked to provide financial support for part of the programme, which it is hoped to launch by the end of 1966. The cost of the programme
to Kenya would be about £1.4 million, including both the cost of ongoing control and curative activities which would have to be undertaken indefinitely in the absence of eradication, and about £0.3 million additional to be incurred during the Plan period. The eradication programme involves three aspects: (1) field and laboratory research concerning ecological associations between tsetse, trypanosomes, vegetation, man, wildlife and domestic animals; determining the most economic methods of insecticide and herbicide application along with other techniques of eradication; and studying mechanisms of reinvasion and their control; (2) field surveys to determine the extent of infestation of different areas and check on the results of control measures; and (3) the control operations themselves, which will include establishment and maintenance of a new barrier at Port Victoria, Busia District, to forestall reinestation from Uganda. Toward the end of the project, studies will be carried out regarding the feasibility of tsetse eradication in other areas of Kenya as well as other African countries.

52. All this activity will be to no avail if reinestation is permitted to occur at any time in the future. An important aspect of preventing reinestation is to ensure intensive land use of reclaimed areas, so that any vegetative habitats of the fly which have had to be cleared are not allowed to regenerate. As part and parcel of its application to the Special Fund the Government has pledged that it will carry out an agricultural follow-up programme which will involve intensive settlement of any reclaimed areas and establishment of the Lambwe Valley stock farm referred to above. Inasmuch as the Lambwe Valley contains a notable concentration of wildlife, including two species no longer found anywhere else in Kenya—the Roan antelope and Jackson’s haartebeeste—consideration will be given to establishing a game reserve on land not suited to agricultural use. This will depend, among other things, on whether the retention of game in Lambwe is compatible with the elimination of tsetse and trypanosomiasis as a threat to humans and domestic animals, a point on which it is hoped to obtain conclusive evidence in the course of the above-mentioned studies.

**Settlement Schemes in the Former African Areas**

53. Under the category of organized settlement public attention has recently been concentrated on the Million-Acre Settlement Scheme, along with some analogous smaller schemes, designed to bring about an orderly transfer of European-owned mixed farming land to African smallholders (discussed below in the section on development of the former Scheduled Areas). However, the Kenya Government has been organizing settlement in the former Non-scheduled Areas for a much longer time. Beginning in 1938 the colonial government organized a dozen different schemes covering 5,000 acres or more each in nine districts. Nearly all the schemes were established on unoccupied or very sparsely settled blocks of land, and had as their main objective to settle surplus population and livestock from
overcrowded areas of the country. Roughly a million pounds of development expenditure was incurred on the schemes (not counting the cost of normal Government services), and over 7,000 families were settled. Table 2 lists the twelve schemes referred to here; it excludes a few other schemes where unoccupied blocks of land were improved and opened up to unorganized settlement. Prior to its termination in June 1963, the African Land Development Board (ALDEV) had been involved to a greater or lesser extent with all these settlement schemes. In 1963 those schemes which were felt to have prospered to the point where they no longer required special Government attention but could be treated essentially as one with the surrounding land units were handed over to the Department of Agriculture for normal extension coverage, while five schemes which had not yet reached that point were placed under the Central Agricultural Board in the Ministry of Agriculture. In 1965 the Board maintained one Settlement Officer at Shimba Hills, Olenguruone, Lembus and Roka; assisting them were Department of Agriculture staff.

Table 2.—Settlement schemes in the former African areas

<table>
<thead>
<tr>
<th>Date of first organized settlement</th>
<th>Name of scheme</th>
<th>District</th>
<th>Acreage ('000 Acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>Gede</td>
<td>Kilifi</td>
<td>26</td>
</tr>
<tr>
<td>1960</td>
<td>Roka</td>
<td>Kilifi</td>
<td>40</td>
</tr>
<tr>
<td>1941</td>
<td>Olenguruone</td>
<td>Nakuru</td>
<td>35</td>
</tr>
<tr>
<td>1947</td>
<td>Makueni</td>
<td>Machakos</td>
<td>50</td>
</tr>
<tr>
<td>1951</td>
<td>Lambwe</td>
<td>South Nyanza</td>
<td>80</td>
</tr>
<tr>
<td>1951</td>
<td>Kimulot</td>
<td>Kericho</td>
<td>7</td>
</tr>
<tr>
<td>1956</td>
<td>Itembe</td>
<td>Kericho</td>
<td>10</td>
</tr>
<tr>
<td>1952</td>
<td>Shimba Hills</td>
<td>Kwale</td>
<td>42</td>
</tr>
<tr>
<td>1954</td>
<td>Sarora</td>
<td>Nandi</td>
<td>6</td>
</tr>
<tr>
<td>1955</td>
<td>Kaimosi</td>
<td>Nandi</td>
<td>5</td>
</tr>
<tr>
<td>1955</td>
<td>Molinduko</td>
<td>Embu</td>
<td>7</td>
</tr>
<tr>
<td>1957</td>
<td>Lembus</td>
<td>Baringo</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total: 328</td>
</tr>
</tbody>
</table>


54. The Government has now decided to bring to bear on these schemes the experience gained by the Department of Settlement in the former Scheduled Areas. Accordingly, in 1966 that Department will assume responsibility for those schemes still requiring special assistance and, as a rule, operate any future settlement schemes in the former African areas from their inception. In all cases the aim will be to ensure general adoption of sound techniques of husbandry and thus bring settlers to a high level of productivity so that they can keep up their holdings and service loans with no more technical assistance than is provided by the Department of Agriculture under its normal extension programme. For each scheme taken over by
Settlement a time limit will be set for achieving this target and turning the scheme over to the Department of Agriculture. Costs of running these schemes and any new ones which may be established during the Plan period have not yet been determined. A notional allocation of £350,000 is made for this programme in the Plan estimates.

**Development of the Former Scheduled Areas**

55. In 1960 the Scheduled Areas comprised about 7.5 million acres of agricultural land reserved for the exclusive ownership of Europeans. Two-thirds of this land was situated in the Rift Valley Province, about 25 per cent divided evenly between Central and Eastern Provinces, and the remainder, less than 10 per cent, was split among Nyanza and Western Provinces and Nairobi. Of the 7.5 million acres approximately 4.1 million consisted of ranches and plantations, the latter being devoted principally to coffee, tea, sisal, and, to a lesser degree, horticultural crops, while the remaining 3.4 million acres were classed as “mixed farming” land.

56. In late 1960 land ownership in the Scheduled Areas was opened up to all races. At the same time, as noted in paragraph 2, the Government felt a political imperative to promote the transfer of ownership of a substantial acreage in the former Scheduled Areas from Europeans to Africans. Out of this imperative was born the Million-Acre Settlement Scheme, designed to accommodate African smallholders, as well as a variety of schemes to assist Africans of greater means and experience to take over the large farms intact. Political and economic considerations dictated that this massive land transfer should, for the most part, be confined initially to the mixed farming areas. On the political side, it was mixed farming areas which largely bordered on those sections of the former African areas where the pressure of population and livestock on the land was greatest. Similarly, it was European mixed farmers, more than ranchers and plantation owners or managers, who were most concerned about the impact of majority rule in Kenya on their way of life, and amongst whom a considerable number pressed the Kenya and British Governments to help them realize their investments and move out. On the economic side, the ranching areas and sisal plantations were too dry for arable agriculture of a type to which Africans in the overcrowded land units were accustomed, while the fair value of mixed farming land was on an average no more than one-fifth of the value of most other plantation land, meaning that several times as many people could be settled for the same cost in the mixed farming areas. Thus far Government-assisted land transfer has been concentrated overwhelmingly in the mixed farming areas, the main exception being an area of approximately 136,000 acres purchased for co-operative ranches as part of the Million-Acre Scheme.

57. The Government’s basic policy decision, discussed earlier in this chapter, to shift the concentration of development resources from the former Scheduled Areas to the former African Areas, does not mean that the
Government denigrates the importance of the former Scheduled Areas in the national economy. In 1962, prior to the start of large-scale land transfer for African settlement, the agriculture of the former Scheduled Areas produced 78 per cent of the gross value of marketed agricultural output, comprising virtually identical proportions of both crop and livestock production. These areas produced an even higher proportion of Kenya’s agricultural exports, and accounted for some 42 per cent of total reported employment in Kenya. While the comparative role of the former African areas in the nation’s cash economy is rising steadily, and will do so even more rapidly under the impetus of programmes described earlier in this chapter, the former Scheduled Areas will continue for some time as the source of more than half of marketed agricultural output and attainment of Kenya’s 1970 growth targets will be impossible unless output from the former Scheduled Areas increases at a steady rate.

58. Turning specifically to the mixed farming sector, which has recently been the locus of the bulk of Government activity in the former Scheduled Areas, in 1962 European-owned mixed farms produced £8 million worth of crops and £7 million worth of livestock products, or 23 per cent and 58 per cent respectively of the gross marketed output of these commodities. Total production of about £15 million on these farms amounted to 32 per cent of the nation’s total marketed agricultural output. Gross value added by the mixed farms was roughly £10.5 million, or 37 per cent of the monetary output in agriculture, while exports originating from them were valued at roughly £9 million or 23 per cent of total agricultural exports. Employment on the farms was estimated at about 110,000 with a total annual wage bill of £4.4 million. The mixed farms generated about £1 million of direct tax revenues for the Government.

59. Between 1962 and 30th June 1965, over one million acres, or about one-third of total mixed farming acreage, was transferred to Africans. Unfortunately, reliable data on total production of African settlers and large-scale farmers who have taken over formerly European-owned land are not available, so that it is not possible to say accurately what has happened to total production on the 3.4 million acres of mixed farming land. However, there is some evidence that transfer of over a million acres in less than four years has brought about a situation where 1964/65 output on this land was substantially less than the 1961/62 level. The Government is confident that this decline will be reversed and that, once all the schemes in the million-acre programme have achieved maturity, more intensive land use will result in production levels substantially higher than in 1961/62. But in the meantime it is clear that this transitional period in the mixed farming areas is costing the national economy significant amounts of output, foreign exchange, and personal income. The Government has therefore decided that the rate of land transfer in the mixed farming areas will be slowed down for a few years in order to permit consolidation of existing schemes and ensure steady progress in the mixed farming economy. The
detailed implications of this shift in policy will be described below after more detailed discussion of the existing schemes of land transfer and development in the mixed farming areas.

60. Appendix Table 6 gives details on various schemes for purchase of land in the former Scheduled Areas with public funds during 1961/65.

Settlement Schemes

61. Appendix Table 7 provides summary data on the Million-Acre Settlement programme and its associated schemes, showing their planned scope and the progress achieved as at 30th June 1965. The Table is broken down according to three different types of schemes, known as High Density, Low Density, and Co-operative Farms. High Density schemes were designed to relieve population pressure in overcrowded African land units by accommodating the greatest possible number of smallholders within a given settlement area. Normally the criteria of selection for these schemes are that settlers should be unemployed and landless but have some agricultural knowledge. In all areas priority is given to previous employees of the farm on which a scheme is located. Selection is made by committees appointed by district commissioners in districts for which specific schemes have been designated. The planned average plot size on all High Density schemes taken together is 28 acres. Plots are laid out and farm budgets designed so as to provide the settler with subsistence plus anywhere from £25 to £70 of cash income after meeting all operating costs and loan service obligations. On schemes with a £25 cash income target the settler is normally required to pay no more than £7 down for stamp duty and legal fees, while in the case of a £70 income target these fees plus a required land deposit bring the total down-payment close to £60. Low Density schemes are built around somewhat better qualified smallholders with demonstrated agricultural ability and some savings of their own. The settler must be recommended by his district agricultural officer and put up £60 or more in fees, land deposit, and working capital (which may be provided in kind, as in the form of a grade cow). These schemes aim at an income of subsistence plus £100 cash, or £250 in a few so-called “Yeoman” schemes. The planned average plot size on Low Density schemes is 35 acres. Budgets on these smallholder schemes provide, on an average, for 60 per cent of gross income to be derived from livestock products, notably whole milk, butterfat, beef, and wool. In the arable sector, the main cash crop budgeted is pyrethrum, with maize, potatoes, vegetables, onions, beans and peas, passion fruit, tea, coffee, wheat, and sunflower also included in one or more schemes. The third type of scheme, Co-operative Farms, is designed for areas which, on account of difficult soil conditions and/or low rainfall, are not suited to smallholder agriculture. The only exceptions to this rule are two schemes to be established on existing coffee plantations. Of the remaining ten Co-operative Farm schemes, six will be beef ranches. The twelve schemes range in size from 130 acres to 41,000 acres. Income targets
have not yet been determined. A basic set of co-operative farming rules has been drawn up for the schemes, but much has still to be learned about how to operate them successfully.

62. Procedures for buying land in the Scheduled Areas for all types of schemes were agreed between the Kenya Government and the British Government, which has supplied all the finance for land purchase. In most cases European farmers received offers for their land and permanent improvements based on 1959 market values. Farmers were free to reject these offers and retain their farms or sell them to other parties. A few farmers have exercised this option, but the majority have found it in their interest to accept what were almost universally acknowledged to be very generous offers. While a large majority of farmers bought out for settlement have taken their proceeds and left Kenya, a number have shown their confidence in Kenya’s economic future by taking over farms in other parts of the country, or entering nonfarming careers in Kenya.

63. As shown in Appendix Table 7, by 30th June 1965, the start of the present Plan period, nearly 25,000 families, or about 75 per cent of the ultimate planned total, had been settled under the Million-Acre Scheme. The settlers owned 63,000 head of grade cattle, an average of two and a half per family. The Department of Settlement was carrying out an average of 1,600 artificial inseminations a month, or nearly 20,000 inseminations per annum, which implies production of 4,500 highly bred cows each year; and the rate was increasing steadily with growing settler acceptance of A.I.

64. The economics of settlement are of vital concern to the nation, for two main reasons: firstly, because the former Scheduled Areas were an important source of income, foreign exchange, and employment for the national economy, and these areas must play their part in the national endeavour to accommodate a growing population at an increasing standard of living; and secondly, because by 1968 the Government will have contracted over £16 million of interest-bearing debt to finance the existing schemes, and unless settlement is sufficiently successful from an economic point of view to generate the required annual loan service payment, amounting (by 1970) to roughly £1.4 million, this will pose a heavy burden on the rest of the economy and hold up the development of other sectors.

65. Obviously, the history of settlement in the former Scheduled Areas is too brief to warrant conclusive economic judgments. The early results on individual schemes have been strongly conditioned by farm budgets and other advance plans necessarily prepared with the benefit of only limited experience, and changes now being made in the light of these results will undoubtedly bring much improvement. Moreover, it was inevitable that many bottlenecks should appear in executing a programme which was drawn up with little regard to the availability of staff resources. Inevitably, many personnel have had to be hired on a short-term basis, resulting in a
rapid turnover of staff such that, for example, within the Settlement Officer cadre, by February 1966, 290 persons had held positions then occupied by 107 officers.

66. Another result of having run settlement as a crash programme is that it has been difficult to record the economic results thus far. A postal census is obviously unsatisfactory in dealing with thousands of smallholders, many of them illiterate, and the substantial output marketed outside the co-operative societies or consumed for subsistence renders the co-op. records inadequate for measuring production. Only by means of a scientific sample survey, based on frequent visits by enumerators, can one obtain reasonable estimates of production, income, and employment in settlement. Two such surveys have now been or are still being carried out, one by an Egerton College economist covering the 1963/64 crop year on four schemes in Western Kenya, the other by the Farm Economics Survey Unit of the Ministry of Economic Planning and Development covering the 1964/65 and 1965/66 crop years on some fifty schemes in all settlement areas. On none of the four Egerton Schemes did average net output approach target levels, although this result was not conclusive because the schemes were relatively new and permanent crops such as tea had not matured. One finding of interest is that, on the assumption of 300 work-days per year, the average number of working hours which the settler himself devoted each day to his plot (not counting his family, and excluding settlers who had regular outside employment) was less than 2½ on two schemes, and equalled 3½ and 4½ respectively on the other two. Significantly, the survey established a wide variability in output, and in most cases the more hard-working farmers attained and even surpassed the targets. Only fragmentary results of the second survey were available as this Plan went to press; these showed gross output of £5.4 per acre on eleven low-density schemes as compared with £3.5 per acre production on the same land by the former European owners; while on twenty-one high-density schemes gross output was much lower at £2.3 per acre (pre-settlement figures not available). The Government has decided to commission two further studies of settlement during 1966, with a view to obtaining recommendations for improved operating procedures and guiding all agencies involved in settlement, both domestic and foreign, in their future investment policies. The first study will be a short, intensive effort by a joint Kenya-U.K. Government team of experts, the second will be a more long-range analysis by a team of economists and other social scientists at the Institute of Development Studies, University College, Nairobi. A continuous programme of surveys will be carried out during the Plan period to enable the Government to keep abreast of its large investment in settlement.

67. Among the major difficulties which have faced settlement in early years is a substantial shortfall in meeting pyrethrum quotas taken over from farms purchased for settlement. In 1963/64 settlement schemes produced
only 201 tons of dried flower against a quota of 1,139 tons. In 1964/65 production more than tripled to 649 tons, but meanwhile the quota had risen to 2,336 tons. Part of the shortfall is due to the 1965 drought. During 1964/65 15,000 acres were planted to pyrethrum, a crop which bears annually over four years. It is hoped that this planting drive will enable settlement to fill its quota by not later than 1966/67. Probably the most serious problem in settlement at the present time is the deteriorating situation in respect of settlers' loan repayments. Appendix Table 8 shows cumulative loan repayments and amounts in default at 31st December 1965 as a percentage of total billings up to 30th September 1965. The information is broken down by settlement zones and presented in summary form for two earlier dates. Some delay between billings and repayments is normal in smallholder credit schemes, but the Government views with concern the 62 per cent of total billings which was overdue by three months or more. In 1965 the Agriculture Act was amended to give the Settlement Fund Trustees additional powers to enforce the recovery of settlers' loans. In future, overdue loan repayments will be deemed to be civil debts recoverable summarily under the appropriate legislation. Where loan repayments are in arrears for more than six months the trustees will have power to evict settlers without recourse to the courts; such power will be used only against chronic defaulters after consideration by a sifting committee. Steps were being taken in early 1966 to launch these procedures. Settlers are no less subject to the strict provisions of Sessional Paper No. 10 regarding loan repayments than are smallholders in the former African areas.

68. The financial totals in Appendix Table 7 show that costs of settlement apart from land purchase and development loans are very considerable, amounting to about 25 per cent of the total cost of all the settlement schemes in the former Scheduled Areas. At 31st December 1965 there were over 1,500 employees of Government working full time on matters pertaining to settlement. The annual cost of one complete staff unit in a single settlement scheme is more than £5,000. In the financial negotiations for settlement the British Government agreed to pay all administrative costs on a grant basis during 2½ years from the start of a given scheme. The Kenya Government agreed to provide normal services of agricultural extension staff and other Government departments in settlement areas from the end of the 2½-year period. It was originally hoped that the settlement schemes would be sufficiently well established after 2½ years so that settlement staff as such could be phased out with the exception of accounts personnel required to keep track of loan repayments. Experience has shown, however, that this was an illusory hope, and in fact settlement staff units must stay on the ground several years longer in order to solve organizational problems and leave settlers at a point where they and their successors will be able to earn a decent living and at the same time make regular six-monthly loan repayments over the next thirty years.
69. The Government has therefore accepted the necessity, both to ensure settlers of a successful start and safeguard the Government’s large investment in settlement, of maintaining “extended supervision” for another 2½ years on each scheme. The costs of this programme are projected at £1.3 million over the Plan period. Undoubtedly, the longer extended supervision is maintained on settlement schemes, the greater will be their economic success and the less the Government will have to worry about loan defaulters. However, it must be remembered that staff employed in extended supervision could otherwise be used in schemes for the former African areas or in other sectors apart from agriculture. It is a matter of national policy that settlement schemes should be able, once the five years have passed, to subsist on the normal pattern of Government services in any progressive farming community in the former African areas, allowing only for some special activity related to loan service collections.

70. Total expenditure over the Plan period on existing settlement schemes in the former Scheduled Areas is estimated at £7.0 million on the development side, representing moneys already promised to Kenya by the U.K. Government, the Commonwealth Development Corporation, and the World Bank. Together with estimated costs of extended supervision this brings total projected Plan expenditure on the Million-Acre Scheme and its adjuncts to about £8.3 million.

**Transfer of Mixed Farms Intact**

71. Appendix Table 6 shows the various schemes under which mixed farms have been taken over intact by Africans with a view to continuing the former pattern of large-scale farming operations. In addition to transfers covered by the table, there have been a number of strictly private arrangements in which Africans have paid cash down or been allowed to buy a farm over several years. In most cases where public funds have assisted in farm transfers the African buyers have been required to deposit up to 50 per cent of the purchase price from their own resources. In a number of cases African businessmen who had made money in trade or transportation invested their savings in these farms. Africans with sufficient resources to buy and own large-scale farms individually have been in a minority; more often several have pooled their savings in a partnership sometimes running to fifty or more members. A number of the larger partnerships, which frequently consist of the former European owner’s employees, have been registered as co-operatives. All told, at the start of the Plan period Africans owned and operated some 750 large-scale farms covering roughly 600,000 acres. The total investment per farm, including borrowed funds in addition to the owners’ capital, was estimated to average £12,000, implying a total capital value on the order of £9 million.

72. The impact of these transfers on production, income and employment is not known accurately. However, it is quite clear that many of the new African large-scale farmers have run into serious trouble, first of all
because most of them had to devote nearly all their savings to purchasing their farms, which left them with very little working capital to operate the farms efficiently. A number of farmers, having gone heavily into debt to purchase both farms and loose assets such as machinery and cattle, still lacked sufficient working capital to generate loan repayments, and were forced to sell off loose assets in order to meet mortgage payments. Another significant factor is that very few of them had the skills and experience required for the complex task of running a modern mixed farm. A number of these farmers had worked on European farms and acquired knowledge in one or more particular lines of activity but few had been given sufficient responsibility by their employers to master the total farm picture. Moreover, when these farmers took over their new properties the Agriculture Department staff in the mixed farming areas was not equipped to work with the farmers, help them prepare farm plans, and advise them on the many operational problems which they encountered.

73. The unfortunate result of this situation is that most African-owned large-scale farms have deteriorated since their change of ownership, many presenting a typical run-down picture with dilapidated buildings, dips, and fences; high mortality among the livestock; heavy drops in crop yields; deterioration of farm machinery; and misuse of land and pasture, leading in some cases to bush encroachment. On many farms production per acre is estimated at only around 20 per cent of pretransfer levels. During 1965 the Government took several steps to rectify the situation. A new school for training African large-scale farm managers was set up with U.K. Government assistance at Thomson’s Falls. This school was opened in June 1965 on a mixed farm which had formerly been converted into a school for European farm children. It will offer one 11-month course per year training eighty persons already connected with African or Government-owned large-scale farms or with good prospects of becoming so employed. The Agriculture Department has also moved rapidly to establish new extension services for African large-scale farmers. By April 1966 some thirty extension personnel, hired locally or provided by the West German Government and the U.S. Peace Corps, were engaged in this activity in Nakuru, Uasin Gishu, and Trans Nzoia Districts, where most of the African large-scale farms are located.

Abandoned and Mismanaged Farms

74. Under the Agriculture Act the Minister for Agriculture has power to issue Management Orders on farms which are found to be abandoned or mismanaged. Once a Management Order is served on a farm, the Central Agricultural Board takes over and runs the farm through a specially hired manager. The Management Order is terminated when the owner of the farm satisfies the Minister that he is willing and able to run the farm properly, or the farm is sold or leased to a third party qualified to run it. As at 20th July 1965, 120 farms totalling 235,617 acres had been declared
mismanaged and served with Management Orders or were awaiting such orders. Most of this was European-owned mixed farming land in the former Scheduled Areas, although Management Orders have been served on several ranches and the Government has served notice that the former African areas will not be exempt from the relevant provisions of the Agriculture Act.

**Land Transfer and Development in the Former Scheduled Areas During the Plan Period**

75. During 1965, with the Million-Acre Scheme and its adjuncts well under way, the Government gave active consideration to the future of the remaining 1.7 million acres of mixed farming land still owned by Europeans. Settlement of 25,000 out of a million families in the African areas had by no means eliminated population pressure in those areas, especially considering that probably more than 50,000 new households had been formed there since the start of settlement. Moreover, there was strong evidence that a majority of the remaining European mixed farmers wanted to sell their farms at a fair value and either switch to a different occupation in Kenya or emigrate. It was also feared that, unless those farmers wishing to leave were assured of receiving a reasonable offer for their farms within a few years, many of them would recover whatever capital they could out of current production, sale of loose assets and running down permanent improvements. If this were allowed to happen, in another few years a further large share of the mixed farming economy would deteriorate badly. On the other hand, the Government also had to face the fact that the country's management resources and agricultural extension services would be heavily committed for some time in consolidating existing schemes in the mixed farming areas and trying to restore production in areas already taken over from Europeans. Thus, to buy out within a short space of time all remaining European mixed farmers desirous of leaving would be to leave a large share of the mixed farming economy devoid of experienced management and cause no less rapid deterioration of the economy in question than if the Europeans were offered no assurance of ever being able to realize fair value for their property. The Government also had to consider that maintaining the current rate of land transfer in the former Scheduled Areas would make impossible a relative shift of staff and financial resources into development of the former African areas, where the potential return on investment, in terms of increased output and employment, was felt to be greatest.

76. Since it was clear that Kenya's own resources could not be spared for a further extensive programme of land transfer and development in the mixed farming areas, negotiations were held with the British Government to secure a maximum contribution from that source for whatever programme was eventually agreed to. In November 1965 agreement was reached on the outlines of a scheme under which an average of approximately 100,000
acres per annum will be purchased from European farmers over the last four years of the Plan period and disposed of as follows:

(i) Approximately 20,000 acres per annum will go to settlement, most of it being handled along the lines of the present low density schemes, with intensive supervision provided over a five-year period from the start of any given scheme. Net of settler’s deposits and certain other immediately recoverable items, this scheme is projected to cost about £25 per acre over a five-year period or eventually £500,000 per annum.

(ii) With the assistance of Land Bank loans for purchase of land and permanent improvements, and Agricultural Finance Corporation loans for loose assets and working capital, part of the remaining 80,000 acres per annum will be transferred to Africans to operate intact as large-scale farms. This will probably go forward at no more than one-third of the rate at which such transfers occurred in 1964 and 1965, but it is felt that a slowing down of this process is necessary in order to arrest the deterioration of conditions on present African-owned large-scale farms. Borrowers in this category will be required to deposit at least 50 per cent of the total amount which experts judge in each case to be necessary in order not only to purchase land and loose assets but also to ensure adequate working capital to operate the farm at a reasonable level of productivity. The total cost is estimated at £20-£22 per acre; assuming transfer of 50,000 acres per year, total public capital required for the Land Bank/A.F.C. share in the transfer programme would amount to about £525,000 per annum, or £2.1 million over the Plan period.

(iii) The remainder of the 80,000 acres will be taken over by the Agricultural Development Corporation and operated as either National or transitional farms. National Farms will be chosen for their suitability to produce strategic inputs required by the agricultural economy as a whole, including mixed farms, settlement schemes, and smallholdings in the former African areas. Such inputs include: improved breeding stock for the dairy, beef, pig, and sheep industries; grade in-calf heifers for the dairy industry; and bulk supplies of improved varieties of wheat, maize, barley, oats, potato, and pyrethrum seed. Before A.D.C. embarks on a particular National Farm project the Government will analyse the state of supply and demand in respect of a particular strategic commodity, and determine whether its production can safely be left to private farmers, or whether adequate supplies can only be assured if the state takes a direct hand. During 1965 the situation in respect of pedigree livestock became so serious that Government had to direct the A.D.C. to purchase two pedigree dairy herds and one pig herd in order to prevent their being broken up; by late 1965 one National Farm had been established to accommodate two of these herds and purchase of others was under negotiation. Transitional farms will be those which must be purchased in order to keep them in production even though they are not required for settlement or National Farms, and no qualified Kenya citizens apply to take them over. These farms will be run by the
A.D.C. with a view to maintaining reasonable productivity until such time as qualified private parties come forward to buy them. The cost of the A.D.C. share in the land transfer programme is estimated very roughly at £22 per acre, including land and permanent improvements, loose assets, and working capital. The total annual cost of handling, say, 30,000 acres through the A.D.C. would thus amount to £660,000, or £2.64 million over the Plan period. In addition, the A.D.C. will obtain funds from non-U.K. sources for development of National Farms on land purchased in 1965/66, before commencement of the U.K.-financed scheme, or on land not eligible for inclusion in the scheme. The amount in question is estimated notionally at £300,000 over the Plan period.

77. The total cost of purchasing 400,000 acres of European-owned mixed farming land during the Plan period and keeping it at a reasonable level of productivity is expected to be about £6.4 million. If this programme is carried out on schedule, at the end of the Plan 1.3 million acres of mixed farming land, less acreages sold under the Compassionate Case Farms scheme (see below) or by private arrangement, will still be in European hands. A number of Europeans farmers have taken out Kenya citizenship. It is Government policy that every land-owning Kenya citizen, regardless of race or national origin, who is capable of farming his holding efficiently, should be encouraged to retain the holding and should have access to regular Government aids to farming, including agricultural credit and extension services. Non-citizen farmers who keep their farms in production are assured of fair play from the Government and fair value for their holdings if they decide to sell out, such value to take full account of any development carried out henceforward.

78. In other respects as well the Government is conscious of the problems faced by large-scale farmers, and will give careful heed to their legitimate demands. Thus the Government is aware of the need to keep a reasonable spread between those producer prices under official control and rising costs of production. In this light, the Government acted in late 1965 to increase producer returns by authorizing 5 to 10 per cent increases in the prices of maize, wheat, and beef. During the Plan period the Government will regularly review the position in respect of producer returns and act as necessary. However, it strongly prefers to enhance farm incomes through increased efficiency rather than rising consumer prices, and will intensify research and other activities designed to improve yields and reduce unit costs. The Government recognizes that stock-theft is one of the main difficulties faced by large-scale farmers in Kenya today regardless of their race. To combat this evil the Kenya Police have established a Stock-Theft Unit, which will expand steadily during 1966 as specially trained personnel and new equipment are added to it. A programme to solve the problem of squatters, of concern to a number of large-scale farmers, is being prepared by the Special Commissioner for Squatters in the Ministry of Agriculture.
79. In addition to the foregoing major programme of land transfer and development there will be several related activities in the former Scheduled Areas during the Plan period. These include.

(i) **Compassionate Case Farms.**—During 1962/64, 161 European-owned farms were purchased with U.K. Government funds provided outside the Million-Acre Settlement Scheme and its adjuncts. Under this scheme farms were purchased from Europeans who, on account of illness, old age, isolated location or other factors beyond their control, were not in a position to maintain their farms and yet could not realize a fair value for them on the open market. Of the 161 farms 20 were incorporated into settlement schemes, while most of the remainder were disposed of intact to Africans. The British Government has now agreed to continue this programme during the Plan period, and for the 1965/66 phase to provide funds for administration, rehabilitation, and running losses in addition to land purchase, prior to transfer of these farms to Africans. The total cost over the Plan period is estimated at £1 million, of which 50 per cent will be incurred in the first two years of the Plan when over forty Compassionate Case farms are likely to be bought.

(ii) **Abandoned and Mismanaged Farms.**—The rate at which the Government finds it necessary to serve Management Orders on farms will be partly dependent on the rate at which the aforementioned land purchase programme goes forward. Thus, any true Compassionate Case farm becomes abandoned and mismanaged unless it is purchased under the foregoing scheme. Also, other farmers who despair of receiving satisfactory offers for their farms within a given space of time may abandon or mismanage them. Most abandoned and mismanaged farms are operating, if at all, at a low level of productivity by the time Management Orders are issued on them. While it is Government’s policy to ensure that these farms are handed over to qualified farmers as soon as possible, in fact there are relatively few customers for the farms in their current state. During 1965/66 the Government is spending about £500,000 to rehabilitate the farms, put livestock on them and generally get them into reasonable production so that the new owners can take over going concerns. This expenditure will be reduced substantially over the rest of the Plan period. Some of the farms will be sold with the assistance of Land Bank loans. Others will be used to accommodate an estimated 2,000 squatter families. Total expenditure over the Plan period, net of recoveries from sales of farms, is projected notionally at £1.2 million. Part of the programme will be handled by the Agricultural Development Corporation.

(iii) **Training and Extension Services for African Large-scale Farmers.**—The Agriculture Department will continue to expand its various activities designed to help African large-scale farmers run their properties more profitably. Additional farm planning and other extension personnel, hired locally or sponsored by external aid agencies, will be put in the field. A second large-scale farmers’ school will be established in Western Kenya, and will provide
special training in farm activities characteristic of Uasin Gishu and Trans Nzoia Districts. The British Government has already agreed to finance the establishment of the school, estimated to cost £72,000. Recurrent costs will total approximately £100,000 during the Plan period, while recurrent costs of large-scale farmers’ extension services will total about £250,000.

(iv) Credit for Existing African Large-scale Farmers.—In addition to the estimated £600,000 of credit to be channelled through the Agricultural Finance Corporation as part of the new land transfer and development programme, a substantial part of the A.F.C.’s supplementary resources (which include an estimated £1.5 million in current loan repayments) will be lent to African large-scale farmers already on the ground. Such loans will be made on strict conditions regarding the use of the money and the cultural practices to be followed by the farmers on Agriculture Department advice.

80. The foregoing discussion has concentrated on programmes in the mixed farming sector of the former Scheduled Areas. It is these areas which will continue to require special Government attention and assistance during the Plan period, although this does not mean that the ranching and plantation sectors are regarded as being any the less important to Kenya’s economic advancement. The Government’s general agricultural policies will be framed so as to take into account the interests of these areas no less than those of other sectors, and special assistance will be provided as appropriate. For example, the range development programme discussed earlier provides for £520,000-worth of loans to commercial ranches comprising 1.3 million acres in the former Scheduled Areas.

Functional Activities in Agriculture

81. Included under this heading are activities which affect both the former African and Scheduled Areas. These are: credit, research, education, and the Agricultural Development Corporation.

Credit

82. Several major credit schemes have already been discussed in connexion with either the former African or Scheduled Areas, but with a few programmes this division cannot be made a priori. Over the Plan period the Agricultural Finance Corporation will have roughly £2.5 million (including current loan repayments) available for lending outside the smallholder credit, range development, and new Scheduled Areas land transfer and development schemes. As already noted, the larger part of this will go to existing African large-scale farmers in the former Scheduled Areas. However, a significant portion will be loaned to individual farmers and co-operatives in the former African areas who are excluded from the smallholder credit scheme for administrative, as opposed to economic, reasons.
83. Similarly, from 1966/67 the Land Bank is expected to provide about £200,000 of credit annually out of current loan repayments to finance the transfer of land and permanent improvements apart from the new Scheduled Areas transfer programme, and to a lesser extent to finance new construction of permanent improvements. Some of these loans will be made for plantations, ranches and residential plots in the former Scheduled Areas, but a substantial amount will be loaned in the former African areas as well. Making Land Bank credit available to progressive smallholders to enable them to buy out neighbours who are unwilling or unable to develop their holdings will give a further impetus to increased productivity on registered land in the former African areas. Additional credit will be provided during the Plan period under schemes associated with particular crop and livestock enterprises. These are considered in a later section of this chapter.

Research

84. Development of a modern agricultural economy requires an expanding programme of research designed to increase productivity by breeding improved varieties, devising economic means of pest control, determining optimum methods of husbandry, and so on. The importance of agricultural research has long been recognized in Kenya and annual recurrent expenditure on research by various public bodies concerned with agriculture presently amounts to more than £800,000. A low-income country such as Kenya cannot afford to put substantial resources into basic scientific research, but must make use of work done in this area by other countries. Instead, the bulk of Kenya’s agricultural research activity can be described as experimental husbandry, where the primary effort is devoted to obtaining concrete results which producers can put into practice almost immediately.

85. Appendix Table 9 provides summary information on existing publicly supported agricultural research facilities as well as new ones to be established under the Plan. Principal research objectives during the Plan period are also described. Major capital expenditure on agricultural research facilities during the Plan period is estimated as follows:

<table>
<thead>
<tr>
<th>Facility</th>
<th>£</th>
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<tbody>
<tr>
<td>Maize Station, Embu</td>
<td>38,000</td>
</tr>
<tr>
<td>Sugar Research Station, Central Nyanza</td>
<td>50,000</td>
</tr>
<tr>
<td>Range Research Station, location undetermined</td>
<td>100,000</td>
</tr>
<tr>
<td>Veterinary Research Laboratories, Kabete</td>
<td>31,000</td>
</tr>
<tr>
<td>Cotton Research Stations</td>
<td>40,000</td>
</tr>
<tr>
<td>Coffee Research Station, Ruiri</td>
<td>9,000</td>
</tr>
<tr>
<td>Unallocated</td>
<td>55,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£323,000</strong></td>
</tr>
</tbody>
</table>
Also worthy of note is the Coffee Research Foundation’s programme for further expansion of Coffee Berry Disease research, in connexion with which it proposes to spend an additional £15,000-£20,000 per annum on recurrent items during the Plan period and is seeking to raise this, with Government assistance, from overseas sources.

86. Skilled manpower is no less a prerequisite for useful research than finance. Where the emphasis is on experimental husbandry rather than basic research, experience is a particularly important qualification for the successful investigator, and the rapid policy of Africanization followed in the last four years has inevitably led to discontinuity in some agricultural research activities. Thus, out of a total of 48 A-scale officers engaged in research under the Department of Agriculture in 1962, two-thirds had left by the end of 1965. Nevertheless the research division of the Department has attracted some highly qualified Africans, and the Plan period should see substantial progress over the whole spectrum of agricultural research.

**Agricultural Manpower and Training**

87. The projects outlined above can only be carried out if the supply of agricultural technicians in the public sector increases rapidly over the Plan period. Taking account of wastage, gross additional personnel required to carry out all projects at the desired rate by 30th June 1970 are estimated as follows: university degree level—250; diploma level—440; and technical assistants—1,500. Existing educational facilities in East Africa and new ones scheduled for the Plan period will fill roughly half of this requirement. Some higher level posts will be filled by Kenyans graduating from overseas universities, but non-Kenya personnel will have to be recruited for at least 150 positions. At the technical assistant level, several hundred personnel will have to be given brief in-service training and employed as their capabilities permit for a year or two prior to obtaining places at one of three institutions catering to this level.

88. *University Training.*—Within the University of East Africa only Makerere College has a Faculty of Agriculture and can offer a degree in this field. In recent years about fifteen to twenty Kenyans per annum have entered Makerere to study agriculture. Many more are studying agriculture overseas, and an average of around thirty per annum are now returning to Kenya with agricultural degrees. However, no more than 40-50 per cent of these have opted to join Government service, the remainder going into private agriculture and commerce.

89. In recent years it has been proposed that Kenya should have her own Faculty of Agriculture attached to University College, Nairobi. Such a Faculty would specialize in high-altitude agriculture, which is relatively more important to Kenya’s economy than to that of Uganda or Tanzania. It has been suggested that Kenyans interested in working in areas characteristic
of tropical agriculture could continue to go to Makerere while the Kenya Faculty of Agriculture would reciprocate by taking Tanzanians and Ugandans choosing to work in high-altitude areas of those countries. Supporting the case for a local Faculty of Agriculture is the fact that Uganda will very soon require virtually all the present places in the Makerere course for her own agricultural services. With these considerations in mind the Government has accepted in principle the inclusion of a Faculty of Agriculture in University College, Nairobi’s, Development Plan for 1965/71.

90. On the veterinary side, the only Faculty of Veterinary Science in East Africa is part of University College, Nairobi. Training is to the full Veterinary Surgeon’s degree. The Faculty presently takes in forty to forty-five East Africans per year, but this is expected to increase to around sixty by 1970. Roughly a third of the intake comes from each East African territory. Meanwhile, a number of veterinarians are receiving training overseas, and some eight foreign countries have put veterinarians at Kenya’s disposal or offered to do so.

**Middle- and Lower-Level Agricultural Education**

91. (i) *Egerton College.*—This institution offers diplomas in Agriculture, Animal Husbandry, Dairy Science, and Forestry. Egerton diplomates fill the Assistant Agricultural Officer, Livestock Officer, and Assistant Range Officer cadres in the Government service. Out of an annual intake of 110 students the Government now sponsors seventy; most of the others come on bursaries from commercial companies. Total enrolment at Egerton is presently 207 students. Those specializing in dairying take a two-year course; in all other subjects (agriculture, agricultural engineering, range management, animal husbandry, and forestry) the course was recently lengthened to three years. Accommodation for 125 more students is being built to bring the designed capacity to 283. Additional capital expenditure at Egerton over the Plan period is estimated at £64,000 of which it is hoped to raise nearly all from external aid sources. These sources are also making a substantial contribution on the teaching side, where, out of a total teaching staff of thirty-three, fourteen are provided by various aid agencies.

(ii) *Agricultural Training Centres.*—In the Agriculture Department, the training level immediately below Egerton College is the Agricultural Training Centre at Embu, which takes students at School Certificate level and turns out sixty to seventy Agricultural Instructors per annum on a two-year course. This will be grossly inadequate to accommodate the demand for A.I. cadres under the Plan, and a second Agricultural Training Centre with 200 places is included in the smallholder credit programme put forward to the World Bank. If this programme is launched on schedule at the planned rate of expenditure, work will have to start on the second Centre in 1966/67. The projected capital cost of the new Centre is £110,000 excluding land.
(iii) Animal Health and Industry Training Institute, Kabete.—AHITI, as this institution is known, trains Animal Health Assistants and Inseminators. The Institute, which opened in 1965, was built with U.K. and New Zealand aid and has room for 160 students. The U.N. Special Fund is contributing staff and equipment, and U.S.A.I.D. has donated vehicles and equipment. The Institute is already too small to meet Plan requirements; hence a sixty-place extension to it, estimated to cost £60,000, is included in the smallholder credit programme submitted to the World Bank.

(iv) Coffee Training Centre, Ruiru.—A new training institute concerned solely with coffee husbandry is planned as one aspect of a broad programme to counteract the deterioration of smallholder coffee (see section below on the coffee industry). The first step in launching this training will be taken in 1966 with short courses for 850-900 co-operative society and Department of Agriculture Instructors, giving preliminary coverage to all smallholder coffee areas. It is hoped that this approach will assist the smallholder coffee industry to consolidate its position in the next year or so, after which stress will be put on more intensive training as a means to long-term improvement of conditions in the industry. For this purpose overseas aid will be sought to establish a permanent training centre. A detailed prospectus has been prepared for the Centre, which is estimated to cost £123,000.

92. In addition to the foregoing institutions designed primarily for training officials of the Government and other public bodies, the Plan period will see expansion of facilities devoted primarily to training farmers and farm managers in the private sector.

(i) Large-scale Farmers’ Training Centres.—As noted above (paras. 73, 79), the Government has already established, at Thomson’s Falls, a centre for training African large-scale farmers and farm managers, and has decided to establish a second one in Western Kenya during the Plan period with U.K. and other external aid.

(ii) Farmer Training Centres.—There are presently thirty residential centres in Kenya, run by different public and private agencies, which hold short courses of one to two weeks’ duration for peasant farmers and their wives. During the first year of the Plan, Farmer Training Centres were under construction in Homa Bay and Maseno. The range development programme discussed earlier provides for construction early in the Plan period of two F.T.C.s, one each at Ngong and Narok, to cater to Masai pastoralists. There is considerable demand for F.T.C.s in other areas not yet served, and more are likely to be built during the Plan period; the actual rate will depend mainly on the availability of recurrent operating funds.

(iii) Tea Grower Education.—Training of prospective growers is an integral part of the Kenya Tea Development Authority’s smallholder tea programme. For this purpose K.T.D.A. runs two Tea Training Farms, at Kagochi and Kaimosi. These two Centres offer one-week courses, and can handle up to
one hundred growers at one time. A modest expansion in the facilities is planned to enable them to cope with 5,000-6,000 growers per annum. Total Plan investment in the two centres is projected at just under £100,000, including planting of tea, which in time will make the centres self-supporting.

(iv) Other Institutions.—In addition to the foregoing the Plan envisages small investments in rural livestock centres and training programmes directed toward specific crops or livestock.

93. While planning the above activities the Government has decided to take a systematic look at the whole field of agricultural education in Kenya, including not only those institutions specifically concerned with agricultural training but also the presentation of agricultural material in primary and secondary schools, many of which already give courses in what is called "rural science". The Rockefeller Foundation has agreed in principle to assist the Government in establishing a commission of experts, including Kenya Government personnel, whose terms of reference will include the preparation of a multi-year plan for agricultural education extending beyond the present Plan period. The commission will analyse the flow of trained personnel into various Government and private occupations, evaluate present teaching methods and curricular content, and suggest improvements. The commission's report is expected to be ready some time in 1967.

Agricultural Development Corporation

94. It has been evident for some time that a new statutory body would be required to execute the substantial direct investments which the Government intends to make in productive agricultural enterprises during and beyond the Plan period. Such a body is nearly always in a better position than a Government department to follow a commercial or semi-commercial approach. Accordingly, in 1965 the Government established an Agricultural Development Corporation responsible to Government through the Minister for Agriculture. Represented on the A.D.C. Board are private individuals with experience in different fields of agriculture and commerce, as well as Members of Parliament and Permanent Secretaries of three Ministries.

95. Immediately upon its establishment the A.D.C. took over two investments which the Government had just made or was about to make, one being in the Chemelil Sugar Company and the other in Kenya Fruit Processors Limited, a passion fruit factory in Sotik. The Corporation also undertook negotiations for the purchase of high-quality pig and cattle breeding herds which were in danger of being broken up by owners who were anxious to sell them and could not find private buyers in a position to take the herds intact. Two such herds were purchased in 1965 along with a 4,000-acre farm, the former Avondale Estate near Subukia, to accommodate them. This was the first of the National Farms, which are slated to be one of the A.D.C.'s major activities during the Plan period.
96. The following list indicates the principal investments scheduled to be undertaken by the A.D.C. during the Plan period:

<table>
<thead>
<tr>
<th>Investment Category</th>
<th>Total Plan Investment (£'000)</th>
<th>Investment Through A.D.C. (£'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitional and National Farms</td>
<td>2,940</td>
<td>2,940</td>
</tr>
<tr>
<td>Compassionate Case farms</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Turbo afforestation scheme, Block A</td>
<td>175</td>
<td>175</td>
</tr>
<tr>
<td>Masai sheep/wheat schemes</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Kenya Fruit Processors Limited (Passion fruit factory)</td>
<td>185</td>
<td></td>
</tr>
<tr>
<td>Sugar enterprises:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muhoroni</td>
<td>2,542</td>
<td>200</td>
</tr>
<tr>
<td>Chemelil</td>
<td>6,713</td>
<td>1,700</td>
</tr>
<tr>
<td>Total sugar</td>
<td>9,255</td>
<td>1,900</td>
</tr>
<tr>
<td>Joint Government/private ranches, Coast Province</td>
<td>600</td>
<td>*</td>
</tr>
<tr>
<td>Stock farm, Lambwe Valley</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Notional estimate for other projects, unallocated</td>
<td>?</td>
<td>2,000</td>
</tr>
<tr>
<td>Central administration (to be subsidized by Government initially)</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Total Investment through A.D.C.</td>
<td></td>
<td>£8,600</td>
</tr>
</tbody>
</table>

* There is as yet no indication as to what part of the total cost of these ranches may be contributed by private enterprise, and how much the A.D.C. will therefore be called upon to put in.

**Crops**

97. In planning the development of Kenya's agricultural crops over the Plan period, the Government has instituted the approach of setting district and provincial targets for 1970 acreage and production in respect of several important cash crops. To compile these targets the Government first requested district and provincial agricultural officers to submit their own estimates of acreage and production levels that were feasible for farmers in their jurisdictions to achieve by 1970. The district and provincial returns were then evaluated and modified by experts in the Ministry of Agriculture and various statutory boards under its jurisdiction. The results for eleven cash crops (cashew nuts, coffee, cotton, passion fruit, canning pineapple, pyrethrum, rice, sisal, sugar, tea and wheat) are given in Appendix Tables 10-20. These eleven crops are marketed exclusively or predominantly through channels where accurate measurement and allocation by producing areas is possible. Unfortunately no district and provincial targets can be given for Kenya's major food crop, maize. This is because 85 to 90 per cent of the maize crop goes unrecorded, being produced for subsistence or traded in rural areas; only in the mixed farming areas of the Rift Valley Province, where most maize is marketed through centrally controlled channels, is there reliable information on which to build projections for 1970.
98. A great many factors were taken into account in preparing the targets. In cases of permanent crops which do not bear substantially until they have been in the ground for five or more years, most of the acreage that will bear in 1970 was already planted at the start of the Plan period. In these cases, targets were computed by multiplying these acreages times yields which recent experience has shown to be typical at maturity, and an additional allowance was made for acreage to be planted in the next two years or so. In the case of pineapple and passion fruit, the Government has accurate knowledge of the expectations of major processing firms in respect of their canning capacity and market prospects by 1970; in the former case the Government has already launched a scheme for ensuring that the required additional supplies are forthcoming from smallholders, while in the second case there is already more than enough fruit in the ground to meet anticipated demand in 1970. Accordingly, one can be reasonably confident that these targets will be achieved. In the case of sugar and rice fairly definite plans have been laid for preparation of land in the major producing areas by public and private enterprise. Here, the targets were compiled by multiplying expected yield times planned acreages. Yields assumed in the case of rice are in fact regularly achieved; on the other hand, sugar presents a less certain picture because the assumed 1970 yields represent in most cases substantial increases over present levels. Targets for wheat, pyrethrum and cotton are based on assessments of available acreages, possible improvements in yields, and growers' intentions which vary considerably in reliability.

99. It is the Government's intention that district and provincial production targets should, so far as possible, serve as specific guides to action by personnel of the Agriculture Department, statutory boards and district and provincial agricultural committees. It is hoped that having specific targets broken down by districts, and even different categories of producers within a district (e.g. settlement, other smallholders and large farms or estates) will help these personnel to channel their energies more efficiently into specific tasks than if they operated merely under the general exhortation to increase production. At the same time, the Government recognizes that the targets must be interpreted flexibly, since it is impossible at this juncture to anticipate all the circumstances which will affect the economics of producing particular crops in individual districts in 1969/70. It is the Government's intention to modify the targets each year in the light of the latest data on total output, attainable yields, market trends and so on. Normal weather conditions have been assumed for 1969/70; if conditions are better or worse than normal, the targets are likely to be correspondingly over- or under-filled.

100. The following sections consider briefly development prospects between 1965 and 1970 for some fifteen major crops, divided into two categories: (i) food crops produced primarily for domestic consumption (maize, potatoes, wheat, rice and sugar); and (ii) food and other crops produced primarily for export. Where relevant, each section should be read in conjunction with the corresponding target table in the Appendix.
Food Crops Produced Primarily for Domestic Consumption

101. At the very start of the Plan period Kenya was undergoing an experience which demonstrated the importance of establishing a comprehensive national food policy and planning many months ahead for the availability of food. This experience was a shortage of the basic foodstuffs consumed by the majority of the population, especially maize, leading to a situation of rationing, high prices, temporary non-availability of supplies in some areas, and widespread famine among less fortunate sections of the population. This shortage resulted from two major factors: domestic food production was substantially below normal consumption requirements, primarily as a result of drought which affected most of Kenya except for certain areas of the West, but also compounded by a shortfall in 1964 commercial maize plantings and failure to move quickly enough to import adequate supplies of overseas maize.

102. In the wake of this experience the Government is now determined to take the necessary steps to ensure a steady supply of basic foodstuffs at modest, stable prices in both urban and rural areas. Attaining this objective is clearly essential to the economic growth target of the Plan. For the industrial sector a steady supply of basic foodstuffs is a prerequisite to the growth of a disciplined urban labour force and the maintenance of social stability without which little industrial investment will take place. In the agricultural sector such conditions of food supply are a prerequisite to obtain an economic level of specialization in the production of crops for the market. Farmers who live in areas better suited to crops other than subsistence foodstuffs but who nevertheless devote a substantial part, if not all, of their productive resources to growing these foodstuffs, will never specialize in more profitable crops for the market until, over a number of years, they have been assured of a regular supply of food, notably maize, at prices which make it worth their while to grow such crops instead. Inevitably, an experience of shortage conditions and high prices such as has prevailed in many areas during 1965 acts as a strong disincentive to specialization, leaving memories which have a deterrent effect for many years afterwards. The converse of this situation is that many smallholders live in areas which are better suited to, and yield a higher cash return with, traditional foodstuffs—e.g. maize, beans, peas, groundnuts, millet, sorghum, etc.—than conventional "cash" crops such as coffee, tea, pyrethrum, sugar-cane, cotton and so on. Yet because of the dichotomy in growers' minds between "food" and "cash" crops, they plant only enough food crops to feed themselves, with a margin for safety, and devote the rest of their energies either to inefficient "cash" crop production or to no productive activity at all. Government field staff must work together with local political leaders to break down this dichotomy and encourage production of food surpluses for sale to food-deficit areas.

103. Maize.—Maize is the principal staple food in Kenya. In normal years a large majority of Kenya's families produce enough maize for their own consumption. Total production in normal years is estimated at 14-15 million
200 lb. bags, equivalent to 1.25-1.35 million long tons. Kenya law requires that any maize offered for sale, apart from direct sales from producer to consumers within the same (or, with Government permission, adjacent) districts, or authorized farm-to-farm sales to feed farm workers, must be offered to the Maize Marketing Board or its agents. Accordingly, virtually all maize supplied to urban areas, and much of that supplied to rural areas not producing sufficient for their own requirements, moves through the Board. The Board also handles surpluses of domestic production over consumption which have to be stored or exported, although considerable unauthorized movement is known to take place outside the Board between Kenya and Uganda and Tanzania.

104. Over the five years 1960/61-1964/65 the Maize Marketing Board purchased an average of 1.8 million bags of maize per year, including imports as well as quantities subsequently exported. Thus, amounts handled by the Board have averaged 12-13 per cent of estimated national output, or 10-11 per cent if imports are excluded. Of the Board's local purchases, roughly half in each year have come from smallholders, and the other half from large-scale farms, mainly European-owned. Between 1962 and 1964 the profitability of growing maize on large farms fell drastically with a reduction in the producer price, a growing problem of maize theft, and an increase in the relative profitability of growing wheat. Accordingly, over the two years 1963-64 large-farm maize acreage and production fell by 50 per cent; meanwhile smallholder deliveries to the Maize Board dropped by 60 per cent (smallholder acreage figures are not known). Thus, domestic supplies to the Board in 1964/65 would not even have satisfied normal fair-weather demand. To meet the exceptional demand for Board-supplied maize arising out of the 1965 drought, and to re-build emergency stocks, the Government has had to negotiate agreements with the U.S. to purchase 2.2 million bags on twenty-year loan under the American surplus maize disposal programme (known as "P.L.480").

105. Clearly a substantial increase in efficiency of maize production, notably through improved yields, would be the most painless way of increasing output and restoring Kenya to self-sufficiency in maize. There is evidence that such a development is now in progress as a result of a research breakthrough by the Department of Agriculture's Maize Research Unit at Kitale, which has bred a number of hybrid maize varieties with a potential, under like conditions of good husbandry, for increasing yields by 30 per cent or more over standard varieties now grown in the commercial maize areas of Western Kenya. Bulking of the hybrid seed has proceeded at a rate sufficient only to plant 30,000 acres in 1964, 70,000 in 1965, and about 120,000 in 1966, as compared with orders placed in 1965 for enough seed to plant more than 200,000 acres in 1966. Only for the 1967 plantings will more than enough seed be available—sufficient for nearly 500,000 acres—to meet demand in both the large-farm and smallholder areas. The Department has also bred, at Katumani in Machakos District, a quick-maturing variety suited to marginal rainfall
areas, where it outyields standard varieties in good years as well as bad. Demand for this maize is growing very rapidly in these areas. During the Plan period a new station will be established at Embu to breed hybrids suited to medium altitudes east of the Rift Valley. Work already done along these lines will permit the planting of 1,000 acres to a new variety in 1967. By a policy of breeding high-yielding maizes for different environments the Government hopes to restore a measure of geographical balance to commercial maize production in Kenya and reduce transport and handling costs incurred in shipping maize from one end of Kenya to the other.

106. Already the increased profitability resulting from the use of hybrids and from price increases effected by the Government has reversed the decline in large-farm maize acreage, which rose from 75,000 in 1964 to 96,000 in 1965. It is as yet too early to state categorically that hybrids will revolutionize the Kenya maize industry, and a note of caution is appropriate in view of the fact that hybrids have not been a panacea in every country where they have been tried. However, the Plan target is to return to self-sufficiency in maize by early 1967, when the main 1966-planted crop will be harvested, and the Government is confident that this will be achieved. In order to ensure a satisfactory safety margin against future shortages, the country must plan on producing surpluses in most years. After allowance is made for building up stores to, say, half of a normal year's local sales by the Maize Marketing Board, additional surpluses have to be exported at world market prices considerably lower than Kenya prices, allowing for transport. (The export parity price for maize delivered at railhead is of the order of Sh. 20 as opposed to the 1966 authorized internal price level of Sh. 37.) If maximum propagation of hybrids results in the hoped-for increase in efficiency, farmers will be able to produce profitably at a price somewhere between these two levels. In December 1965 the Government established a Commission of Inquiry to investigate the 1965 maize shortage and make recommendations for improving all relevant aspects of the industry. The report of this Commission, which was in preparation as this Plan went to press, is expected to provide further guidelines for maize policy during the Plan period.

107. Potatoes.—At the present time most peasant farmers in Kenya grow maize as their staple food crop regardless of whether maize is the most suitable crop in the given ecological conditions. In some areas the potato is or can be a far superior crop—it has a shorter vegetative period at most altitudes, so that, if planted at the onset of the rainy season, it can reach maturity before drought conditions set in; many areas can produce two crops per year; and unlike maize, the yield does not decrease nor the vegetative period increase at higher altitudes. It is estimated that, under like conditions of (average) husbandry, the potato can feed at least three times as many people from the same acreage at 8,000 ft. Taking the two crops on a basis of calory equivalents (3.5 lb. potatoes = 1 lb. maize), the Nairobi retail price of potatoes is now about twice that of maize; however, the potato offers greater value in proteins,
and its retail price could be reduced by improvements such as an increased
supply of quality seed potatoes at lower prices. Apart from its potential role
in the domestic food supply, the potato could contribute to Kenya’s foreign
exchange earnings by meeting an import demand in the Indian Ocean area
estimated at 12,000 tons worth £340,000 at 1964 prices (1964 exports were
1,200 tons, not counting sales of over 4,000 tons to Tanzania and Uganda).

108. The potato is susceptible to several crippling diseases, notably blight,
bacterial wilt and certain virus strains, and disease is the major problem
encountered by African growers. The most effective way of countering this
difficulty is to increase production of certified, disease-free seed potatoes at
prices low enough to induce smallholders to buy them rather than retain their
own product for seed. As part of the Plan policy of increasing efficiency
and diversification of food production, the Government will endeavour to
rationalize the production of seed potatoes in Kenya, and for this purpose is
negotiating with West German interests toward establishing a potato farm in
which the Germans would provide management and most of the capital, with
the Agricultural Development Corporation taking a minority share. The farm
would produce ware as well as seed potatoes until the demand for certified
seed had increased sufficiently to absorb the entire output. Concurrently with
the establishment of this farm the Government will take steps to control the
present extensive trading in uncertified potatoes for use as seed (although
any private farmer will be eligible to have his potatoes certified on standard
criteria). Extension services will be provided to assist smallholders in
improving other aspects of potato husbandry.

109. Wheat.—Over the past years Kenya has striven towards self-sufficiency
in wheat, not only for herself but for East Africa as a whole (Tanzania pro-
duced 65 per cent of her own requirements in 1964, whereas Uganda is entirely
dependent on imports from Kenya or overseas). Achieving this target has
involved increasing both production and baking quality, the latter because,
until recently, a blend of imported hard wheat with local wheat was necessary
in order to produce bread acceptable to consumers. In 1964 the long-standing
target was finally achieved, and wheat imports into East Africa were negligible.
In 1965, however, the situation altered drastically with an unexpected 23 per
cent jump in East African wheat consumption (31 per cent in Kenya alone)
as compared with a production increase in Kenya of only 10 per cent (1964/65
over 1963/64). The sharp increase in demand was partly a result of shortage
of maize and other staple food crops in many parts of East Africa, including
most of Kenya, but it also reflected changing tastes on the part of urban con-
sumers and was expected to be irreversible at near-present price levels. Thus,
the Kenya Wheat Board projected a further 10 per cent rise in Kenya con-
sumption during 1966, while production was expected to be down as a result
of the 1965 drought. Accordingly, for 1966 the Interterritorial Wheat Com-
mittee projected a need to import 70,000 tons (of which 21,000 tons would be
consumed in Kenya), or just under 50 per cent of Kenya’s 1964/65 output.
110. Under these circumstances, recognizing that Kenya has a potential for substantially greater wheat production at or near the long-term import parity price level, the Government has set a 1969/70 production target of 2.05 million 200-lb. bags, compared with 1.59 million in 1964/65. This target should more than satisfy Kenya's consumption, leaving a surplus to sell to Uganda. However, unless the future rate of increase in consumption falls substantially below 10 per cent per annum, East Africa as a whole will almost certainly have to import part of its wheat requirements in 1970.

111. Production can be increased either by expanding acreage or increasing yields. The 1964/65 acreage was 300,000. It is estimated that at least 200,000 more acres in Kenya are suited to growing wheat. However, changes now taking place in the economy of the main wheat-growing areas—notably the transfer of mixed farming land from Europeans to African settlers and large-scale farmers—make it unlikely that the next five years will see a substantial net increase in wheat acreage. It is becoming apparent that cultivation of wheat under smallholder settlement schemes is frequently not economic relative to other crop opportunities, and 10,000 or more acres which were under wheat in 1964/65 are likely to produce other crops under settlement in 1969/70. Another development affecting wheat production is the advent of African large-scale farmers lacking the machinery, working capital and experience to maintain the same large acreages under wheat, at least in the initial years, as did the former European owners. It is feared that some 40,000 acres may be out of production in 1969/70 for this reason.

112. To compensate for these reductions in acreage it is imperative to start bringing into wheat production a very large acreage in the Narok District of Masailand which is some of the best wheat land in Kenya—characterized by 40-in. plus rainfall and rich loamy soil—but which now, with few exceptions, provides nothing more than grazing for the pastoralists' scrub stock. The potential of this land has been proved by a handful of non-African farmers from the adjoining Nakuru District who have rented several hundred acres from the Masai landholders, ploughed the land, planted and harvested wheat with modern machinery and achieved yields of seven or more bags per acre. During the past two years the Government has held discussions with Masai leaders and rank-and-file pastoralists concerning schemes in which the Masai would form co-operative societies and participate with Government, through the Agricultural Development Corporation, in joint wheat/sheep enterprises. In order to hold Government's capital investment to a minimum in the early years, machinery services would initially be hired from contractors, who would eventually transfer the used machinery to the co-operatives at low cost. Management and extension services would be provided by A.D.C. and the Agriculture Department. A German voluntary aid organization is giving consideration to providing working capital for the operation. After initial hesitation several groups of Masai have expressed strong interest in participating in these schemes. The first one was launched in late 1965 in the Ildamat
section of Narok District, and will have 1,000 acres planted to wheat by mid-1966. It is hoped to organize another four or so in 1966, followed by planting of an additional 11,000 acres in 1966/67. The total area in Masailand suited to these schemes is estimated at more than 200,000 acres, of which the Plan target calls for putting 50,000 under wheat by 1969. The evidence indicates that these sheep/wheat schemes will substantially enhance the incomes of the Masai participants, no less and perhaps even more than the cattle ranching schemes discussed earlier. Much will depend on the willingness of the Masai to exchange some of their traditional ways of life, which leave them destitute in the wake of floods and drought, for participation in a modern economic enterprise.

113. If the target for Masailand is met, losses of wheat acreage in other areas would be more than offset and total acreage would rise to an estimated 314,000 in 1969/70. Even so, the total production target can only be met if there is 20-25 per cent increase in yields across the board. The initial impetus for such an increase must come from the research side, which has in the past been forced to concentrate on breeding for resistance to diseases, particularly rust, and more recently for improved baking quality as well. Under these circumstances the national average yield has shown virtually no upward trend over the past ten years, although admittedly yields would have dropped in the absence of newly bred rust-resistant varieties. It is thus clear that a new emphasis on breeding for higher yields is required on the research side. Moreover, fertilizer trials and other experimental work must be carried out to determine optimum methods of husbandry in order to exploit the yield potential of new and existing varieties. In this connexion it has been decided to engage an agronomist at the Njoro Plant Breeding Station, and recruitment was under way at the start of the Plan. Use of improved techniques of husbandry usually involves additional financial outlay on the part of the farmer. The Government will give consideration to providing short-term loans where necessary to finance techniques associated with higher yields.

114. Rice.—The bulk of Kenya’s rice crop is grown on the Mwea Irrigation Scheme. Over 90 per cent of the Mwea paddy crop is centrally marketed and thus subject to accurate measurement. Estimates of production in the Coast, Nyanza and Western Provinces are subject to wide margins of error, especially as only a small fraction of this output is centrally marketed and much of it is consumed by the growers. Available estimates suggest that Kenya produced approximately 11,500 tons of rice in 1964/65. Kenya’s output does not satisfy domestic demand at current price levels; in most years several thousand tons of rice are imported from Tanzania, but Tanzania’s 1964/65 harvest was poor, and Kenya imported 2,000 tons from Asian countries in 1965. It thus appears that Kenya’s total 1965 consumption was about 13,500 tons.

115. By 1969/70, rice output from Mwea alone, based on concrete plans for doubling the paddy acreage, is expected to increase by about 7,000 tons, or 5,000 tons more than 1965 imports. Thus, unless domestic consumption
increases fast enough to make up the difference, Kenya will have a surplus of rice for export in 1970. However, there is reason to believe that the domestic market could easily absorb the projected increase from Mwea as well as other producing areas. The present retail price of Mwea rice, at upwards of Sh. 1 per lb., is artificially high due to gross inefficiencies in the system of processing and distribution, as well as a generous Rice Stabilization Fund margin which could be eliminated in order to stimulate domestic consumption. The Asian community are at present the largest consumers of rice in Kenya, but experience at Mwea, where the irrigators have taken to rice as their staple food, indicates that Africans will consume much larger quantities than at present if the cost is comparable with maizemeal.

116. On the processing and distribution side, a major improvement will come about with the establishment of a mill at Mwea to process the entire crop there. This mill, which will be set up during the Plan period, is discussed above under the Mwea Irrigation Scheme. There is also considerable room for improvement in the system of distribution from mill to consumer; the rice trade is notorious for market-rigging practices which maintain exorbitant trading margins. The Government will henceforth play a more active role in regulating these practices.

117. Sugar.—In recent years the Kenya white sugar industry has undergone very uneven growth. Production reached a maximum of 36,800 tons in 1963, and thereupon fell in each of the two succeeding years. Output in 1965 was 28,511 tons, or less than in 1960. Meanwhile consumption has been rising rapidly, from an annual average of 75,645 tons during 1956-60 to 110,493 tons in 1965. White sugar is now produced by two factories located at opposite ends of the country, one in Miwani, Central Nyanza, and the other at Ramisi, Kwale. Inept management led the Ramisi enterprise into bankruptcy in 1964, and the facility’s 1965 output was only 4,242 tons as against a capacity of 20,000 tons (drought also figured in this situation). The firm was sold out of receivership in late 1965, and the new owners have indicated firm resolve to get Ramisi back into full production during the Plan period. During 1964/65 the Miwani enterprise increased its milling capacity from 30,000 tons to 40,000 tons. However, 1965 cane supplies to the mill decreased over the preceding year. This resulted partly from the 1965 drought and partly because independent cane-growers found it more profitable to process their cane into jaggery, a crude brown sugar.

118. So that Kenya may produce a larger percentage of her own white sugar requirements, the Government is promoting substantial private and public investment in both the agricultural and processing sides of the industry during the Plan period. In order to ensure adequate cane supplies in future to the Miwani factory, a nearby area of 5,500 acres is to be developed under cane by smallholders grouped into production co-operatives. In addition,
two new integrated sugar projects were under way in Central Nyanza at the start of the Plan, one at Muhoroni and the other at Chemelil. Maximum plant capacity at Muhoroni will be 45,000 tons of white sugar, and at Chemelil 60,000 tons. Adjacent to the Muhoroni factory are four settlement schemes which are scheduled to produce, by 1968, some 200,000 tons of cane for the factory, or nearly half of its full capacity requirement. Some 12,000 settlers already have or will soon be allocated cane plots covering a total of roughly 13,000 acres. Land preparation on the schemes is now carried out by the Department of Settlement on a fully mechanized basis. Apart from settlement, three other categories of growers will supply cane to Muhoroni: a nucleus estate owned by the factory company, large-scale farmers, and smallholders grouped in co-operative societies. Private sponsors of the company are the Mehta Group, major sugar producers in Uganda. Additional investors in the project are West Germany (via machinery credits), the Development Finance Company of Kenya, and the Agricultural Development Corporation, which will contribute £200,000 obtained partly from Government and partly by public subscription. Settlers will be encouraged to buy into the A.D.C. share and thus become part-owners of the factory.

119. The Chemelil sugar scheme has been sponsored by the Kenya Government from its inception. The Government is scheduled to contribute a minimum £350,000 in equity, and £360,000 has been paid so far for the purchase of a nucleus estate and factory site. Machinery for the factory is being financed by West Germany, as is approximately £900,000-worth of land development in smallholder areas scheduled to supply cane. Other contributors include the D.F.C.K., the U.K. Government, and commercial banks. By 1970 approximately 40 per cent of Chemelil’s cane supply is scheduled to come from Luo and Nandi smallholders. Land preparation will be carried out by the Chemelil Sugar Company, which is also likely to transport cane from all suppliers. Other sources of cane will be a factory nucleus estate and large-scale farms in the area.

120. This ambitious development programme in the Central Nyanza sugar belt will require construction of a road network to ensure a regular flow of cane to the factories at all times except for an annual shutdown period of several weeks at the height of the rainy season. Engineering consultants have estimated the cost of this road development at £3.0 million; negotiations are proceeding with external aid sources regarding finance for the programme. The roads will, of course, benefit the general economy of the area apart from the sugar industry, including other agricultural activities.

121. Total direct investments, both public and private, in the Central Nyanza sugar industry will amount to over £10 million during the Plan period. If the roads are included, the total capital cost runs to about £13 million. If the planned rate of development is achieved, and assumed cane yields (see Appendix Table 18) are forthcoming, Kenya’s 1970 white
sugar output will exceed 140,000 tons, or four times the 1963 record output. Domestic consumption of sugar in 1970 is projected at about 170,000 tons, which means that Kenya would still be importing sugar from Uganda and possibly Tanzania. The Government is considering the possibility of additional sugar development which might bring Kenya to a position of self-sufficiency in sugar after 1970. One of these is the Tana Basin Irrigation Scheme, discussed earlier in this chapter, which could produce as much as 500,000 tons of sugar annually by the turn of the century. Another site under consideration for sugar development is Mumias, Kakamega District; the Government has arranged for a private survey to provide information on a proposed scheme in that area.

**Food and Other Crops Produced Primarily for Export**

122. *Coffee.*—For many years coffee has been Kenya's principal export commodity. Within the last ten years its percentage share in total exports (not including re-exports) has been as high as 36 per cent and never less than 17 per cent; in 1964 it was 21.1 per cent. By 1970 most of the substantial smallholder acreage planted to coffee in the last three or four years will have reached maturity. Thus, coffee is still expected to account for 24 per cent of the country's exports in 1970. However, due to restrictions on planting imposed under the International Coffee Agreement, any increases in coffee production after the Plan period will result from increased productivity rather than additional acreage coming into bearing, and coffee's share in total exports may be expected to decline gradually relative to commodities on which no such restrictions exist.

123. Apart from a negligible volume consumed domestically, Kenya must sell all her coffee in a world market which is characterized by substantial oversupply. Hence it is very much in Kenya's interest that the International Coffee Agreement should function properly. At the start of the Plan period discussions were under way concerning the terms on which Kenya would join the Agreement. It is Kenya's position that she should be allowed an I.C.A. quota corresponding to production at maturity from acreage planted before restrictions were imposed in 1964. For many years Africans in most parts of the country were prohibited by the colonial régime from growing coffee. The prohibition was relaxed in the 1950's, but only as a result of massive plantings in 1962-64, before restrictions were reimposed in accordance with the Agreement, did the Africans' share in total coffee acreage rise above 50 per cent (it is now 62 per cent). The Government has left a small acreage open for planting in districts which lacked the resources to keep up with the massive planting programmes in Central and Eastern Provinces, or where the fact that land consolidation was in process forestalled planting prior to the deadline. Otherwise the Government has successfully held plantings beyond authorized totals in the more progressive districts to a trickle, and can be said to have observed the Agreement as well as any other producing country and better than most.
124. The Kenya coffee industry's greatest asset under present world market conditions is the high quality of its product, which has regularly commanded premium prices in Europe and America. It is clear that the earnings of the industry will fall drastically unless traditional quality levels are maintained. Up to 1963 smallholders planted coffee under close supervision by the Department of Agriculture. The result was that African-grown coffee gained a reputation for higher quality than that produced on most estates. However, the 1963 rush to plant coffee led to a breakdown of supervision and a drastic fall in standards of husbandry. Over half the estimated 250,000 small growers have had little training or experience in improved coffee husbandry, and the Department of Agriculture is unable to spare extension staff to work specifically on coffee. Unless these conditions are corrected, there is a danger that the average quality of Kenya coffee will decline as recently planted acreage comes into maturity. A second problem is the deterioration in management of many of the co-operative societies which play a vital role in the industry by virtue of their responsibility for buying and grading smallholder cherry, pulping and drying it, and distributing the pay-out from the marketing authorities. The societies' governing committees have become lax in grading members' cherry, thus destroying the incentive to produce quality coffee; they are tardy in rendering financial accounts; and some of them are frittering away 50 per cent or more of members' proceeds on wasteful recurrent expenditure or urban land speculation and other projects unrelated to the members' interests. A third major problem facing the entire industry, including both smallholders and plantations, is Coffee Berry Disease, a fungus which has spread rapidly from higher to lower elevations in the last few years and destroyed more than 90 per cent of the crop on a number of holdings. Despite increasing concentration on the C.B.D. problem researchers have not yet discovered any economic means of keeping the crop loss below 20-30 per cent in cases of severe infestation.

125. In the light of these problems facing the coffee industry and posing a serious threat to Kenya's leading export crop, the Government and industry have decided on concrete remedies. The Coffee Board has undertaken to organize an inspection service, employing a dozen officers to identify neglected coffee holdings which are a source of pests for neighbouring farms and to have the offending trees uprooted. Plans have been laid for a Coffee Training Centre under the aegis of the Coffee Research Foundation at Ruiru, to train co-operative society and Agriculture Department officials in special problems of coffee. A special coffee extension service, supported by advice from the Coffee Research Foundation, will be established in the Agriculture Department to help growers improve their husbandry and apply the results of coffee research.

126. In respect of co-operative societies, the Government has decided to take steps to ensure that societies pass on to members no less than 80 per cent of the pay-out from the Coffee Marketing Board, on pain of dismissal.
of society committees and possible further sanctions following investigation. In order to up-grade co-operative society management it is no less essential to strengthen the Department of Co-operative Development, the Plan programme for which is discussed in the final section of this chapter.

127. Finally, the Coffee Research Foundation, in conjunction with the East African Agricultural and Forestry Research Organization (E.A.A.F.R.O.), has worked out a programme for intensified research into C.B.D., including an expansion of the Foundation's present field work, institution of an intensive breeding programme, and detailed studies of the action of fungicides. (Further details in earlier section on research.)

128. If significant progress is achieved in implementing these measures during the Plan period, Kenya may look forward to a 1970 crop on the order of 70,000 tons, of which it is hoped that some 60,000 tons, or 85 per cent (compared with 91-92 per cent at present), could be sold on quota markets. The average price being realized at Nairobi auctions at the start of the Plan period was £350-£360 per ton. Allowing for some decline in price levels by 1970, an average price of £325 per ton in quota markets and £250 per ton in non-quota markets would bring in export proceeds of about £23 million.

129. Tea.—For the past ten years tea has run a close race with sisal for the position of Kenya's second most important export commodity. The 1964 exports of the two crops were almost identical in value. However, in 1965 tea exports were around 50 per cent ahead of sisal, and because of the grossly divergent prospects for the two crops it seems clear that tea has won the race for good and will be, for many years to come, Kenya's most important export after coffee. Indeed, it is entirely possible that tea would pass coffee in importance in the late 1970's. As there is more than enough suitable acreage in Kenya to increase tea output many times over, the only long-run constraint on Kenya tea production is world demand. If a glut should develop in the world tea market, there would be pressure to revive the International Tea Agreement which lapsed after World War II. However, anticipated increases in output of some of the major Asian producing countries have not materialized, and rapid growth in domestic consumption in these countries has so far prevented a world glut. Present satisfactory price levels are expected to continue well into the 1970's, and no need to restrict acreage is foreseen during the next ten years.

130. Tea is rapidly becoming one of the principal cash crops in smallholder agriculture. In 1960 smallholders accounted for only 6 per cent of total tea acreage in Kenya; by 1964 the smallholder share was 23 per cent, and by 1970 it will have risen to approximately 44 per cent. Because tea requires several years to reach maturity the smallholder share in total output will necessarily lag behind; in 1964/65 this was only 6 per cent, and by 1969/70 it is only expected to be about 21 per cent. At the start of the Plan period over 20,000 smallholders were growing tea; this is expected to increase by at least 10,000 during the Plan.
131. Development of the smallholder tea industry is the responsibility of the Kenya Tea Development Authority, a statutory body with full regulatory and financial powers. The excellent economic prospects for smallholder tea, and K.T.D.A.'s demonstrated ability to expand the industry on sound lines, have enabled the Authority to borrow some £2.1 million from the International Development Association, the Commonwealth Development Corporation, and the West German Government to finance field development under its First and Second Development Plans. These Plans also call for the construction of sixteen factories to process the tea, of which three had been completed by the end of 1965. The capital cost of the factories, estimated at £2.2 million in total, is being financed by the C.D.C., commercial tea companies, and the Kenya Government. Shares in the factories will be offered to growers supplying leaf to them, and as soon as all loan capital invested in the factories has been repaid, which will be after eighteen years or by prior redemption, growers may purchase a majority or all of the equity.

132. In 1965, when the Second Plan had run less than two years of its seven-year course, K.T.D.A. drew up proposals for a Third Plan, which called for increasing smallholder tea acreage from the 1969/70 total of 27,814 acres projected in the revised Second Plan to 52,562 acres in 1972/73. Preliminary discussions concerning finance for the new Plan were held with agencies that had assisted the first two Plans, and a favourable response was received. Assuming that these negotiations can be finalized in 1966/67, it is K.T.D.A.'s intention to inaugurate Third Plan nursery development in 1967, pointing toward an increase in annual planting from the maximum of 5,085 acres projected for 1967/68 in the revised Second Plan to about 6,500 acres in the following year, continuing at this rate into 1973. In order to determine the most economic allocation of Third Plan acreage among districts, the Government and K.T.D.A. have authorized a feasibility survey to evaluate conditions for tea growing in various districts and recommend a phased programme. The survey report was submitted in January 1966. Meanwhile, an economist at University College, Nairobi, is conducting a farm management survey of smallholder tea growers; information gathered in this study will provide the Government with a comprehensive picture of the economics of smallholder tea and assist in planning development from the later years of the Plan period.

133. Total Plan public investment in smallholder tea development, including factories and the commercial tea companies' share in them, is projected at £4.1 million. In addition, estates and large-scale farms have revealed firm plans for planting some 7,000 acres during the Plan period. The capital cost of this development, together with required factory expansion, is estimated at £2.1 million.

134. Sisal.—The inflation in world sisal prices which started in 1962 and created boom conditions in the East African sisal industry for two
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years was virtually wiped out in late 1964, and by the second half of 1965 prices were lower than at any time since 1959. The volume of Kenya sisal output changed very little between 1964 and 1965, but exports by value dropped by some 35 per cent. Further price fluctuations may be expected during the next five years, but it is becoming clear that the long-run prospects for the sisal industry are not good. Development in Europe and America of a synthetic substitute for sisal, polypropylene fibre, is proceeding apace and commercial production of the commodity has already commenced. The synthetic appears to have superior qualities to sisal in the major present use of the latter, i.e. agricultural baler and binding twine. By 1964 the comparable cost basis of polypropylene fibre vis-à-vis grade I sisal fibre c.i.f. London was £129 per ton, as compared with a sisal price of £84 at the end of 1965. Present production facilities for the synthetic can only supply a fraction of the world sisal market; however, large new facilities are under construction or planned during the next few years, and with an increased scale of production and further advances in research it is anticipated that the comparable cost basis will be reduced below the present sisal price during the 1970's. If the synthetic's superior quality gives it strong consumer preference, the resulting imbalance between the supply of sisal from existing acreage (the crop grows on an 11-year cycle) and world demand for it will push sisal prices very much lower.

135. Under these circumstances no significant expansion in Kenya sisal production is anticipated during the Plan period. The district targets in Appendix Table 17 indicate the likelihood that more efficient producing areas will expand their output at the expense of less efficient areas, but with little net impact on the overall total. The 1963 National Cash Crops Policy target of 20,000 tons of annual smallholder sisal production has had to be abandoned, since no means has yet been found of organizing smallholder sisal production so as to cover costs at current price levels. By the same token, the Department of Settlement has been compelled to suspend planting of sisal on several schemes in the Western Province where it was a major factor in the original budgets. Existing sisal on land purchased for settlement in other areas has been uprooted and the land planted to other crops. In general, Government policy is that there will be no public investment in any aspect of the sisal industry, apart from research, except on firm evidence that such investment will be profitable at sisal prices expected to prevail in the 1970's.

136. For the plantation industry the main hope lies in rationalizing production so as to cut costs and increase yields from existing investments. Research is going on into new uses for sisal, such as mixing it with soft fibres as a substitute for imported bagging, and feeding sisal waste to cattle. There is some hope that livestock and sisal could prove to be complementary in other ways, such as by grazing cattle between rows of established sisal and thus simultaneously cutting weeding costs. The development of efficient
field-decorticating machines would effect economies in field transport while also assisting the livestock enterprise by depositing feed throughout the grazing area. Experimentation in these techniques will be carried out during the Plan period.

137. Pyrethrum.—Pyrethrum is the one major commodity produced in Kenya of which Kenya is the world’s largest producer, accounting for more than 60 per cent of world supply in 1961/62. For many years pyrethrum has been Kenya’s fourth most important export commodity, accounting for £3.4 million worth of exports in 1961/62, although this fell over the next three years to about £2.8 million in 1964/65. The fall in volume of production has been even sharper, from 10,758 tons in 1961/62 to a six-year low of 4,440 tons in 1964/65. The particularly low level in the latter year was due primarily to drought, leading to an average yield of 248 lb. of dried flowers per acre on large farms, and 191 lb. per acre on settlement farms, as compared with an average of 429 lb. per acre on large-scale farms over the preceding four years.

138. As we have already seen (para. 61), pyrethrum is the main cash crop budgeted for settlement schemes in the former Scheduled Areas. The European farms purchased for settlement were formerly Kenya’s main producers of pyrethrum, which has thus become the first (and thus far only) significant crop once grown predominantly by Europeans where Africans now produce more than half of total output. In line with the drop in output between 1961/62 and 1964/65, the sharp increase in Africans’ share over the three years (from 25 per cent to 72 per cent) reflects declining European output (down by 84 per cent) more than it does increasing African production (up by only 12 per cent).

139. In a limited world market where she is the major supplier, Kenya cannot expect to be able to sell unlimited quantities of pyrethrum at fixed prices. The Pyrethrum Marketing Board found it necessary to store a considerable proportion of the above-average output of the years 1960/61-1962/63, and the dominant concern of the industry at that time was to avoid over-production. But as a result of shortfalls in all producing countries during the last two years the Board has virtually exhausted its stocks in order to maintain traditional markets, and the present need is to increase production. The greatest incentive to production is an increased producer price, and it appears that the 1964/65 total payout, which, at Sh. 2/45 per pound of flowers containing 1.5 per cent pyrethrins, was the highest since 1960/61 and 25 per cent above the previous year, is already having the desired effect. The 1965/66 rate will at least equal and probably exceed the 1964/65 figure. The goal of increased output can also be served by increasing pyrethrins content; the Pyrethrum Board is working in this direction by means of plant breeding trials and other research, and has established nurseries throughout the production area to distribute improved planting material to farmers.
140. Considering the likely results of these measures, the 15,000 acres planted to pyrethrum in settlement schemes in 1964/65, and the fact that it proved necessary only a few years ago to restrict production, a target of 12,500 tons for 1969/70 seems entirely feasible on the supply side. However, there are ominous reports of progress in Japan and elsewhere toward producing synthetic compounds which are competitive in price and quality with pyrethrum. The high price of pyrethrum, at roughly Sh. 70 per lb. of extract, is an obvious stimulant to the development of synthetic substitutes, and to preserve the market in the long run Kenya and other producing countries will have to reduce costs.

141. Cotton.—Kenya's cotton industry has a chequered history. Before World War II cotton was one of the leading cash crops in smallholder agriculture. Until the 1964/65 season the all-time production record was 22,166 bales of lint, set in 1936/37. Following that year a number of factors—especially a proliferation of insect pests—combined to reduce output and discourage producers. Cotton has since been by-passed in importance by a number of crops, but it now appears to have found its feet again and is thought to have the greatest potential of all Kenya's major export crops for relative expansion by 1970. On the supply side it is clear that, with simple improvements in husbandry such as the proper use of insecticides, not to mention mechanized land preparation and the use of fertilizer, there are large acreages of unused land where net returns to small farmers from growing cotton and selling it at present prices would be higher than those obtainable from any alternative crop and sufficient to reward the farmer for his effort. By means of a programme for providing short-term credit to farmers, inaugurated in the 1965/66 season out of Cotton Board resources, and with concentrated efforts by the Board's extension staff and the Department of Agriculture's field service, it is hoped to raise by 50 per cent the average yield from the present acreage of cotton holdings by 1970. At the same time, it is hoped to increase the total acreage planted to cotton by 200 per cent in 1970. Total output of seed cotton in 1970/71 would thus equal about four times the record output of 23,000 bales of lint in 1964/65. Such a development would give Kenya annual foreign exchange earnings of over £3 million from cotton by 1970, either through exports or by saving imports of cotton for its own textile industry. Even so Kenya would only be producing about 10 per cent of East Africa's total output, and about 1 per cent of world exports of medium-staple cotton lint.

142. Of all Kenya's commodity boards the Cotton Lint and Seed Marketing Board began the decade of the 1960's in the strongest financial position to assist growers and expand production at minimum cost to the Government Treasury. The Board earned £1.4 million out of the Korean War boom, and maintained its reserves at this level up to the end of 1961. However, over the next four years, the effect of lower world market prices,
high producer prices (maintained at par with Uganda levels), free issue of seed, and increased Board expenditure on non-marketing activities cost the Board nearly £600,000 in reserves (£250,000 in 1964/65 alone). The results of this expenditure are thus far disappointing; over the same period production rose by only 7,500 bales, worth £300,000 including seed.

143. Obviously the remaining resources of the Board will have to be applied much more economically if a 1970 production target of 95,000 bales is to be achieved without heavy Government subsidies. In late 1965 the Government took two major steps toward putting the cotton industry on a sounder financial basis. Firstly, it decided to base the producer price of seed cotton on economic circumstances in Kenya and not automatically follow Uganda's lead every year, which policy had cost the Board £60,000 for price support in Western Kenya during 1964/65. Accordingly, in late 1965 the Government announced a producer price formula of 50 cents per lb. AR grade seed cotton and 25 cents per lb. BR. It was felt that any unavoidable movement of Kenya cotton into Uganda resulting from a higher Uganda price would be the lesser of two evils. In the event Uganda soon afterwards announced an AR price of 59-60 cents; supporting such a price in 1965/66 would have cost the Kenya Board £100,000 in Western Kenya alone. The second step was to stop free issue of cotton seed for planting and charge farmers the world price for this valuable commodity. Free seed issue is a long-standing tradition in the East African cotton industry—the only major agricultural enterprise where farmers do not pay for their planting material—and it continues in Tanzania and Uganda, but it had become an intolerable burden on the Kenya Cotton Board, accounting for £15,000 of the Board's 1964/65 losses. It is believed that the present seed charge of Sh. 5 for 20 lb., enough to plant one acre, will virtually eliminate widespread wastage of seed, compel farmers to take cotton more seriously as a commercial enterprise, and enable the Agriculture Department to exercise stricter control over the time of planting, thus facilitating pest control.*

144. Under the seasonal credit programme about £60,000 was loaned in 1965 for mechanical ploughing and pest control; in 1966 loans are expected to exceed £100,000. These loans are secured only by the proceeds of the crop. In the first year of the programme defaults were substantial, largely because of the 1965 drought but also due to some growers evading their obligations. Enforcement of these will be strengthened in the 1966/67 programme so as to ensure that the credit becomes a revolving fund encouraging expanded cotton production, instead of augmenting the Cotton Board's recurrent losses.

*After the Plan had gone to press the Government decided to delay introduction of the seed charge by one year in view of the depressing effect of the 1965 drought on cotton-growers' income. At the same time it was announced that the charge would definitely be introduced for 1967 plantings.
145. *Pineapples.*—In 1964 fruits and vegetables as a whole were Kenya's sixth most valuable agricultural export. Within this category the dominant commodity for many years has been canned pineapple, 1964 exports of which were worth a record £874,000 (exports of fresh pineapple, mainly by air, were worth another £18,000). Intake of fresh pineapple by canneries amounted to 25,800 tons in 1964, dropping to 20,100 tons in 1965 due to the drought. Of this intake estates in the Thika area are licensed to produce 10,000 tons, although they were particularly affected by the drought and delivered only 4,700 tons in 1965. Virtually all other canning pineapple—15,400 tons in 1964—is supplied by smallholders in Kiambu District. Together with smaller numbers in Fort Hall and Nyeri Districts these African farmers also produce an estimated 10,000 tons for the local fresh market.

146. In 1965 a leading United States fruit processor, California Packers, which sells under the Del Monte label, chose Kenya as the country best suited to grow pineapple for the company's rapidly expanding markets in Europe. Negotiations between the Government and Calpak were successfully concluded in 1965, and as a result Kenya can look forward to a probable seven-fold increase in canned pineapple exports by 1975. Under the agreed expansion programme, Calpak has taken a financial interest in and assumed management of Kenya's largest existing cannery, Kenya Canners Limited at Thika, and will increase its present capacity of 20,000 tons of fresh pineapple intake to 35,000 tons by 1970. All of the 15,000 tons additional supply will come from smallholders in Kiambu and Fort Hall Districts; the Government has undertaken to assist them to grow pineapple to desired standards, and expects to allocate a gross of £200,000 in medium-term credit for this purpose over the Plan period. This programme will also involve some relocation of smallholder pineapple from higher (above 5,700 feet) to lower altitudes, where the quality of the fruit improves. At the same time Calpak will conduct field trials to determine suitable areas for plantation development. The Government has undertaken to purchase approved areas, amounting to an estimated 5,000 acres plus during the Plan period, and ultimately to about 20,000 acres, and to place these at Calpak's disposal under long-term lease at fair rentals. Calpak hopes to begin plantation development in 1968/69, and will continue it in the next Plan period to produce up to 130,000 tons in 1975, processing a total of 165,000 tons including intake at 1970 levels from estates and smallholders. Total Calpak investment over the Plan period in plantation development and factory expansion (major expansion to cope with plantation output will commence only in late 1970) is projected at close to £1 million.

147. *Passion Fruit.*—This commodity, which appears commercially as a juice, is now a minor factor in Kenya's agriculture, but deserves mention on several grounds: firstly, because of the enormous percentage increase in production forecast for 1970 (from exports worth £9,800 in 1964 to about £130,000); secondly, because of the entry into Kenya of a major world producer, Cottee's of Australia, which has taken over the largest of two
existing processing facilities in association with the Government’s Agricultural Development Corporation; and thirdly, because a serious problem of over-production of the fruit by smallholders is likely to arise during the Plan period. The latter has arisen because of a rush to plant passion fruit by smallholders in Kisii District, along with a number of settlers in Kericho District, who were attracted by the relatively high return (in 1965 factories paid 15 cents per lb., or £52 per acre on a conservative yield assumption of 7,000 lb.) as compared with low labour and other inputs required. A survey of growers in Kisii District by the Canning Crops Board and Department of Agriculture, completed in January 1966, established that plantings of vines, which were virtually nil before 1963, increased from 7,000 in that year to 150,000 in 1964 and 1.8 million in 1965! Potential 1966/67 production from plants already in the ground, controlled by nearly 7,000 smallholders including settlers, was estimated at 24 million lb., as against a Sotik factory requirement of 4 million. Most growers maintain nurseries, and new planting goes on at a rapid rate. The Government is taking steps to regulate production and allocate quotas fairly, but some growers will inevitably be disappointed. Meanwhile efforts to expand overseas markets continue; demand is growing rapidly in Europe, and test marketing has been started in the United States. Hopefully it will be possible to absorb the present production potential in the next Plan period.

Other Crops

148. To complete this section brief comments follow in respect of other crops not covered above.

149. Groundnuts, Beans and Pulses.—The major factor in expanding production of these commodities, which accounted for a total of over £1 million of exports in 1963 and nearly £1 million in 1964, will be the smallholder credit programme to be executed with World Bank assistance. At full maturity the participating farms budgeted to grow these crops are expected to do so on 300,000 acres (part of which will be double-cropped) yielding output worth £10 million. These targets will only be reached after the present Plan period, however.

150. Wattle Bark and Extract.—As late as 1955 this commodity was Kenya’s third most valuable export, even running tea a good race for second place. By 1964 it was in ninth place, its value having dropped by 75 per cent to £1.1 million. At fault in this development is the world trend toward synthetic shoe materials, together with development of synthetic tanning compounds. Sales have in fact been relatively stable since 1960, but over the Plan period a further decline in the world market is expected and exports are projected at £900,000 for 1970.

151. Cashew Nuts.—A record output of 8,300 tons of cashew nuts was recorded in 1964/65. Taking into account trees already planted but not yet bearing and assuming that world market conditions will make it possible
to maintain the present attractive producer price (raised in 1965 from 35 cents per lb. to 40 cents), it is likely that 1969/70 output will be close to 12,000 tons. A modern cashew nut factory can operate economically in this capacity range, and the Government will encourage investigations into the feasibility of establishing such a factory in the Coast Province later in the Plan period. Private interests have already indicated willingness to put up money for such a project if it proves to be feasible, an important condition for which is that the factory should be able to pay as much to cashew growers as they now earn by selling most of the crop for low-cost processing and re-export by India.

152. Other Horticultural Crops.—Kenya produces a wide variety of horticultural crops apart from those already mentioned. Recorded exports of such products, fresh and processed, including sales to Tanzania and Uganda as well as some £200,000 worth of shipments by air to Europe, amounted to roughly £0.9 million and £0.8 million in 1963 and 1964 respectively. Sales in Kenya's main towns are estimated notionally at £1 million. With rising living standards in Europe, there is a growing demand for off-season supplies of fresh fruits and vegetables even at the high cost of importation from points far to the south. The temperate climate of the Kenya highlands places this country in a favourable position to produce for that market, and the increasing air passenger traffic between Kenya and Europe is making transport space available at concessionary rates; yet shipments of quality produce are considerably below the present market potential. In respect of processed (canned and dehydrated) fruits and vegetables, several factories in Kenya are operating far below capacity, even in the peak season, due not to lack of market outlets, which are plentiful, but rather to insufficient deliveries of raw produce by growers. Kenya is even compelled to import some processed commodities (e.g. tomato paste) for which wholly satisfactory growing conditions and unused factory capacity exist side by side within the country.

153. During the Plan period the Government will take a number of steps to advance production and thus remedy the foregoing situation. Firstly, it will shortly ask the National Assembly to pass legislation establishing a Horticultural Development Council. Secondly, the Minister for Agriculture will set up a Board under the Marketing of Agriculture Produce Act with subsidiary legislation enabling it to control the production and marketing of horticultural crops. Thirdly, the Horticultural Section in the Department of Agriculture will be strengthened by the establishment of (1) a special extension service, staffed initially by four officers, and (2) a training unit at the Horticultural Research Station, Thika, at an estimated capital cost of £5,000. In respect of processed commodities, for a number of these it has become evident that the best procedure is for processing interests to expand into the agricultural side on the nucleus estate pattern, thereby (1) assuring themselves of enough raw produce to operate at a minimum economic level of capacity, (2) acquiring the means to advise and otherwise assist independent growers,
and (3) demonstrating to the latter that growing the produce in question is feasible and profitable. In cases where such a procedure is desirable, the Government will encourage processors to expand in this direction and, where appropriate, furnish technical assistance and credit.

B—Livestock

154. The development of Kenya's major livestock industries up to now has established highly favourable conditions for further expansion during and after the Plan period. The existence of substantial numbers of exotic dairy cattle, wool sheep, quality pigs and Boran beef cattle provides basic stock for further breeding to multiply numbers for expansion. A great deal of valuable skill, experience and knowledge in livestock production and processing has been accumulated. Suitable climatic conditions make possible not only more intensive development in existing areas of production but also introduction of exotic stock into new areas. This is particularly true of dairy cattle, wool sheep and, to some extent, pigs. Low-quality beef cattle which can be improved now graze over nearly three-quarters of the total area of the country.

155. On the demand side, internal consumption of many livestock products is rising steadily and will probably rise even faster if the Plan growth rate is realized. A growing proportion of total output will be absorbed in the domestic market in future years. Expansion of present export levels will require substantial investment in new production. While demand and prices for beef in world markets are likely to remain high, both the composition and direction of dairy exports will require revision if Kenya is to sell in the most profitable markets. To some extent, this also applies to pig products. The prospects for wool will be determined by competition from synthetic fibres. Indications are that the long-term trend of world wool prices is in a downward direction.

156. The share of livestock production in agricultural output, both total (including subsistence production) and recorded monetary output, declined slightly during the decade since 1955, from an average of 24.2 per cent during the first five years of the decade to 22.4 per cent during the last five years. This has resulted mainly from the substantial increase in the output of permanent crops, particularly tea and coffee, during the last five years, at a time when livestock production has been relatively static. Not unnaturally, crop production in the high potential areas has received a good deal more attention than livestock development, particularly in the arid areas.

157. The bulk of marketed livestock output still originates in the large farm sector. However, the smallholder sector and the pastoral areas are making an increasingly important contribution—the share of the large farm sector in gross farm output (excluding subsistence) of livestock products declined from 80 per cent in 1960 to 73 per cent in 1964. By 1970, it is expected that about half of marketed livestock production will originate outside the large farms as the development projects outlined in this chapter are implemented.
158. The targets for gross output of each livestock industry in 1970, set out in Table 3, together with actual output in 1964, show an increase for the entire sector of 32 per cent over the six years.

**Table 3—Gross Output of Livestock Products, 1964 and 1970**

<table>
<thead>
<tr>
<th>Industry</th>
<th>1964</th>
<th>1970</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy products</td>
<td>6.5</td>
<td>8.8</td>
<td>35.4</td>
</tr>
<tr>
<td>Pig products</td>
<td>0.9</td>
<td>1.1</td>
<td>22.2</td>
</tr>
<tr>
<td>Beef, beef products and other meat</td>
<td>6.3</td>
<td>8.3</td>
<td>31.7</td>
</tr>
<tr>
<td>Wool</td>
<td>0.5</td>
<td>0.7</td>
<td>40.0</td>
</tr>
<tr>
<td>Hides and skins and leather</td>
<td>1.8</td>
<td>2.2</td>
<td>22.2</td>
</tr>
<tr>
<td>Other livestock products</td>
<td>0.5</td>
<td>0.7</td>
<td>40.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16.5</td>
<td>21.8</td>
<td>32.1</td>
</tr>
</tbody>
</table>

Only in the case of beef are figures for 1964 estimated and 1970 target production by quantities broken down by districts and provinces of Kenya. This is done in Appendix Table 21. Even these figures vary widely in reliability, being derived mainly from estimates of cattle population the basis for which, except for the commercial ranching areas, varies from sample surveys carried out as long as five years ago to crude estimates by veterinary and range officers with experience in particular areas.

159. The disposal of total output between domestic consumption and exports is projected to change as follows:—

<table>
<thead>
<tr>
<th>Industry</th>
<th>1964</th>
<th>1970</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic consumption</td>
<td>9.9</td>
<td>13.8</td>
<td>39.4</td>
</tr>
<tr>
<td>Exports</td>
<td>6.6</td>
<td>8.0</td>
<td>21.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16.5</td>
<td>21.8</td>
<td>32.1</td>
</tr>
</tbody>
</table>

160. Total Plan expenditure on livestock development by the public sector, including expenditure passing through the Government budget, investment by statutory bodies, and external aid not flowing directly through “public” channels, is projected at £7.0 million. Recurrent costs for the whole period are estimated at £3.5 million.
161. **Dairying.**—The basic prerequisite for expansion of dairy production is an increase in the number of grade cows, which declined from a peak level of about 450,000 in 1960 to about 371,000 in 1965. Execution of all relevant Plan projects at the maximum rate would require an estimated increase in the national dairy herd to 484,000 head in 1970. The net increase of 113,000 head comprises 49,000 for settlement schemes in the former Scheduled Areas, 44,000 for the smallholder credit project, and 20,000 for other smallholders. Such an increase implies a compound annual growth rate of 5.5 per cent per annum; this was in fact achieved during 1954-60, but a rate of 4 per cent to 4.5 per cent is more likely during the Plan period, and Plan targets for dairy production are based on a corresponding net addition of around 90,000 dairy cattle to the national herd. Measures adopted for this purpose will have the following intermediate objectives: to shorten the average period of the calving interval, check the present high mortality of calves, ensure that grade cows are inseminated only with semen from exotic bulls, retain and rear all good heifer calves, and upgrade indigenous stock.

162. An expanded artificial insemination service will be a major factor in dairy development. The Swedish Government has agreed to provide substantial assistance in expanding the present A.I. service, which is currently operating at a rate of 35,000-40,000 inseminations per year, not counting roughly 30,000 scheduled to be carried out in 1965/66 by the Department of Settlement. It is hoped that the expanded A.I. service would carry out some 450,000 inseminations in all areas of Kenya (including settlement schemes) by 1969/70, resulting in impregnation of 225,000 cows at the normal rate of two inseminations per pregnancy. Gross expenditure of some £750,000, including £132,000 for capital items, is envisaged over the Plan period. The cost of A.I. to farmers will be set initially at Sh. 10 per pregnancy for grade cows and Sh. 5 for indigenous cows. Revenue from sales of semen is expected to reach £85,000 by 1969/70. Keeping of unlicensed bulls in areas served by A.I. will be strictly prohibited.

163. A national Stock Raising Committee is considering ways and means of ensuring that the maximum number of good heifer calves are reared. A “Keep That Calf” campaign sponsored by the Kenya Dairy Board and the Kenya Co-operative Creameries is already having some effect. The fact that the prices of dairy cows are now attractive and likely to remain so offers a strong inducement to breeders. Establishment of National Farms to rear calves is also envisaged under the land transfer and development programme in the former Scheduled Areas and as part of the follow-up to tsetse eradication in South Nyanza. It is estimated that a unit to produce 410 in-calf heifers per annum can be established at a capital cost of £61,500. Draft budgets suggest that profits after four and a half years should be sufficient to meet all expenditure, including capital repayment commitments.
164. The development of a national Sahiwal stud is already under way. When fully established, it will consist of 2,000 animals. These will be bred and selected for their milk potential and the progeny made available for sale in medium and low rainfall areas unsuitable for other exotic stock. Plan expenditure on the stud is projected at £145,000. Sales of animals should yield an income in 1970 of £50,000, enough to meet operating costs.

165. On the production side, it is anticipated that output of milk in 1970 will reach 82 million gallons, compared with 61 million gallons in 1964. Responsibility to handle and process this milk will rest primarily with the proposed Kenya Creameries Commission, a new statutory body incorporating both the Kenya Dairy Board and the Kenya Co-operative Creameries. The Kenya Dairy Board’s present plans for expansion envisage a total expenditure to 1970 of nearly £400,000. The bulk of this will be for the development of rural dairies and two large milk plants. These establishments will process almost exclusively milk produced by smallholders. They will be equipped with U.N.I.C.E.F. assistance, the value of which will be repaid as skim milk for children living in the areas of production.

166. The Mariakani milk scheme has already been re-equipped with U.N.I.C.E.F. assistance. Further development will require only a small amount of additional equipment which can be financed from factory profits. However, over the Plan period the scheme will require total additional recurrent expenditure of £65,000 on more veterinary personnel in order to rationalize production and stock management.

167. Research to combat disease will continue to be conducted at a national level by the Department of Veterinary Services, covering all livestock industries. In particular, an intensified programme of research on East Coast Fever will be undertaken in conjunction with the East African Veterinary Research Organization. A specific project affecting dairying will be expenditure of £13,300 over two years on liver fluke and worm control. A more general means of controlling disease will be included in a dipping project. Capital expenditure of £84,000 will be undertaken for the construction of cattle dips in areas of grade dairy stock. The operating costs will be met from fees paid by farmers for the use of these facilities. In addition a total of £44,500 will be spent during the Plan period on the establishment of three Diagnostic Laboratories to be sited in areas of intensive livestock production.

168. A major prerequisite for dairy development is adequate veterinary coverage. Very substantial expansion in this field is envisaged. New Government extension expenditure, including that required for dairying work in the smallholder credit project but excluding new staff for Mariakani, will amount to £331,000 during the Plan period. Substantial recruitment from outside will be necessary if the development programme is to be implemented. Schemes for domestic training of veterinary personnel are outlined earlier in this
chapter. Expenditure of £97,000 on housing for veterinary staff in the smallholder credit project is also envisaged.

169. Beef.—Excluding grade dairy animals, Kenya is estimated to have a total cattle population of over seven million. Out of this population, estimated off-take is only 12 per cent per annum. The bulk of the off-take consists of animals slaughtered and consumed in the countryside. A small proportion, 25 per cent, are slaughtered in the abattoirs of the Kenya Meat Commission, which supplies half of its output to urban centres and exports the rest. Its throughput includes virtually all cattle sold from the commercial ranches. This source of supply still accounts for more than half of all meat produced by the Commission. Although the number of cattle delivered to the Commission from the pastoral areas—about 95,000 out of total deliveries of 175,000 in 1965—is now higher than deliveries from the commercial ranches, animals from the latter are heavier.

170. Preliminary results of a survey recently completed by a United Nations Special Fund/F.A.O. team suggest that, assuming the present off-take rate remained constant, there would be a shortage of beef in the country in 1970. Total production in 1963 was estimated at 242.2 million lb. of boned-out beef, including 16 million lb. from imported cattle. Of this quantity, 180.7 million lb. were consumed internally and 61.5 million lb. exported. Given no change in the off-take rate, and assuming that no imported cattle would be available (Somalia and Ethiopia, the principal sources of imports at present, are rapidly expanding their domestic slaughtering facilities), the United Nations team projected an output of 243.8 million lb. in 1970. If exports were to be maintained at the 1963 level, the following deficits would appear in 1970 under varying rates of growth in domestic consumption over the Plan period:—

<table>
<thead>
<tr>
<th>Changes in domestic per capita consumption of beef</th>
<th>Deficit (million lb.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No change</td>
<td>-16.3</td>
</tr>
<tr>
<td>10 per cent increase</td>
<td>-25.1</td>
</tr>
<tr>
<td>15 per cent increase</td>
<td>-45.1</td>
</tr>
</tbody>
</table>

171. This picture could be altered by two factors—an enlarged off-take rate and an increase in the weight of animals slaughtered. An off-take of 14 per cent without any change in carcass weight would wipe out the entire deficit on the demand side. The range development programme described earlier in this chapter is designed, among other things, to achieve both larger off-take rates and the production of fatter cattle. Some basic features of this programme are discussed in paragraphs 26-27 above. In the range areas, emphasis in the past was placed primarily on disease control. What is now contemplated is the development of the under-utilized land and livestock assets of these areas with large injections of capital and skills. Anticipated public expenditure, both
development and recurrent, on all beef development projects during the Plan period is indicated in the following list:—

<table>
<thead>
<tr>
<th>Service</th>
<th>£’000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range credit</td>
<td>2,000</td>
</tr>
<tr>
<td>Government ranches</td>
<td>654</td>
</tr>
<tr>
<td>Extension services</td>
<td>1,530</td>
</tr>
<tr>
<td>Education and training</td>
<td>413</td>
</tr>
<tr>
<td>Research</td>
<td>561</td>
</tr>
<tr>
<td>Marketing facilities</td>
<td>260</td>
</tr>
<tr>
<td>Water development</td>
<td>495</td>
</tr>
<tr>
<td>Land registration</td>
<td>180</td>
</tr>
<tr>
<td>Resettlement</td>
<td>177</td>
</tr>
<tr>
<td>High-quality feed lots</td>
<td>83</td>
</tr>
<tr>
<td>North-East worm eradication</td>
<td>5</td>
</tr>
<tr>
<td>New processing facilities</td>
<td>600</td>
</tr>
<tr>
<td>Housing</td>
<td>30</td>
</tr>
<tr>
<td>Other (range grants)</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,238</strong></td>
</tr>
</tbody>
</table>

172. Range credit will cover the development costs of ranching co-operatives, group and individual ranches, community grazing schemes, and assist the further development of existing commercial ranches. All schemes will include large contributions from participants in the form of cattle.

173. Range education and training is an essential factor in the development of the range areas. It involves not merely the teaching of modern ranching practices but also a transformation of attitudes, towards regarding livestock not merely as a means of subsistence and a store of wealth but also as a commercial asset, which means emphasis on the quality of livestock rather than the number of heads. The education and training programme will include provision of bursaries and fellowships for study abroad by Government officers, as well as development of two new Farmer Training Centres specializing in range problems. The new emphasis on range development brings with it a need for expanded research on the animal husbandry (as distinct from disease) problems peculiar to the range areas, i.e. ecology, nutrition, breeding, etc. For this purpose establishment of a new range research station is included in the Plan. Work at the station will be conducted by local personnel with supporting staff provided under the U.N. Special Fund and other external aid projects. The new emphasis on animal husbandry does not, of course, mean that there will be any reduction in vigilance and research to combat disease and maintain animal health. On the contrary, a high level of animal health will be stressed even more because any future disease outbreaks would affect better-quality cattle and therefore increase the magnitude of losses suffered.
174. Disease control will also be improved by the development of stock routes and quarantine facilities. The range development programme will be spread over a very wide area, including parts remote from communications and slaughtering facilities. Off-take rates in many districts are low, partly because of the inadequacy of marketing facilities. It is estimated that an improvement of these alone, without other new investment, could increase the supply of cattle for slaughter by over 70,000 head, also reducing thereby numbers in overstocked areas. The range programme itself will require the movement of very large numbers of cattle for fattening and breeding. These objectives will be achieved by construction of more primary sale yards, improvement of water supplies, extension of present stock routes and development of new ones along with more and better quarantine facilities, and the maintenance of an organization to run the stock routes.

175. Water development is a prerequisite for the improvement of the range areas. A third of the range credit to be made available will consist of funds for water development. Two additional projects in this field include water development in the North-East and a ground water survey to be carried out with U.S.A.I.D. assistance in the Coast Province. The project in the North-East will increase the output of store cattle for other schemes as well as provide more slaughter stock from that area. The water survey of the Coast Province is fundamental to the planning of the large ranching projects there.

176. In addition to range development, new expenditure on processing, to be undertaken by the Kenya Meat Commission, will be necessary to handle the increased supply of slaughter stock. As the Plan went to press a team of experts, financed by U.S.A.I.D., was conducting a feasibility study of proposed expansion in K.M.C. processing facilities. Comprehensive details will be worked out after this study has been completed. Capital expenditure of £600,000 on new facilities is projected at this stage.

177. Range development in the arid areas will yield not only increased numbers of marketed slaughter stock but also improve the subsistence diet of participants in the group and individual ranches and community schemes. By 1970 the annual supply of slaughter stock should increase by over 100,000 head if the entire programme outlined here can be implemented during the Plan period. However, its major gains will be realized in the years after 1970. Until then, the bulk of the increased supply of slaughter stock will accrue primarily from the improvement of marketing facilities.

178. Pigs.—Domestic demand for pork and pig products is growing rather slowly. In 1964, 71 per cent of total output was consumed domestically, 17 per cent exported to Uganda and Tanzania and the rest to other markets. Any substantial growth in output will have to rest primarily on the development of export markets. The major constraint on growth will be the availability and price of cereals for feed. It is expected that for at least the next two years these will not be available in quantities and at prices required to make possible
exports without subsidization from domestic sales. For this purpose, the relevant price of feed grains should not exceed Sh. 30 per bag. Assuming that such a price can be realized by 1968, a target of 59,000 pigs slaughtered per annum can be achieved by 1970. This will be 13,000 more than in 1964/65. Earlier availability of cereals would make possible a higher level of output. The relevance of livestock feed requirements in a national cereals policy is therefore obvious. Apart from cereals, skim milk is an important element in pig feed. This should be available in sufficient quantity. Research into other substitute feeds will be continued.

179. Although pig production is still based mainly on large-scale farms, smallholders are making a growing contribution to total output. Their share in total deliveries for slaughter increased from virtually nothing in 1960 to 12 per cent five years later. A major problem in expanding production of quality meat, particularly by smallholders, will be the supply of high-quality gilts and boars for foundation stock. A pedigree herd was accommodated on the Agricultural Development Corporation's first National Farm in 1965. Expenditure of £72,000 on national pig farms is envisaged during the Plan period; these farms will supply breeding stock to farmers and also deliver pigs directly for slaughter.

180. Production in future will depend increasingly on farmers who now have little or no experience in this field. Extension staff will therefore be needed to give detailed guidance to producers. A training and extension programme involving expenditure of £48,000 is envisaged over the last four years of the Plan. Two diseases—swine fever and foot-and-mouth—pose a threat to the pig industry. The incidence of these is fairly well controlled, largely through stringent regulations. These will have to be maintained and strictly enforced. Any outbreaks would evoke immediate embargoes in export markets. Expenditure of £16,000 on disease research is included in the Plan. No new expenditure on processing facilities will be necessary as the Uplands Bacon Factory is equipped to handle twice the current throughput.

181. Sheep and Goats.—In mid-1965 wool sheep on large-scale farms numbered about 330,000, while 53,000 were held on settlement schemes and roughly 3,500 on other smallholdings. The total wool sheep population thus numbered about 386,500. Total production of wool from these in 1964/65 was approximately 2,435,000 lb., yielding farmers a gross income of £350,000. A team of experts invited to study the potential for future development estimated in 1965 that a wool sheep population of 900,000 would be possible by 1970. However, while this is technically feasible, 600,000-800,000 would be a more realistic target. At a conservative estimate of 6.5 lb. of wool per sheep, the total output from 600,000 sheep should be worth £0.7 million and, from 800,000 head, £0.9 million.

182. Rearing of wool sheep requires more skill and care than perhaps any other species of farm livestock. The team of experts referred to above also felt
that large units would be best suited to sheep rearing. Although detailed development plans for sheep have not yet been worked out, an outline of projects and measures has been prepared. The Ministry of Agriculture has set up a Sheep Development Committee to study these. This Committee will eventually be transformed into a Sheep Development Authority responsible for all aspects of development within the industry. The cost of running the Authority during the Plan period is estimated at £29,000.

183. There is a singular lack of veterinarians, agriculturists and extension staff with adequate experience in sheep diseases and husbandry. Further development will require the training not only of these but also of farm managers. A Sheep Institute will be established, probably at Molo, to provide such training. Initially, higher level manpower such as diplomates will have to be trained abroad. Together with a diagnostic laboratory the Institute is estimated to involve expenditure of £108,500 during the Plan period.

184. While there is no widespread epizootic disease of sheep in Kenya, there is a variety of minor diseases which could cause serious losses if not checked. Apart from the Sheep Institute facility, another laboratory will be built at Nanyuki as a diagnostic centre for all livestock in the area (see paragraph 167) but especially sheep. The two additional disease investigation centres will also concern themselves with sheep.

185. An increase in numbers of wool sheep will require an intensive breeding effort. Some breeding stock will be imported but breeding rams of sufficiently high quality can be produced from existing stud flocks, particularly Merinos, which form about 40 per cent of all wool sheep in Kenya. A careful classification of stud flocks will have to be prepared and farmers may require assistance to do this. At the same time, preservation of existing breeding stock will be a paramount objective. The lack of a market for high-quality sheep in recent years has already caused substantial damage to breeding. Tentative plans have been drawn up for a sheep-breeding farm, to be a joint enterprise involving the Agricultural Development Corporation, private interests and external public capital. When fully developed it should be capable of holding 100,000 head of sheep. Its functions would be to provide: (1) a market for breeding stock, (2) a supply of high-quality flock rams and (3) facilities for training at a lower level than those offered at the proposed Sheep Institute. Plan period expenditure on the farm is estimated notionally at £40,000.

186. Other minor projects will include: (1) investigations into the role of indigenous sheep (of which there are estimated to be five million) in the pastoral areas, possibly accompanied by small pilot schemes for improvement through breeding and disease control; (2) further research on the use of goats (which also number about five million) for bush control; (3) a small breeding centre to produce milking goats for sale to smallholders; (4) a pilot Karakul breeding station in one of the pastoral areas; (5) development of Angora goats for semi-desert areas; and (6) experiments on the stall feeding of wethers on smallholdings.
187. Wool will continue to face strong competition from synthetic fabrics in international markets and downward pressure on world prices must be anticipated. However, additional production in Kenya will be only a minute proportion of total world output and will not by itself affect the general price level. If the present high quality of Kenya wool can be maintained, exports should continue to fetch prices which will more than cover costs.

188. Although the primary return from sheep development is increased wool output, considerable quantities of mutton as a joint product will inevitably be forthcoming. This will be a useful addition to domestic meat supplies and should enable larger quantities of beef to be exported. There are virtually no exports of lamb at present and future prospects are not promising.

189. Poultry.—The major problems of poultry are on the marketing rather than production side. A relatively small domestic market, seasonality in production, and uncertain export markets lead to wide fluctuations in the production and prices of eggs. Although the output of eggs from large commercial producers has declined during the last few years, numerous smallholders have started production for sale with exotic birds. The small investment called for and the fact that the necessary skills are rather easily acquired have induced many smallholders to enter the industry. There has, however, been no corresponding systematic development in marketing and distribution which would even out supplies to the small domestic market by organizing the export of surpluses. As the Plan went to press a Poultry Advisory Committee was in the final stages of preparing a report on the industry’s marketing problems.

190. Additional expenditure of £8,000 to provide improved poultry extension services is envisaged during the Plan period.

191. Hides and Skins and Leather.—Nearly 80 per cent of Kenya’s total production of hides and skins is exported in a raw state. Most of the balance is tanned, part being exported and the rest consumed in Kenya. Exports of raw hides are destined primarily for Western Europe where they will face increasing competition from synthetic substitutes in future years. On the other hand, the quality of hides exported should also improve with the development of the range areas since the condition of the animal at the time of slaughter is a major determinant of quality. This, together with the continuation of the Government’s hide improvement service, should help to strengthen the competitive position of Kenya hides in world markets. At least two new tanneries are likely to be built, thus increasing the value-added of hides and skins. A large proportion of tanned hides and skins will be exported. However, domestic consumption is expected to show an increase with the growth of rural craft industries. Increased local production of quality leathers will bring some import substitution.
192. Other Livestock Projects.—Other livestock projects to be launched during the Plan period are as follows:—

(i) Lambwe Valley.—This will be a combined tsetse eradication and livestock development project. A large stock farm in Lambwe Valley will, apart from producing milk and beef cattle on its own account, also breed dairy animals for farmers in the surrounding areas. Development expenditure on merely the livestock side of the project is estimated notionally at £200,000.

(ii) Bee-keeping.—Expenditure of £14,000 may be undertaken to promote bee-keeping.

(iii) Veterinary Research Laboratory.—Laboratory facilities for veterinary research are to be expanded at a cost of £31,000, of which the U.K. Government is providing £28,000 as a grant.

(iv) Veterinary Department Housing.—The very large growth of veterinary services involved in livestock development will require expenditure of £55,000 on new staff housing in addition to that included above under dairying and beef development expenditure.

C—Co-operatives

193. Co-operatives were first organized in Kenya, starting before World War I, for the purpose of marketing the products of European farmers. In 1945 a new Co-operative Societies Ordinance provided for establishment of co-operatives among African smallholders, and under it roughly 1,000 societies have been registered in the last twenty years. About 500 to 600 of these were active at the start of the Plan period.

194. Over 98 per cent of the turnover of co-operative societies in Kenya derives from agricultural production and marketing. The value of produce marketed through co-operatives in 1964 is estimated at £30 million; by 1970, assuming Plan production targets are achieved, it will exceed £50 million. Of the 1964 total an estimated £7 million was handled by African societies; this should be on the order of £25 million in 1970, with coffee accounting for slightly more than half. From these figures it is clear that the efficiency of co-operative societies affects the incomes of a large number of producers. Because co-operative societies play an important role in grading and processing certain commodities, notably coffee, the performance of the societies also affects the quality of output and prices received for it on world markets.

195. Apart from the marketing function, some co-operative societies act as low-cost distributors of farm requisites (fertilizers, insecticides, seed, etc.) to their members; and some are an important source of credit to farmers, though usually as an intermediary between the farmers and private or public financial institutions. A number of African producer co-operatives have been registered since 1960. Most of these (some 300) were formed for the purpose of buying and operating large-scale farms formerly owned by Europeans.
Six co-operative farms have been established under the Million-Acre Settlement Scheme and others are planned. Moreover, the entire 120,000-acre Ol Kalou Salient is scheduled to be divided up into co-operative farms. Four ranching co-operatives are operating in the pastoral areas, and the range project outlined earlier in this chapter provides for setting up twenty-nine more. Finally, the development of wheat/sheep enterprises on the high-potential land in Narok District will be carried out on the basis of producer co-operatives.

196. Co-operative societies have already benefited from substantial Government investment. The annual recurrent costs of the Department of Co-operative Development are close to £100,000 (excluding £45,000 received under U.K. aid for co-operative staff in settlement schemes). In addition, at 31st December 1965, £135,000 was outstanding in loans administered by the Agricultural Finance Corporation, mainly to coffee, pyrethrum, and dairy co-operatives for construction of processing facilities. Loans to all types of co-operatives in the Million-Acre Settlement Scheme totalled £495,000 at 30th June 1965. Finally, in 1965 some £40,000 was lent to cotton co-operative societies in Western Kenya to finance land preparation and insect control.

197. Despite this past effort on the Government's part it could not be said that the co-operative movement in African agriculture was on a sound basis at the start of the Plan period. With a number of societies the rapid increase in turnover associated with rising output by member farmers has outstripped the societies’ accounting and financial control procedures. In the case of coffee, where society turnover rose from £2.8 million in 1961 to £5.4 million in 1964, at the end of 1965 40 per cent of the industry’s 146 societies had not completed their accounts for the year ending in 1964, and thirteen societies were delinquent for the previous year as well. In both the coffee and pyrethrum industries many of the societies’ governing committees have become lax in their financial stewardship, engaging in wasteful expenditure on their own account, managing their services inefficiently, and (in the case of coffee) making speculative investments with the members’ proceeds. As a result, in both industries an unnecessarily large share of the crop proceeds are siphoned off before reaching the members—over 50 per cent in the case of some coffee societies. Members’ receipts are also diminished by inefficiencies arising from the existence of a plethora of small mono-crop and mono-purpose co-operative societies instead of multi-crop and -purpose societies such as is the rule in countries where the co-operative movement is more advanced. A slightly different problem arises from the frequent breakdown of the grading system in coffee societies, where committee members or their relatives demand top grading for inferior cherry, and society employees, holding their jobs at the committees’ will, are not in a strong enough position to refuse. All these phenomena act to diminish farmers’ incentives to grow the crops in question and contribute the labour and other inputs required to obtain a quality product. In either way both
the nation and the farmer lose. The situation in the coffee industry has reached a point where many growers are clamouring individually or in small groups for permission to establish their own processing facilities on the ground that they stand to lose less through diseconomies of small-scale production than is currently withheld from them by their co-operative societies.

198. The coffee and pyrethrum industries are strong enough so that some expansion of output is likely even in the present state of the co-operative movement, although it is unlikely that the Plan targets for 1970 will be achieved without some improvement in those conditions. But there are other industries in which the co-operative movement's weaknesses are an even more serious obstacle to progress. Probably the most notable example is cotton. The Government believes that, in order to attain its 1970 target increase in cotton production in Western Kenya, and bring about a significant rise in the living standards of hundreds of thousands of people in areas where cotton is the most suitable crop, it is necessary to introduce technological improvements which at this stage, because of the local poverty, can only be financed by means of seasonal credit. It is obviously unsatisfactory for a public agency to make loans to thousands of individual growers for one acre of cotton apiece with no security other than the crop, part or all of which can always be sold through third parties in order to avoid loan repayment. Rather, a far preferable procedure is for the lending agency to deal with co-operative societies which can screen borrowers in the light of local knowledge and discipline members to adhere to the loan terms, realizing that wholesale defaults will result in a termination of credit facilities. Unfortunately, however, the co-operative movement in Western Kenya is at present in no position to play such a role. As the Plan went to press it was becoming evident that the societies had been unable to induce their members to repay a significant proportion of the seasonal credit advanced to them in 1965. Such a performance can only reduce the availability of seasonal cotton credit in future years, and thus retard the technological advance of the industry. In addition, the Government's decision in 1962 to prepare the co-operatives for their future role by giving them a monopoly in the buying of seed cotton from growers has thus far had the effect of raising handling costs in the industry by forcing the buying commission from Sh. 1 per 100 lb. up to an average of Sh. 2/50, and, because of the societies' lack of collateral, increasing finance charges on bank crop advances through gimmers.

199. Mismanagement and failure of co-operative marketing in some areas has also disrupted development of African horticultural enterprise. A case in point is the Taita Hills, whose location and ecology suit them to being a major supplier of horticultural products to Mombasa. Largely due to the collapse of several past efforts at co-operative marketing in Taita, areas of the Central Province situated three times further away have emerged as more economic suppliers to Mombasa.
200. The foregoing difficulties in no way detract from the importance of a healthy co-operative movement to the progress of Kenya's agriculture. There is only one course of action open to the nation, and that is to strengthen the co-operatives to play their role adequately. Quite apart from social and political factors there is no doubt that a strong co-operative movement would maximize the incomes of Kenya's peasant farmers by, on the one hand, performing essential functions of processing and distribution on a much larger and more efficient scale than would be possible for the individual grower, and on the other hand, giving him a share in the profits associated with these operations rather than letting them accrue entirely to private middle-men. A strong co-operative movement would also facilitate the expansion of agricultural credit and the technological progress associated with it, among other ways by simplifying the collection of loan repayments, through deduction of repayments from a borrower's crop proceeds at co-operative society level.

201. The present difficulties of the co-operative movement are fundamentally due to shortcomings of management, at the governing committee level as well as among society employees. It is the Government's view that these can be corrected by means of a concerted effort on three broad fronts: (i) more effective public regulation of co-operative society practices and procedures; (ii) encouragement of institutions within the co-operative movement to make it self-policing and -supporting; and (iii) training of committee members and employees as well as Government staff. Far-reaching measures will be undertaken on all three fronts during the Plan period.

Public Regulation of Co-operatives

202. Early in 1966 the Government completed a draft Co-operative Societies Act which it proposed to submit as soon as possible to the National Assembly. The draft Act gives enhanced regulatory powers to the Commissioner of Co-operative Development, enabling him among other things to exercise control over co-operative society budgets, and thus put a stop to major financial abuses. It is envisaged that this power will be used to limit co-operative society deductions (other than loan repayments) from members' crop proceeds on the basis of legitimate economic services rendered by societies in different industries. Such control would be exercised in order to compel greater efficiency in the organization of services, curb wasteful expenditure on behalf of committee members and employees, and require membership approval of investments outside a society's basic functions. The Commissioner will also have power to require minimum qualifications for society employees, and protect employees against dismissal for refusal to exercise favouritism towards committee members. Finally, the Commissioner will have power to compel the merger of uneconomically small mono-crop or -purpose societies into more economic units. Initially, the criterion for determining whether a society is a viable unit will be whether it can afford a secretary/book-keeper with specified minimum qualifications.
203. To implement his new powers the Commissioner for Co-operative Development will require the advice and assistance of a greatly expanded staff. It is planned to engage additional staff immediately. The Government recognizes that sufficient properly trained local personnel will not be available for some time, and has therefore asked external aid agencies to supply large amounts of staff for the first years of the Plan. In March 1966, twenty-eight U.S. Peace Corps Volunteers were working in the Department. The four Scandinavian countries (Denmark, Finland, Norway and Sweden) have agreed to provide an even larger team of field experts. In addition, the Scandinavians will supply two or three experts to assist at Department headquarters in planning the co-operative development programme, especially the four countries' own very large role in it (see also section on training below). Headquarters staff are also being provided by U.S.A.I.D. and the U.K. Government.

New Institutions Within the Co-operative Movement

204. It is Government policy to encourage the formation of district co-operative unions, each union covering a geographical area (which may be the same as or smaller than an administrative district) whose primary societies, all crops being included, have a turnover approaching £500,000 or more. Some twenty-five unions have already been formed, some of them operating on a mono-crop basis. The unions carry overall responsibility for the development and operations of primary societies in their areas. Theoretically it is their function to: provide transportation, marketing, accounting and other administrative services; determine terms of service of society staff members and arrange their recruitment and training; and make recommendations to the Commissioner on new applications for registration. The draft Co-operative Societies Act gives district unions powers similar to those of the Commissioner, subject to his overall co-ordination and direction. It is the Government's aim to build up unions to the point where it can rely on them to keep the primary societies on a sound footing and generally implement Government policies at the primary level. When this point is reached Government staff will be able to work almost exclusively with the district unions; however, for the time being both primary societies and unions require direct Government advice and assistance.

Training

205. The key to the success of the foregoing and other measures intended to advance the co-operative movement is a greatly expanded programme of co-operative education, aimed at all levels of personnel in primary societies, district unions, and Government. At present, organized co-operative training takes place mainly in the Kenya Institute of Administration, whose primary function is to train civil servants. The Institute offers four courses in the field of co-operatives, ranging from six to thirty-six weeks' duration and catering to personnel of larger primary societies and unions as well as the Government's own Department. This training programme is wholly inadequate
to meet the needs of co-operative development in Kenya, and the expansion of co-operative training is one of the most important projects in this Plan. This expansion will take two directions: firstly, the establishment of a national co-operative college to increase the scope of the staff training now undertaken at K.I.A., introduce short courses for society and union committee members, organize correspondence courses for them, and generally give co-operative training in Kenya a distinct identity. Secondly, five provincial co-operative training centres will be set up at existing farmer training centres to hold continuous one-week courses for society secretaries and committee men, some of whom will then proceed for further training to more advanced centres at Maseno and Wambugu. The co-operative college will make use of an existing complex of buildings near Nairobi where relatively modest expenditure will make possible conversion from a previous use.

206. Assistance from the Scandinavian countries will be instrumental in carrying out this education programme. The Scandinavians plan to supply a principal and two lecturers for the co-operative college, as well as one lecturer for each provincial training centre. They have also agreed to donate the cost of new facilities required for the college and provincial centres, estimated at roughly £140,000. U.S.A.I.D. is providing substantial training assistance in the form of two U.S. technicians, ninety-two U.S. scholarships for Kenya staff (of whom about sixty will be in the U.S. at some time during the Plan period), and equipment such as mobile film units, vehicles, visual aids, books, etc.

Costs of Co-operative Development Programme

207. The Scandinavian countries have estimated the cost of their contribution, in cash and kind, at £3-£4 million over a ten-year period, six years of which fall outside the present Plan period. The Kenya Government’s counterpart contribution vis-à-vis the Scandinavians is estimated at £130,000 in recurrent costs over the Plan period. Another £25,000 will have to be spent on transport equipment, although this may be covered by Scandinavian aid. The increase in the Co-operative Department’s regular staff over the Plan period will involve some £60,000 in additional annual recurrent expenditure in 1969/70, and an estimated £20,000 for transport equipment over the Plan period.

Co-operative Activities Outside Agriculture

208. In mid-1965 there were twenty-nine registered consumer co-operatives in Kenya, nearly all in urban areas, including twelve in Nairobi. Only one had a turnover as high as £50,000. Consumer co-operatives show a high mortality rate, over half of those registered since 1945 having been liquidated.
They suffer from many of the shortcomings as do agricultural co-operatives in respect of management, membership discipline, financial resources, and competition from private business. It is Government policy to encourage this form of co-operative development, and a modest portion of the Government's staff and training resources described above will be made available to consumer co-operatives. It is also Government policy to promote co-operatives in new fields such as fisheries, housing, insurance, credit, wholesale trade, handicrafts and other small-scale industry, but in view of the severe limitation on Government resources priority during the present Plan period must be given to the co-operative movement in agriculture. The Government has also decided in principle to establish a Co-operative Bank, but this must await the successful launching of the Central Bank and the proposed National Commercial Bank.
CHAPTER 7—TOURISM AND NATURAL RESOURCES

A—Tourism, National Parks and Game

Tourism

Tourism is a major industry in Kenya; its gross foreign exchange earnings in 1964 have been estimated at £7 million. Including domestic tourists and holiday-makers, total revenue of the tourist sector may be estimated at about £10 million. For the Plan period the growth of gross foreign exchange earnings from tourism is estimated at 15 per cent per year.

2. This growth estimate may well be too low; Kenya's tourist income is proportional to the development of tourist facilities, and the more the country spends on the development of this sector, the greater will be the flow of visitors. The European and American mass markets have hardly begun to be tapped; the 65,000 recorded visitors to Kenya in 1964 are a small trickle compared to the annual flows of tourists to countries around the Mediterranean, which are counted in millions and hundreds of thousands. Annual tourist expenditure by Europeans is rising at a rapid rate, and Kenya is coming within the reach of millions of middle-class tourists who have already visited various Mediterranean countries and now want to see Africa. Charter flights and inclusive tours now enable them to spend a fortnight in Kenya for about £110, which makes a visit here comparable in cost with visits to traditional Mediterranean tourist centres.

3. The growing numbers of business travellers to Kenya and visitors in transit increasingly tend to add to their itinerary a few days of touring and sightseeing, and the number of visitors who prefer individual tour arrangements is increasing steadily. The 15 per cent growth projection is based on the trend from 1961 to 1964. In fact, the number of visitors during 1965 was 34 per cent higher than in 1964. It was during 1965 that group travel by charter flights began on a substantial scale, and the Kenya Government is negotiating with aviation bodies and governments to relax the rules which hitherto have tended to restrict charter flights to Kenya.

4. The first requirement for a sound development of tourism is forward planning and co-ordination of the many different projects which are necessary. During 1965 the Government took four important steps in this direction—

(i) it invited the French Inspector-General of Tourism, Mr. Lucien Bertrand, to prepare a report on tourism in Kenya with recommendations for future development;

(ii) a feasibility survey was carried out by a hotel expert from the Commonwealth Development Corporation Hotels Ltd. on the construction and improvement of tourist lodges;

(iii) private engineering consultants prepared a feasibility report on tourist roads; and

(iv) the Tourist Development Corporation was created by an Act of the National Assembly.
In addition there was improved co-ordination between tourism, the national parks and the game reserves, formerly split between two Ministries, by combining them under the Ministry of Natural Resources, Wildlife and Tourism.

5. The Government’s tourist development policy calls for close co-operation with the private sector. Proposed public investment in tourist facilities during the Plan period, estimated at £3.5 million, requires complementary private investment of at least an equal amount, mainly in hotels. Execution of this programme will also require assistance from foreign governments and financial institutions, negotiations for which were under way at the start of the Plan period.

6. The need for co-ordinated planning of the tourist sector is apparent. Investment requirements are large, and unless there is a balanced development of hotels in Nairobi—the main tourist gateway—tourist lodges and hotels in areas of tourist attraction and roads and other transport facilities in and to these areas, surplus capacity, i.e. wasted capital, will result. Kenya has an unusual variety of attractions to offer tourists, the most important being wildlife. Others include climate, scenery, mountaineering, trout fishing, big-game hunting and viewing, deep-sea fishing, surfing, swimming and other sports to mention only a few. In each of these activities Kenya can offer something as good as or better than virtually any other country. The combination is unique, and still barely exploited. One of Kenya’s great advantages as a tourist centre is the feeling of immense open spaces in the mountains, on the plains or along the Coast, which impresses visitors from the crowded cities of Europe and America. Kenya must be able to absorb not only two and one-half times the present tourist flow by 1970 but eight or ten times as many by 1980, without giving the impression of being crowded. Hotels, lodges and roads are built to last twenty-five years or longer, and long-term planning is necessary to preserve the beauty and vastness of the country.

7. The experience of many Mediterranean countries is that an area can be destroyed very rapidly unless tourist development is well planned. Over-crowding of small localities can easily destroy their character. With careful planning, on the other hand, such places can absorb a great number of tourists without losing their charm. Evils to be prevented include pollution of beaches, traffic congestion, buildings which do not harmonize with the environment, etc. Flows of visitors through the national parks and the game areas must be planned so as not to disturb the wildlife. One of the chief objectives of the Tourist Development Corporation will be comprehensive planning to avoid these pitfalls.

The Bertrand Report

8. The Bertrand Report states that it should be possible to achieve three targets by 1970—

(1) an increase in the number of tourists by 160 per cent over the Plan period, or 17 per cent per year;
(2) an increase in the average length of stay from eleven days to fifteen days;
(3) a substantial increase in the number of tourists from East Africa itself.

The combined effect of achieving the first and the second objectives would be to increase the volume of tourism (measured by the aggregate number of tourist days spent in the country) by 250 per cent from 1964 to 1970, or 23 per cent per year. (Income from tourism would not necessarily increase by the same proportion, since the longer a visitor’s stay, the smaller his average daily expenditure.)

9. As stated earlier, the Government is basing its plans on a lower growth rate than the 23 per cent implied in the Bertrand Report. An average annual rate of increase of 15 per cent would result in gross foreign exchange earnings of about £15 million by 1970. Assuming that 25 per cent of foreign visitors’ expenditure is on imports, direct or indirect, the net foreign exchange receipts from tourists would thus increase from £5.2 million to almost £12 million. Taking into account the somewhat slower growth projected for “local” tourism, total turnover of the tourist sector in 1970 may be projected at £20 million, compared with an estimated £10 million in 1964.*

10. The actions suggested by the Bertrand Report to achieve its proposed objectives can be summarized as follows.

(i) Game Reserves.—Continuation of the general policy pursued since 1945 for the protection of game and exploitation of its tourist value. The status of national parks should be extended to the present national game reserves and game preservation should be co-ordinated under a single authority. The problem of game preservation in the Amboseli Reserve, where at present game and cattle are competing for grazing and water, requires urgent attention. The Report also emphasizes the need to create new reserves in the north-eastern part of the country to avoid overloading of the existing reserves. The Government recognizes the need to re-examine the administrative machinery for the game reserves with a view to ensuring that development in these areas, including the provision of tourist facilities and amenities and game management schemes, are matched with those in the National Parks.

* There are no specific projections regarding the growth of “local” tourism. The estimate that local tourists spend about £3 million at present is a rough guess, based on the fact that residents account for about two-thirds of the bed-occupancy in Kenya hotels and lodges. (In addition, local visitors spend holidays in rented bungalows on the Coast, in tents and otherwise.) The standard of accommodation chosen by local tourists is simpler and therefore cheaper than that of foreign visitors, and a high proportion consists of families with children. On the basis of a guess that “local” tourist-days spent in Kenya are at least double, and possibly three times, the number of foreign visitor-days, and that their average cost per day is not more than 20 per cent of the cost of a foreign visitor-day, the aggregate expenditure of local tourists and holiday-makers would be around £3 million. Increasing living standards, numbers of local car-owners, and above all numbers of Kenyans who for the first time can begin to tour and see their own country, would appear to make 5 per cent per annum a reasonable growth figure for “local tourist expenditure.”
(ii) *Accommodation.*—The Report emphasizes the need for a rapid development of accommodation in game lodges, and puts 1,600 new beds as the minimum requirement. Under the Government's more conservative projection of tourist demand, the Plan objective has been set at 1,000 new lodge beds. The Report makes recommendations on the location of lodge development and road improvements, and these have been largely adopted by the Government. An airstrip should be built near each lodge for transportation of tourists and supplies. The Government attaches great importance to this recommendation, because air communications are a valuable means of making the utilization of lodges less dependent on weather conditions. During rainy periods some areas are difficult to reach in saloon cars and similar transport; however, once visitors have arrived at the lodges, special vehicles on the spot can take them around without difficulty.

(iii) *Mountains, Lakes and the Coast.*—The Report contains a number of valuable suggestions for a better exploitation of Kenya's scenery, especially Mount Kenya, where M. Bertrand suggests laying a track to bring cars to an altitude of about 9,000 ft., as well as building comfortable lodges at the end of the track, from which day trips on the mountain would be organized. In particular, the plant life on Mount Kenya is something which few visitors are now aware of, but which should be an attraction in itself. The Report points to Nyanza as an area which until now has been neglected from a tourist viewpoint, but offers much attractive scenery, particularly near the shores of Lake Victoria, notably Homa and Kendu Bays. The Report suggests building an hotel and restaurant and improving road connexions between the Mara Reserves, Homa Bay and Kisumu. On the region between *Mount Elgon and Lake Baringo* the Report states: "This part of Kenya is probably the most impressive from the point of view of its contrasting scenery, its awe-inspiring escarpments and drops, and the vastness of its panoramas. Moreover, fascinating populations live here." The Report suggests improvement of the road from Eldoret and Kitale toward Lake Baringo; establishment of one or two restaurants at the most scenic points on the route, along with an hotel or restaurant on the Lake; and organization of boat trips on the Lake. In terms of development expenditure the most important proposals relate to tourist development of the Coast, where the Report suggests that 1,000 new hotel beds should be provided by 1970 (in addition to the existing 1,500). The Report states: "The Coast must be given a larger place in the tours organized for foreigners, and residents of East Africa should visit it during their holidays. It ought to be a place where Nairobi residents can go for long week-ends..." A number of road improvements are suggested along the Coast and between Malindi-Aruba and Voi. Finally, the Bertrand Report suggests that *Lake Naivasha* and *Lake Nakuru* should have more tourist amenities and better roads. Lake Naivasha, about one hour by road from Nairobi, could become a much bigger recreation centre for inhabitants of Nairobi and Nakuru, particularly during week-ends. For Lake Nakuru the Report recommends building a circular road, setting up a lakeshore game reserve, constructing a series of
hide-outs for viewing and photographing the flamingos, and better advertising of the beauties of nearby Menengai Crater.

(iv) Publicity, Administration and Planning.—The Bertrand Report makes many valuable recommendations on tourist publicity, administration and planning. These are now the subject of a detailed study by the Government.

Lodge Programme

11. The Government has embarked on a 1,000-bed expansion programme for the game lodges, following the 1965 feasibility report by an expert from the C.D.C. Hotels Ltd., who has since been appointed as consultant to the Government for execution of the programme. The Report notes at the outset that most lodges now are busy for about six months of the year only, but even during that period bed occupancy figures are not as high as they should be. The number of guests is low between the departure of one tour and arrival of the next; block bookings are not fully taken up, or are cancelled too late for rooms to be re-let; double rooms are occupied as singles. Tour operators complain that in the peak months of the year they have to turn away business. In order to accommodate their clients, they have bought into the companies which operate the lodges. It is undesirable in principle that tour operators should be involved in the hotel side of the tourist trade. The Report therefore recommends building new lodges on the condition that management must fill its accommodation from all available sources without partiality. Centralized booking will be the solution to this problem.

12. On sales promotion, the Report draws hope from the fact that the first American airline and additional European lines have recently been granted landing rights into Nairobi; that faster and more direct flights between Nairobi and the main African centres are about to come into operation; and that increasing numbers of persons are visiting Africa on government, diplomatic and commercial business. All these are potential visitors to the game parks. Air fares will be generally reduced in April 1966. Scheduled airlines have introduced excursions and package tour fares for middle-income tourists. Tour operators have arranged cheaper package tour fares with charter airlines to cater for lower income tourists. Considering this potential the Report recommends that management arrangements for the proposed new lodges should include a sales promotion organization to promote Kenya in the world tourist market in association with the Government, airlines, travel agents and tour operators.

13. The types of accommodation to be provided in game park lodges must cater for very different categories of customers, including higher, middle and lower income groups of foreign tourists, residents of Kenya including families with children, and students from Kenya and overseas. Most middle and higher-income visitors do not expect luxury standards in game park lodges, but demand well planned and equipped accommodation with reasonable standards of service. Lower income foreign tourists expect the same standards, but cannot afford middle-income tariffs. Elsewhere this problem is often met by
charging different tariffs for peak and off-peak seasons. The existing "do-it-yourself" lodges should be maintained, improved and extended to cater for local families who enjoy this sort of holiday and/or cannot afford the better type of accommodation. The Report also recommends construction of one or two hostels consisting of a dormitory, a "do-it-yourself" kitchen, mess-room and communal toilets for student visitors. The rates would have to be low and possibly even subsidized. Whereas the report deals almost exclusively with game areas, it is however recognized that cheaper accommodation facilities will also be required outside the game areas.

14. The design of new international tourist class lodges is now under study by the Government's consultants. One question which must be tackled is the optimum size of lodges, requiring a compromise between the objective of making a lodge small so that the tourist feels surrounded by wilderness, and so as not to disturb the game unduly, while on the other hand achieving economies of scale so as to hold down the high overhead costs. Present thinking in this field favours 100-bed lodges, but local conditions will influence the decision on any particular lodge. Economies of management also favour making each new lodge part of a chain with a total capacity of at least 500 beds.

15. On the basis of the C.D.C. Report, the Government has decided to set up a lodge development organization to be known as Kenya Safari Lodges Company Ltd., in which it will hold shares through the Tourist Development Corporation. The company will promote the construction of new lodges and expansion and modernization of existing ones, at the same time enabling the Government to co-ordinate lodge development with, for example, road building and hotel development. The 1,000-bed programme is to be carried out by 1970 in two 500-bed phases. Depending on the trend in tourist traffic, decisions may be made to accelerate or slow down the programme. The cost of the 1,000 beds is estimated at £1.5 million, or £1,500 per bed on average, including not only construction and equipment costs but also administration, training of personnel, preliminary sales promotion, working capital, etc.

16. Financial arrangements for the lodge development programme still remain to be worked out between the Government, county councils, the national parks organizations, private tourist interests and overseas financial institutions. Satisfactory arrangements have already been made for expansion and modernization of some existing lodges, and preliminary talks have been held with financial institutions in countries expected to send large numbers of tourists here. Thus, the United States, Great Britain and West Germany have all indicated their willingness to support the programme. The Government is also welcoming investment from other countries, and from international institutions. Of the estimated £1.5 million expenditure, about one-third will probably take the form of equity investment in the Lodge Company, and about two-thirds will be loan finance. Of the equity investment, again, about one-third is likely to be Kenya Government participation, while all the loan finance will have to come from the private sector and from abroad.
17. While existing lodges are largely owned by national parks or county councils and run by different individual operators under lease agreements, the new lodges will as far as possible be brought under one centralized management provided by an experienced company with a selling organization abroad and with ability to provide the necessary training facilities, consultancy and supervisory services. The company will employ local hotel personnel with a knowledge of the country and train Kenyans in methods and standards of international hotel-keeping. Its accounting, buying, reservations, administrative and engineering services will be centralized. The new lodges will operate an intensive “on-the-job” training programme to improve the standards of service and advance Kenyans into management positions as quickly as possible. To this end, the management company will select suitable young Kenyans for key appointments in the new lodges and, after initiation to the job, send them to hotels abroad for further training.

18. The 1,000-bed expansion programme involves about 200 additional beds in existing lodges and 800 beds in new lodges. The following existing facilities are scheduled for expansion and/or modernization:

- Keekorok (Masai Mara Game Reserve)
- Kilaguni (Tsavo National Park—West)
- Amboseli New Lodge
- Samburu—Uaso Nyiro Game Lodge
- Maralal (Samburu)
- Kitani (Tsavo—East)
- Ol Tukai Old Lodge (Amboseli)
- Kenmare (Meru Game Reserve)
- Aruba Lodge (Tsavo—East)
- Lake Baringo
- Loiangualani (Lake Rudolf)
- Ferguson’s Gulf (Lake Rudolf)
- Mt. Kenya
- Aberdares
- numerous small fishing huts

The last-named fishing huts are virtually unknown except to local residents, but can and should be “sold” to tourists.

19. The eight new lodges planned for 1965/70 will be constructed in a two-phase programme. Phase I aims at the construction of three new lodges to be ready for the 1967/68 season, Phase II involves construction of five more during 1968-70. Each lodge will have about one hundred beds and cost approximately £150,000 including development expenditure, investment in training, and working capital. The proposed location of the lodges is as follows:

Phase I (1966 and 1967).—Mazima Hill, Tsavo East; a lodge on the beach, south of Mombasa; and Ngulia Hill, Tsavo West.

Phase II (1968-1970).—Loitokitok; Amboseli Game Reserve; Loisiotoo Hill, Tsavo West; The Triangle, Mara Game Reserve; Leopard Rock, Meru Game Reserve; and Kisumu, Lake Victoria.
The timing of Phase II will depend upon the demand for accommodation, road improvements and other development in the game parks. If the demand grows faster than anticipated, consideration will be given before 1970 to establishing game lodges in northern areas.

**Hotel Development**

20. Expansion and modernization of hotels outside the national parks and game reserves is a counterpart to lodge development. The present hotel situation is as follows:

<table>
<thead>
<tr>
<th>Location and Type</th>
<th>No. Rooms</th>
<th>No. Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nairobi international</td>
<td>700</td>
<td>1,100</td>
</tr>
<tr>
<td>Nairobi, other</td>
<td>1,000</td>
<td>1,500</td>
</tr>
<tr>
<td>Coast</td>
<td>800</td>
<td>1,500</td>
</tr>
<tr>
<td>Up-country</td>
<td>700</td>
<td>1,300</td>
</tr>
<tr>
<td>Total (excluding game lodges)</td>
<td>3,200</td>
<td>5,400</td>
</tr>
</tbody>
</table>

The hotel situation differs from that of the game lodges in that considerable expansion can take place at fairly low cost through modernization and improvement of existing facilities in all categories except the Nairobi international hotels, which are very nearly used to capacity and will shortly require a substantial addition. Their average bed occupancy rate is about 70 per cent and it is thought that between 450 and 600 new beds will be required before 1970 to avoid a bottleneck. Thus, there is need for two new international hotels, expected to cost a total of £2.5 million, and one of the existing modern hotels may have to be expanded. The Government is engaged in discussions with potential investors, and construction of the first of the two new hotels is expected to start during 1966/67 in the centre of Nairobi. The international hotel business will be left largely to private enterprise although Government will participate in investment through the Tourist Development Corporation. The problem is different for "other" Nairobi and up-country hotels. Many of these are old, somewhat run-down and have uneconomically low bed occupancy rates, averaging about 55 per cent in Nairobi and as low as 30 per cent up-country. This situation calls for an overall improvement in services and amenities to increase capacity utilization by attracting lower- and middle-income overseas visitors. Only after such improvements have been made will new hotels be built in this category, with the exception that some motels may be needed before 1970. The cost of modernizing existing Nairobi hotels outside the international and up-country establishments need not be very high. It is estimated that an expenditure of about £500,000, or an average £200 per bed, could effectively increase the capacity of the hotel industry to receive the expected tourist flow. On the basis of assumed increases in bed occupancy rates, it is estimated that £300,000 worth of modernization, one-half being spent in Nairobi, will have the same result as building new hotels with a capacity of 400-500 beds in Nairobi and 300 beds up-country. Most of the Nairobi and up-country hotels in question lack funds for such a modernization programme, and the Tourist Development Corporation will be an important
instrument for financing it. Through this channel, funds from overseas development finance institutions may be made available. Depending on how fast the modernization programme for up-country hotels is implemented, it is considered that an additional 200 new beds may also be required in several up-country areas. The cost of such new beds is expected to be between £1,500 and £2,000 per bed, making a total of £400,000.

21. At the Coast, the present hotel capacity is about 1,600 beds, and the majority of hotels need modernization. The average bed occupancy rate tends to be about 50 per cent, but the expected influx of new customers to the Coast and a lengthening of the tourist season in connexion with package tours could with some organization raise the rate to 75 per cent. Again, this would require a modernization programme, expected to cost about £100 per bed on average. As above, the effect would be the same as from building 400-500 new beds but it would cost only a fraction of the price. In addition, existing hotels at the Coast need to be expanded in order to become more viable units, and, as pointed out in the Bertrand Report, about 1,000 additional beds would be a minimum requirement over the Plan period. The cost of this expansion programme is at present difficult to estimate; most of the additional capacity is likely to take the form of modern but comparatively simple accommodation, at a cost of about £1,500 per bed, but some high-class and luxury hotels will also probably be needed before 1970, involving perhaps more than 300 beds costing £2,000-£2,500 each. Several hotel owners and tourist organizations with Coastal interests can raise their own finance, and will not need assistance from the Tourist Development Corporation. However, some of these may be reluctant to invest without at least nominal Government participation.

Costs of the Lodges and Hotel Programmes

22. The breakdown given below is tentative and suggests merely the order of magnitude of the investments:—

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lodge Programme</strong></td>
<td>1,000 new beds at £1,500 (including one 100-bed lodge at the Coast)</td>
<td>£1,500,000</td>
</tr>
<tr>
<td><strong>Nairobi</strong></td>
<td>International hotels, 500 new beds at £5,000</td>
<td>£2,500,000</td>
</tr>
<tr>
<td></td>
<td>Modernization of other hotels, 1,500 beds</td>
<td>£150,000</td>
</tr>
<tr>
<td><strong>Up-country</strong></td>
<td>Modernization programme for 1,300 beds</td>
<td>£150,000</td>
</tr>
<tr>
<td></td>
<td>200 new beds at £2,000</td>
<td>£400,000</td>
</tr>
<tr>
<td><strong>Coast</strong></td>
<td>300 new high-class beds at £2,500</td>
<td>£750,000</td>
</tr>
<tr>
<td></td>
<td>600 new beds at £1,500</td>
<td>£900,000</td>
</tr>
<tr>
<td></td>
<td>Modernization programme for 1,600 existing beds</td>
<td>£150,000</td>
</tr>
<tr>
<td><strong>Total new capacity</strong></td>
<td>2,600 new beds, plus modernization of 4,400 existing beds (estimated to have the same effect on capacity as 1,100 new beds)</td>
<td>£6,500,000</td>
</tr>
</tbody>
</table>
23. If by 1970, 85,000 additional overseas visitors spend on average twelve nights in Kenya hotels, this would correspond to 1,020,000 bed-nights, or a 75 per cent occupancy rate for the 3,700 new beds equivalent. This figure suggests that the programme is of the right order of magnitude. But tourist trends must be kept constantly under review because an unexpected concentration of tourists could otherwise mean crowded conditions in some areas and premature investments in others.

24. Of the projected £6.5 million investment about £4.5 million may be raised from private sources, domestic and foreign, leaving about £2 million to come from Government and foreign aid sources, channelled through the Tourist Development Corporation. This estimated breakdown is based on the following assumptions:—

<table>
<thead>
<tr>
<th></th>
<th>Private Sector</th>
<th>Public Sector</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodge Programme</td>
<td>500,000</td>
<td>1,000,000</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Modernization of “other” Nairobi, up-country and Coastal hotels</td>
<td>200,000</td>
<td>250,000</td>
<td>450,000</td>
</tr>
<tr>
<td>Nairobi international hotels</td>
<td>2,200,000</td>
<td>300,000</td>
<td>2,500,000</td>
</tr>
<tr>
<td>Coast, new hotels</td>
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<td>350,000</td>
<td>1,650,000</td>
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<tr>
<td>Up-country, new hotels</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>6,500,000</strong></td>
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Since two-thirds of the total investment will be private, and all of it largely dependent upon trends in tourist demand, the following time-phasing must be regarded as tentative:—

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<td>Modernization and extension of lodges Phase I, three lodges</td>
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<tr>
<td>International II</td>
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<td>200,000</td>
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<td>750,000</td>
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<td>600 new beds at £1,500</td>
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<td>910,000</td>
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<td>280,000</td>
<td>455,000</td>
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Tourist Roads

25. Without substantial expenditure on tourist roads, in order to link up interesting circuits and improve existing roads to an all-weather standard, the tourist expansion programme would fail. The Government therefore commissioned private consulting engineers to prepare a report on tourist roads, and the report has been adopted as a basis for the road programme. The development to be carried out during the Plan period will cost approximately £1 million, and is included under the general road programme (Chapter 9).

26. The Report recommends in particular the improvement of existing roads or construction of new ones to provide all-weather through routes suitable for coaches on the following stretches:

(a) Namanga to Ol Tukai Lodge in Amboseli.
(b) Ol Tukai Lodge to Kilaguni via Loitokitok.
(c) Kilaguni to Tsavo River Gate in Tsavo Park East.
(d) Voi to Malindi along Sabaki River.
(e) Narok to Keekorok Lodge and Tanzania border.
(f) Keekorok Lodge to Mara Bridge and on to Kericho.
(g) Circular road round Lake Nakuru.
(h) Meru to Meru Game Reserve Lodge.

In addition, the consulting engineers recommend bituminization of part of the main circuit in Nairobi National Park and improvement of several minor roads within game parks or reserves to make them suitable for saloon cars although some would not necessarily be all-weather.

27. For the development of the southern area, the Report emphasized the importance of a cross-connexion between Amboseli Reserve and Tsavo West Park. The key to the northern circuit is the road around Mount Kenya, part of which is already bituminized. Branch roads to northern area parks and circuits through them are proposed to start from this road. The road across the Aberdares from Nyeri to Naivasha forms a useful circuit but is closed at very short notice after rain and therefore tends to be avoided. Due to heavy and frequent rainfall and the steep gradients encountered, the roads in this park must be gravelled, with bitumen surfacing on the steeper slopes, and the numerous river crossings must be improved. The Meru Reserve to the east of Mount Kenya has a good tourist potential and a new lodge is planned there. However, the park is virtually isolated because a short stretch of approach road in the Nyambeni Hills is in poor condition and requires reconstruction. A new track across the park eventually joins on to the Embu/Meru trunk road; when improved, this route will form an alternative access to the park from the south and create a new circuit. Mount Kenya is another park at present comparatively undeveloped due to limited access. There are three motorable tracks up the western slopes of the mountain but no facilities at the top and the tracks do not go high enough. A new track has been recently
opened on the northern slopes and reaches an altitude of 13,800 ft. Known as the Sendeo Track, it is still fairly rugged but would not require much improvement to bring it up to saloon car standard. The tourist potential of this route is undoubtedly high and the consulting engineers have suggested that it be improved in 1968/69. In the coastal area, the Report investigates a possible circuit on the south coast through Kwale, in the Shima Hills, to Mariakani by way of Kinano, but states that the expense necessary to raise it to a reasonable standard would not be warranted until the Shima Hills area is developed as a tourist attraction. Development of the coastal circuits through the parks is being influenced by the recent development of Malindi as a holiday resort. As a result, the Sanaki River road between Malindi and Tsavo East Park is becoming a major access route.

28. The Report contains detailed recommendations for improvements to existing roads. On the question of timing, the Report recommends that priority should be given to the Namanga-OI Tukai, Voi-Malindi, Kangeta-Leopard Rock, Chyulu Hills and Narok-Keekorok roads and that a start should be made or work continued on these during 1965/66. The final version of the Report will be published, so as to facilitate private planning and decision-making as well as the overall co-ordination to be carried out by the Tourist Development Corporation. The Government is negotiating with the West German Development Bank regarding loan finance for the road programme and preliminary agreement has been reached for an initial loan of about £220,000. The £1 million tourist road programme is only the first phase of a major development effort which will have to be continued throughout the seventies to make Kenya an important tourist country.

**Hotel Training Scheme**

29. The rapid expansion of tourism will require a growing number of Kenyans to be trained in the hotel and catering trades. At present the hotel industry alone engages some 16,000 persons and forecasts indicate that by 1970 more than double that number will be employed. The lodge development programme alone will require a minimum of 200 well-trained people within the next two years. This means that, even allowing for training within the industry, there will be a continuing need to recruit overseas personnel.

30. New facilities are urgently required, and the Government in co-operation with the Hotelkeepers' Association will arrange full- and part-time courses, embracing practical and theoretical studies in hotel and catering operations and management. The most urgent training requirement is for cooks, waiters, supervisors and receptionists. Depending upon their basic education and performance during the training, some students in these categories may be recruited for advanced managerial training. "On-the-job" training will be provided by the new lodge management company and by members of the East African Hotelkeepers' Association, who have also indicated willingness to assist the project financially. Teaching personnel and financial assistance will
be sought from the Governments of Austria, France, Switzerland, West Germany, Israel, the United Kingdom and other countries where tourism is important. Assistance will also be sought from international institutions which have shown interest in vocational training schemes in tourism. Initial capital costs for the scheme are projected roughly at upwards of £50,000 and recurrent costs at £50,000 per year. It is hoped that most of the finance will be provided by the industry, foreign governments and international institutions, and that the direct charge on the Kenya Government will be nominal.

Wildlife Management and National Parks

31. Fundamental to the tourist industry is the maintenance of Kenya’s wildlife, in which a major role is played by the National Parks. The parks derive their authority from the National Parks of Kenya Act of 1945. In that year a Board of Trustees was appointed to control and manage the parks, and on the recommendation of the Government-appointed Game Policy Committee the first park in East Africa, the Nairobi National Park, was proclaimed. The following National Parks have been established to date: Nairobi, Tsavo, Aberdare, Mount Kenya, Lake Nakuru, Gedi, Fort Jesus and Olorgisailie. Certain areas eminently suitable as National Parks but which could not be so proclaimed owing to the legal status of the land were placed under the partial control of the Trustees and are known as national reserves. These are: Amboseli, West Chyulu, Ngong, Mara, Marsabit, Tsavo Road and Rail. The four national reserves in the Masai Land Unit were handed over by the Government to the two Masai District Councils in 1961 and only a portion of the Marsabit National Reserve (Marsabit Mountain), plus the main road and railway reserves through Tsavo National Park, still have the national reserve status.

32. The National Park Trustees have two main duties: firstly, the preservation of the natural assets with which they are entrusted, including the habitat and all forms of plant and animal life within it; and secondly, the provision of facilities for visitors to see, study and enjoy the areas so protected. This Plan provides for substantial activity by the Trustees in carrying out these duties.

Programmes for Existing National Parks

33. Nairobi National Park.—Because of its location, this park is an invaluable asset, attracting 120,000 visitors annually. Its present area is 44 square miles. The Kenya Meat Commission is willing to exchange with the Trustees approximately 7,000 acres of cattle holding ground adjoining the park’s southeastern corner on condition that an equivalent acreage would be purchased by the National Parks Trustees and given to the Kenya Meat Commission in exchange. Purchase of this land is essential for the park’s development. Moreover, the adjoining section of the Masai Land Unit must be maintained as a protected area for wildlife.
Tsavo National Park.—With its 8,024 square miles, this is Kenya’s largest National Park and most important centre of wildlife. The Chyulu Hills require protection as a vital catchment area and the source of water for Mombasa. The Kiboko block could become an important tourist area within one hundred miles of Nairobi. There are two suitable lodge sites in the hills, subject to availability of water.

Aberdare National Park.—Three extensions to this park are planned, one on each side of the “Treetops” salient and another running northwards towards the northern limit of the range. These additions will make the “Treetops” ridge more secure as a tourist area, and include in the park a more representative section of indigenous flora.

Mount Kenya National Park.—Planned extensions to this park include lowering the boundary to the 10,500 contour, and including two access corridors plus a section of forest near Nanyuki.

Lake Nakuru National Park.—The entire lake will be included in the boundaries of the park, thus making this unique bird sanctuary a viable unit with enormous tourist potential.

New National Parks

34. With a view to including a wider representation of fauna and flora within the National Parks system, and in order to allow for further expansion of tourism, the following areas are being considered for national protection:—

(a) Shimba Hills.—This range will be declared a National Park. It has considerable faunal interest, and is the only place in Kenya where the sable antelope can be seen in any number. It could well become the counterpart of Nairobi National Park for Mombasa and the Coast.

(b) Marsabit.—Marsabit mountain, with its interesting volcanic features, forest and complement of wildlife including Greater Kudu, is a strong candidate for conversion from the national reserve status into a National Park. Its present lodge is scheduled for expansion into a larger centre of accommodation as part of the development of the presently rather inaccessible, although fascinating, northern part of Kenya.

(c) Ol Donyo Sabuk.—After having been alienated many years ago, this mountain was handed back to the nation by the MacMillan family, and is scheduled to become a National Park. With the spectacular view from its summit and interesting flora and fauna, this mountain will be an attractive recreational outlet for Nairobi.

(d) Lake Rudolf.—Preliminary agreement has been reached to establish a National Park on the north-eastern shore of Lake Rudolf, where an impressive variety of game can be seen. Although remote by road, the area will be within easy reach for tourists by air.
(e) **Marine National Park.**—There is much international support for Kenya establishing a National Park along a portion of its sea coast. Protection of wildlife and its habitat is just as important in the sea as on land, especially as Kenya's tropical waters offer as fine an array of spectacular fish as any place in the world. This National Park might also include some interesting historical monuments, together with part of the Coast hinterland.

(f) **Mount Elgon National Park.**—For many years there has been a plan to establish a National Park on the Kenya side of Mount Elgon. It would have considerable scenic and faunal interest, and would include one of the finest stands of podo trees anywhere in the world.

35. **Research.**—Over the years no public funds have been available for research and collection of scientific data on Kenya's wildlife. As a result of this policy, the National Parks have had to be developed and managed largely by trial and error. The effects of tourist development, bush fire and climatic changes should be assessed systematically before any irreparable damage is done. Housing and a laboratory are required urgently for two scientists to work in this general field. The Ford Foundation has donated £70,000 for a three-year programme of research into the elephant problem in Tsavo National Park. In the last fifty years the elephants' movements have been increasingly restricted due to increased population pressure in their former range, bringing with it controlled shooting for human and crop protection, legal hunting and poaching. Thus, many elephants have sought permanent sanctuary within Tsavo and, together with those normally resident in the park, remain there during the rainy season when they would normally move into adjacent areas. Increased numbers and year-round occupancy have resulted in serious damage to the habitat. Basic research is required into such questions as optimum population size, efficient means of control, and economic techniques of restoring and conserving the vegetative environment essential to both elephants and rhinoceros. Solutions must be found to these problems if Tsavo Park is to survive as an elephant sanctuary of world importance.

36. **Other Requirements:**

   **Airstrips.**—Airstrips are required at new lodges, entrance gates and at strategic points within Tsavo Park for administrative purposes and to assist in anti-poaching activities.

   **Observation Posts and Bird-Watching Facilities.**—In the interest of both tourists and local visitors, facilities for game-viewing and bird-watching outside the lodges will be constructed in the parks.

   **Publications.**—Attractive brochures and guide books covering all the parks are required.

   **Staff Training.**—A park school is required to prepare the National Parks Rangers for more senior duties.
Staff Housing, Administrative Buildings and Vehicles.—Increase in the number of areas administered by the national parks will require investment in additional administrative buildings, staff housing and transport vehicles. In addition, staff quarters at Voi and Mtito Andei in Tsavo Park are to be rebuilt.

Radio Equipment.—Modern radio equipment is required to facilitate communications over the vast areas in the parks.

Table 1—Estimated Expenditure—National Parks

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<td>Extension to Existing National Parks</td>
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<td>61,665</td>
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</table>
Game

37. Protection of Kenya's wildlife is not ensured through the existence of a few National Parks. If these were the only game sanctuaries in Kenya, they would quickly develop into oversized zoological gardens, crowded with tourists, where the fiercest of animals would become tame subjects for amateur photographers. This is why, in addition to National Parks, Kenya maintains a number of Game Reserves under the control of local authorities who are advised by the Government, and the Government controls hunting all over the country. Although wild animals are of great value to Kenya, both for their scientific significance and as the country's most important tourist asset, to the local people they represent a threat to their own lives, their livestock and to their crops. The functions of the Game Department are designed to protect all legitimate interests. They include advice and assistance to local authorities on their own Game Reserves; strict control of all hunting, curtailment and the prevention of the killing of wildlife by unauthorized persons; control of the movements of game animals to prevent them from causing injury or damage; and scientific research on wildlife.

38. The Game Department will be strengthened in the course of the Plan period in order to undertake its increasing responsibilities effectively. Four new divisional headquarters are being established (at Mombasa, Ngong, Maralal and Nyeri), staff is being increased, and a modern communications system is to be set up.

39. In areas where it is intended to grow crops and simultaneously conserve wildlife, some form of protection must be provided for one against the other, in the form of ditches and fences. This is necessary, among other places, in the Kinangop and Kipipiri Settlement Schemes and on the Mount Kenya foothills, where elephant-proof ditches will be constructed during the Plan period. The protection of wildlife in these areas is crucial for the Aberdare and Mount Kenya National Parks, and also to ensure that wildlife remains an attraction around tourist lodges such as the famous Treetops. So that the Game Department can effectively control wild animals for their own preservation and the benefit of the nation as a whole, it must conduct scientific research into the habits of wildlife. For this purpose well-equipped laboratories will be established at three divisional headquarters during the Plan period.

Table 2—Estimated Expenditure—Game Department

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<td>Strengthening and Reorganising the Game Department (buildings, vehicles, etc.)</td>
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<td>£25,000</td>
<td>£30,000</td>
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<td>—</td>
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<td>£9,000</td>
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<td>£22,000</td>
<td>£15,000</td>
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<tr>
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<td>294,000</td>
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<td>50,000</td>
<td>50,000</td>
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</tr>
<tr>
<td>National Parks</td>
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<td>89,000</td>
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<tr>
<td>Game Department</td>
<td>72,700</td>
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<td>79,000</td>
<td>84,000</td>
<td>89,000</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>495,700</td>
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<td>1,938,000</td>
<td>1,975,000</td>
<td>2,958,000</td>
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<tr>
<td>Of which public sector (including roads)</td>
<td>151,000</td>
<td>473,000</td>
<td>718,000</td>
<td>819,000</td>
<td>1,041,000</td>
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</table>

*Included in the road programme.

### B—Forests

40. Kenya's forests are valuable natural resources. The country contains approximately 6,000 square miles of indigenous forests which serve the important functions of protecting soil and water catchments and of supplying local timber requirements. Without forests to protect its catchment areas, much of Kenya's land would be less valuable and a considerable potential for economic development would be lost. The sound husbandry of these forests and the costs involved are recurrent responsibilities of the Government. Capital funds available for forestry will be devoted to the planting of fast-growing coniferous and hardwood forests, which are favoured by extremely suitable climatic and soil conditions. About 200,000 acres have been planted with such trees over the last 25 years, and planting is currently proceeding at the rate of 12,000 acres a year. Assessments carried out on the Government's behalf by the United Nations Food and Agricultural Organization and other agencies indicated that the Government's planting target of 300,000 acres of coniferous plantations by 1980 will have to be raised in order to meet the country's needs for saw and veneer logs. It is estimated that East Africa will be consuming 84 million cubic feet of sawlogs and veneer logs and 37 million cubic feet of pulpwood by the year 2000. Uganda and Tanzania are expected to be producing a total of 26 million cubic feet of sawlogs and veneer logs by that year. Kenya can, by building up its softwood plantations to a total acreage of 350,000 by that time, meet the balance required for sawlogs and veneer logs with a surplus of about 7 million cubic feet for export, although this will still be far short of supplying the East African market with pulpwood. The ultimate minimum target of 350,000 acres of softwood plantations has been accepted by the Government.

41. Because of the productive nature of expenditure on plantations and the long period over which it yields a return, all expenditure on plantations is considered a capital investment. In order to continue planting at the rate of 12,000 acres per annum, a total expenditure of £2.2 million is planned over the Plan period, at an approximate average rate of £450,000 a year. Investment in softwood plantations does not begin to pay its first returns
until at least 12 years after the trees are planted. Clear felling (the cutting down of all trees of a given age) takes place in the thirtieth to thirty-fifth year after planting under the conditions that exist in Kenya. The 35-year rotation period is, due to Kenya’s favourable climate, much shorter than that for most countries. Over and above direct returns, forests offer considerable indirect benefits. First, they employ large numbers of labourers who would otherwise be unemployed. Second, the labourers employed in clearing and planting practise a form of shifting cultivation, under which they produce significant quantities of cash crops in addition to their subsistence. Third, the plantations also serve to protect the catchment area and prevent erosion. When estimated values of these indirect benefits are included, the plantations are found to yield 9.1 per cent per annum to the economy at compound interest. In addition, there are indirect benefits which cannot be easily estimated, including the saving of foreign exchange and the value to tourism in the form of scenery and the protection of wildlife.

42. In order to reduce wood freight costs for the proposed pulp and paper mill at Broderick Falls, 50,000 acres of land suitable for planting forests is being acquired in the Turbo area, which is situated some 20 miles from the mill site. It is planned to establish this area of plantation within a 10-year period and to commence clearfelling in the eleventh year. Preliminary estimates of costs and returns suggest that the project will be most profitably and effectively run as a combined agricultural/forestry enterprise. A total expenditure of approximately £1.6 million will be required in order to complete the project, of which £1.2 million falls within this Plan period. The financial returns will be sufficient to service annual loan charges, and pulpwood sales will enable the project to show a 10 per cent per annum net return on the total invested capital. The project could still yield a satisfactory return on invested capital if run as a pure forest enterprise. It is the intention to integrate this project as closely as possible with the Broderick Falls pulp mill.

43. As distinct from the Government’s main coniferous plantation programme, the Forest Department is also responsible for the maintenance and protection of a number of small local forests which serve the requirements of specific rural markets besides protecting local water supplies. Many of these smaller isolated forest areas have been created at considerable expense following reclamation of eroded lands. It is estimated that an expenditure of approximately £479,000 will be required during the Plan period to enable the Department to continue to develop and protect these forests. In addition to its own afforestation programme, the Government will continue to lend active support to voluntary efforts to stimulate afforestation by organizations such as the Men of the Trees Society. 30th April has been declared a National Tree Planting Day.

44. The existing forest road system in the already established plantation areas was installed with the primary intention of affording access to new planting sites. In most cases, the existing roads consist of narrow, winding
tracks which are unsuited for fast heavy logging traffic such as will be required to cope with the raw material requirements of the planned woodpulp mill and sawmill enterprises in existence or being planned in other forest areas. In order to establish an appropriate road system, a total expenditure of £793,000 over the Plan period is envisaged.

45. In the past, there has been little experience of large-scale logging operations in Kenya. Prior to 1964, there was practically no machinery in the country capable of handling large volumes of pulpwood such as will be required by the Broderick Falls mill, and no operating experience of this type of work. The Pulp and Paper Company of East Africa Limited and the Forest Department established an experimental logging unit which has operated very successfully on a contract basis to an existing sawmill in the west of Rift area. It is planned to expand this logging unit and to establish an additional two units during the Plan period for supplying other saw-milling operations with their saw log requirements and gaining further practical operating experience of the type which will be required once the Broderick Falls mill comes into production. Provision has been made for setting up a logging organization capable of handling the total wood requirements for the Broderick Falls mill. It is anticipated that part of the capital required for the logging units will be secured from private enterprise.

46. In order to streamline the existing forest education facilities at Londiani, it is intended to run a composite training course designed to serve the requirements of both rangers and foresters. The capital cost for this project is estimated at £27,500.

47. During the last two years, the Canadian Government has given valuable technical assistance in connection with the implementation of a Forest Inventory in the indigenous forest areas. This assistance will be continued until June 1967. In addition to staff, Kenya will have to supply counterpart funds to a total of £49,500 over the Plan period. The information being secured as a result of such inventories is essential to the formulation of sound forest industrial development plans. Industrial investment decisions must depend on a detailed and accurate knowledge of the volumes and species of timber available in both indigenous and plantation forest areas.

48. In continuation of the Forest Department’s task of promoting the establishment of new forest industrial enterprises, it is intended to continue with periodic feasibility studies of such industrial projects as may appear to warrant serious consideration. Comprehensive studies of the East African domestic market for bleached printing and writing paper, sawn lumber, plywood and wallboard will be undertaken. Considerable interest has been expressed by several manufacturing companies in the prospects for establishing extensive areas of either coniferous or hardwood plantations in Kenya’s coastal strip for supplying the raw material requirements of future forest product export industries. It is planned to carry out a pre-investment survey
in the area in order to assess the practicability of such a project. A total of £21,000 has been included in the programme as expenditure for feasibility studies and market surveys.

49. For a number of years there has existed a need for a modern sawmilling plant which could serve as a demonstration centre for new technical methods and processes and for the training of staff in saw-doctoring, sawmilling machine maintenance techniques, etc. Considerable interest in this project has been shown by the Food and Agricultural Organization, and it is planned to bring this project into being early in the Plan period. A total expenditure of £255,000, which includes operating costs, is provided for this purpose during the Plan period. If possible, it is intended to try and make this project pay its way from the second year onwards by supplying sawn timber to the domestic market.

50. In the Masai area, there still remain approximately 700 square miles of extremely valuable indigenous forests which the Government has been unable to protect or develop in the past. The forests of the Mau area in particular contain very valuable stands of cedar, a species which in the past has been successfully exported by several of Kenya's sawmills. A more thorough inventory of these forests is required and, in the interest of making more effective use of this valuable natural resource, feasibility studies will be undertaken of the prospects for establishing industrial enterprises to make use of this asset.

TABLE 4—ESTIMATED EXPENDITURE—FORESTS

<table>
<thead>
<tr>
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<td>£450,000</td>
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<td>£490,000</td>
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<td>£185,000</td>
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<td>£100,000</td>
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<td><strong>£1,043,000</strong></td>
<td><strong>£1,036,500</strong></td>
<td><strong>£1,007,500</strong></td>
<td><strong>£1,822,500</strong></td>
<td><strong>£5,941,000</strong></td>
</tr>
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</table>

C—Fisheries

51. Kenya's waters, lakes, sea and rivers, provide considerable potential fish resources, most of which are not fully exploited. It is Government policy to guide and assist the development of commercial and sport fisheries, both marine and inland, to a stage of optimum production as fast as available natural, financial and staff resources and markets allow. This development must be undertaken with due consideration being given to the needs for conservation of the fish stocks, so as to safeguard future production. While increasing production of fish, parallel development must take place in expanding markets for the catch, both locally and abroad. In certain areas, poor
communications are holding up expansion, preventing ease of access and making transportation of the catch difficult. Therefore markets, roads and transportation require special consideration in the development of fisheries. In order to assist in planning better exploitation of fish resources and to assess potential markets, the Government obtained the services of an F.A.O. fish marketing expert to carry out an economic and market survey of Kenya’s inland fisheries. The expert’s survey report is being studied by the Government. Exploitation of the deep-sea fishing potential is the subject of a separate survey, also being carried out by F.A.O. personnel. An interim report by F.A.O. on possibilities of deep-sea fisheries has already been received and is encouraging.

52. Kenya’s fisheries fall into three classes:
   (a) inland fisheries (including Lakes Victoria, Rudolf, Baringo and Naivasha, the rivers Tana, Nzoia, Yala and Sabaki, and domestic fish ponds);
   (b) coastal inshore fisheries;
   (c) coastal deep-sea fisheries.

The quantity of fish landed by inland freshwater fisheries in 1964 was 15,000 tons, with a gross retail value of £2.1 million. The output of coastal fisheries amounted to 5,000 tons in the same year, with a gross retail value of £675,000. The number of full-time fishermen was 11,500, of whom 6,000 were employed in inland freshwater fisheries. The present overall employment associated with commercial fisheries is estimated in the range of 25,000-30,000 workers.

53. The total capital expenditure required for the fisheries development programme over the Plan period amounts to £524,000. The annual recurrent expenditure needed for the programme will rise from about £30,000 in 1965/66 to an estimated £120,000 in 1969/70. The target is a threefold increase in production, from 20,000 to 60,000 tons of fish per annum, with an increase in gross value from £2.8 million to £8 million. This means that the average productivity will increase from 1.8 to 2.6 tons per fisherman per year; and, supposing that 40 per cent of the gross value of the catch will continue to accrue to the fishermen, the average net revenue per fisherman will increase from £92 to about £139 per year. The average net revenue per ton of fish caught is assumed to remain at the same level of £53. The following estimates can be given as targets for the fishing industry at the end of the Plan period:

<table>
<thead>
<tr>
<th></th>
<th>Quantity of fish landed</th>
<th>Gross retail value of output</th>
<th>Revenue accruing to fishermen</th>
<th>Number of full-time fishermen</th>
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</thead>
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<tr>
<td>Inland Freshwater</td>
<td>40,000</td>
<td>5,300,000</td>
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<tr>
<td>Coast</td>
<td>20,000</td>
<td>2,700,000</td>
<td>1,100,000</td>
<td>11,500</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>60,000</strong></td>
<td><strong>8,000,000</strong></td>
<td><strong>3,200,000</strong></td>
<td><strong>22,500</strong></td>
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</table>
These figures show that the development programme will lead to an increase in the value added by fishing activities from £1.1 million to £3.2 million, and to an increase in value added by activities associated with fisheries (e.g. fish processing, storage, transportation, trading) from £1.7 million to £4.8 million. Thus, the total value added by fisheries and associated activities is expected to increase by about £5 million as a result of the development programme. The number of full-time fishermen should almost double during the period.

54. Domestic consumption of fish in 1964 was 21,580 tons, or approximately 5 lb. per person. The prospects for an extension of the internal market for fish are favourable, and consumption should increase substantially once better transportation and marketing facilities are provided. Great importance should, however, be attached to the publicity campaign to promote fish consumption, especially among groups of the population which consume very little fish at present. Over half of Kenya's population do not eat fish for reasons of non-availability or superstition, while many people are suffering from serious protein deficiency in their diet. The total capital cost of the publicity campaign is estimated at £15,500, and its recurrent costs will be about £6,000 per year. Taking into account the expected increase of per capita income, a possible further increase in the relative prices of meat and dairy products, and the results of the publicity campaign, the per capita annual consumption of fish may be expected to increase to 10 lb. by 1970. A prerequisite for the extension of the fish market is the development of the distribution system, not only in the field of transportation but also in providing adequate facilities for marketing fish. Existing marketing facilities, such as cold stores and organized fish markets, are inadequate even for the present volume of trade and will therefore need considerable expansion if the planned development is to take place.

55. While of national importance, a number of the projects included in the plan for fisheries clearly have great provincial and district importance, which may justify a considerably higher priority than would be given on purely national economic grounds. For instance, development of the fishing industries in Lamu District, South Nyanza District and the area round Lake Rudolf will contribute a lot to the development of these areas which are now lagging behind.

56. Lake Rudolf.—Lake Rudolf has the largest untapped potential of any inland fishery in Kenya. Though a definite economic evaluation of the Lake Rudolf development scheme has to wait until the F.A.O. fisheries expert's study is completed, preliminary indications are very favourable. To enable the Fisheries Department to play its necessary part in the development of Lake Rudolf fisheries, the stage has been reached where permanent buildings and facilities for the Ferguson's Gulf fisheries station must be constructed. The capital expenditure required for this purpose amounts to £22,900, and the annual recurrent cost of operating the station is estimated to be £5,000. It is
estimated that successful implementation of this project would increase the quantity of fish landed from 850 tons in 1964 to 15,000 tons in 1970, and the gross value of output from £133,250 to about £1.8 million over the same period.

57. It will be essential for the development of the Lake Rudolf fisheries to have suitable transportation facilities between the Lake and market centres. The reconstruction of 250 miles of road from Ferguson’s Gulf to the nearest railhead at Kitale is included in the Development Plan. A preliminary estimate of the capital expenditure needed for this purpose is £300,000, of which £50,000 would be spent in 1966/67, and £245,000 in 1967/68. The reconstruction of this road will also provide a suitable access to Uganda markets. This road will not only be a vital link for the fishing industry, but will also stimulate several other developments, for example tourism, in the area. It will also be of great administrative and strategic importance.

58. South Nyanza.—The present fishing industry in South Nyanza is underdeveloped compared with that of Central Nyanza, mainly because the centres of population are fewer, smaller and more dispersed. There is need for improvements in transportation, storage and distribution of the catch in this area. In planning the targets for fish cropping, the ability of Lake Victoria to sustain increases of the catches must be taken into account, because technical improvement may lead to over-fishing. The reopening of Kisumu Station has already been of great importance in enabling the Fisheries Department to supervise the application of measures to conserve fish stocks.

59. The capital expenditure required for the development of South Nyanza fisheries is estimated to be £49,500 over the Plan period. This includes expenditures on a revolving loan fund, improvement of marketing and processing facilities, and an experimental fishing boat. The average recurrent cost of the scheme is estimated at £14,000 per annum. With the realization of the scheme, South Nyanza fisheries should land about 9,000 tons of fish per year by 1970. Further and more detailed studies on the development of South Nyanza fisheries are required. An important element of the scheme not included here is the provision of roads to connect major fish landings with markets within the district. The capital expenditure required for the construction or improvement of these roads is preliminarily estimated at £50,000. Because the distances concerned are not great, a combination of county council and self-help effort can make a substantial improvement. The United States Agency for International Development is providing technical assistance and equipment to help implement the South Nyanza fisheries scheme.

60. Coastal Fisheries.—The development of commercial fisheries on Kenya’s seashore will provide an essential stimulus to overall economic development of the Coast Province. In spite of the availability of big stocks of various kinds of fish and shell-fish near the coast, the fishing industry in this area is undeveloped, and much of these resources are virtually untapped.
Coastal inshore fisheries produced 5,000 tons of fish in 1964, with a gross retail value of £675,000, of which about £268,000 accrued to the 5,500 fishermen employed. The average catch per fisherman is extremely low, 0.9 tons per annum, as is the average net revenue per fisherman of £49 per year. Fish markets on the lines of the one already established at Malindi will also be needed at Mombasa, Shimoni and Lamu, at an estimated total capital cost of £36,000. Most of the capital expenditure planned for the development of coastal fisheries will serve inshore as well as deep-sea fisheries. Of the planned capital investment in experimental fishing and fish transport vessels, Malindi Harbour, and market facilities at Mombasa, Shimoni and Lamu, an amount of £170,000 may be tentatively attributed to inshore fisheries. The annual recurrent expenditure needed for the programme for inshore fisheries will probably increase from about £8,000 in 1966/67 to £20,000 in 1969/70. This development programme is planned to lead to an increase in the gross retail value of the catch in coastal inshore fisheries by £2 million, and an increase in the total amount of revenues accruing to fishermen by £800,000 per year. More detailed feasibility studies are required on the plans to develop coastal fisheries.

61. The development of deep-sea fisheries is still in the exploratory stage. A survey is being carried out by experts from the F.A.O. to determine the feasibility of establishing such a fishing industry. Preliminary results are very promising, and if the final results confirm this, an industry may be established with a valuable export potential as well as supplying the local market. In that case a considerable amount of private investment may be expected in deep-sea fisheries and associated activities.

62. As a result of developing other inland fisheries (Central Nyanza, Lake Baringo, Lake Naivasha, other lakes, rivers and fish ponds), it is expected that the quantity of fish landed, estimated to be 10,120 tons in 1964, will rise by 50 per cent over the Plan period.

(i) Central Nyanza.—Of these inland fisheries, Central Nyanza is the most important. The district provided a catch of 7,500 tons in 1964, with a gross retail value of more than £1 million. It is estimated that the quantity of fish landed in Central Nyanza will increase to 11,000 tons by the end of the Plan period.

(ii) Lake Baringo.—There are indications that Lake Baringo may have been over-fished during the last two years. A co-operative has been formed among the licensed fishermen on the lake, and proposals are being examined for the co-operative to take over the filleting and freezing factory, with participation of the I.C.D.C. and the present owner of the factory. In addition to providing financial assistance to the co-operative, the Oxford Committee for Famine Relief is making a grant for restocking the lake. The Fisheries Department’s Lake Baringo station, necessary for supervision of catches, requires a capital expenditure of £15,400, and approximately £3,000 for recurrent costs.
(iii) Lake Naivasha.—As a result of stocking by the Fisheries Department, a stock of fish has been built up in Lake Naivasha. Capital expenditure is needed for the establishment of a fish landing station, at an amount of £8,500. The recurrent cost is estimated at £4,000 per annum.

(iv) Tana River.—The Seven Forks Hydro-electric Scheme will result in the impounding of considerable areas of water, capable of producing large quantities of fish. While there is no immediate urgency for planning fisheries development linked to this scheme, it is nevertheless necessary that preliminary steps be taken to incorporate this aspect into the Development Plan for the river system. £11,000 is provided for this purpose.

(v) Fish Ponds.—The domestic fish pond scheme in Western and Nyanza Provinces has continued to develop and at present there are known to be more than 11,000 ponds in existence. For the main part, ponds are not exploited for commercial purposes, but to satisfy the needs of the farmers’ families. New ponds are being added all the time, and there is continuing need for advisory staff from the Fisheries Department for this self-help activity. A feature of the fish pond work is the necessity for adequate facilities for the production of fish fry for stocking purposes. A total of £6,200 is provided for this purpose.

63. Financial Assistance.—In order to provide financial assistance to freshwater fishermen and fish farmers, a fund of £10,000 for granting loans to inland fishermen will be established. The fund will be administered by a committee comprising representatives of the Ministries of Commerce, Industry and Co-operative Development, and Natural Resources, Wildlife and Tourism, and the Fisheries Department. A Coastal Fishermen’s Loan Fund is administered by the Coast Province Loans to Fishermen Committee, subject to the executive control of the Director of Trade and Supplies in the Ministry of Commerce, Industry and Co-operative Development. It is planned to increase the capital sum at the disposal of the Coast Province Loans for Fishermen Committee by £10,000. It is considered that the sum of £15,000 will be adequate to assist coastal fishermen in carrying out the planned development during the Plan period. The loan funds for coastal and inland fishermen will form part of an overall Fishermen’s Loan Fund. Possible other ways and means to provide loans to fishermen will be investigated. A system of providing grants to cover part of the capital cost for replacing outdated fishing craft is planned. In this scheme, it will be possible for up to 50 per cent of the cost of an approved design of fishing boat to be met from the grant fund, and a further 40 per cent in the form of a loan to the fishermen from the loan fund. Administration of the grants will be undertaken by established loan committees. The sum involved during the Plan period will be £20,000.

64. The Fisheries Department.—In the past, the Fisheries Department has dealt primarily with the development of sport fisheries. The emphasis has now, however, been shifted towards commercial fisheries. In order to
cope with the planned development, a substantial extension of the Department’s headquarters as well as field staff, presently consisting of four senior officers and 150 junior staff and crews of the Department’s boats, will be necessary. Taking into account the potential of this country’s fishing industry, and considering experiences with fisheries establishments under comparable circumstances in neighbouring countries, the additional senior staff requirement of the Fisheries Department is estimated at about forty officials. In addition to this, eight trainees for the posts of Fisheries Development Officers will be required. The total supporting staff requirement is estimated to be in the order of 500-520 junior staff and crews of the boats of the Department.

65. Fisheries Training School.—A training school will be set up for the purpose of providing practical training to fishermen, for the deep-sea industry as well as for coastal inshore and lake fisheries. Fishermen of the deep-sea fisheries will be trained to perform sea-going duties like gear operation, navigation and radio operation, and coastal inshore and lake fishermen will be instructed on modern methods of catching, processing, simple accounting, etc. Three-month courses for fishermen will be provided, for which Japan may provide equipment as well as teaching staff. The capital cost to Kenya will amount to £8,000.

Table 5—Estimated Expenditure—Fisheries

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Lake Rudolf Station</td>
<td>22,900</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>22,900</td>
</tr>
<tr>
<td>Lake Baringo Station</td>
<td>3,000</td>
<td>12,400</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15,400</td>
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<tr>
<td>Restocking of Lake Baringo</td>
<td>1,500</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Lake Naivasha Fish Landing</td>
<td>2,000</td>
<td>6,500</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8,500</td>
</tr>
<tr>
<td>Kaumu Station</td>
<td>4,000</td>
<td>2,800</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,800</td>
</tr>
<tr>
<td>South Nyanza Fisheries Developments</td>
<td>19,500</td>
<td>-</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>49,500</td>
</tr>
<tr>
<td>Fish Hatcheries and Fry Centre</td>
<td>4,000</td>
<td>2,200</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,200</td>
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<tr>
<td>Tana River Development</td>
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<td>-</td>
<td>11,000</td>
<td>-</td>
<td>11,000</td>
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<tr>
<td>Fish Marketing Facilities</td>
<td>-</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td>-</td>
<td>36,000</td>
</tr>
<tr>
<td>Malindi Harbour</td>
<td>-</td>
<td>-</td>
<td>30,000</td>
<td>30,000</td>
<td>-</td>
<td>60,000</td>
</tr>
<tr>
<td>Fishing and Fish Transport Vessels</td>
<td>40,000</td>
<td>35,500</td>
<td>31,000</td>
<td>32,000</td>
<td>2,000</td>
<td>140,500</td>
</tr>
<tr>
<td>Deep-sea Fishery</td>
<td>-</td>
<td>-</td>
<td>30,000</td>
<td>30,000</td>
<td>40,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Improvement of Fish Landings</td>
<td>-</td>
<td>1,500</td>
<td>1,200</td>
<td>1,000</td>
<td>1,000</td>
<td>5,000</td>
</tr>
<tr>
<td>F.A.O. Surveys</td>
<td>2,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,000</td>
</tr>
<tr>
<td>Grant and Loan Schemes</td>
<td>-</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>5,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Publicity Campaign</td>
<td>-</td>
<td>6,500</td>
<td>6,000</td>
<td>3,000</td>
<td>-</td>
<td>15,500</td>
</tr>
<tr>
<td>Fisheries Training School</td>
<td>-</td>
<td>4,000</td>
<td>4,000</td>
<td>-</td>
<td>-</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>79,400</td>
<td>112,900</td>
<td>134,500</td>
<td>128,000</td>
<td>69,000</td>
<td>523,800</td>
</tr>
</tbody>
</table>

*May involve substantially more expenditure if the survey report is encouraging.

D—Mines and Geology

66. Kenya’s geology indicates that there should be economically exploitable deposits of such minerals as copper, gold, silver, iron ore, manganese, lead, phosphates, barytes, kyanite, wollastonite, etc., and further possibilities may be uncovered by a continuing search for minerals. In 1964, Kenya’s production of minerals and processed minerals reached a value of about £2.5 million, but the potential is estimated to be far greater. Rapid mineral development is impeded, however, partly by the shortage of venture capital for intensive exploration, partly by the small size of basic industry to provide a local demand, and in some cases by the small size of the known deposits.
The data given in the Table do not include the significant subsistence output of salt and lime used on farms. The mining of soda for soda ash is by far the most important mining industry in Kenya. This industry has suffered a serious setback as a result of the trade boycott against South Africa—output of soda ash fell from 142,000 tons in 1961 to 80,000 tons in 1964. Strenuous efforts, however, are being made to find alternative markets. Output of limestone, gypsum and other minerals for the cement industry is modest in value but very important in the production of cement which was worth £3.2 million in 1964. The contribution by mining to the gross domestic product fell from £1.36 million in 1956 to £0.75 million in 1964, or to only 0.3 per cent of the total Gross Domestic Product. This sharp decline has been the result of the fall in soda ash production and a general fall in demand for building materials following the recent depression in the building industry.

67. The objective of the Government’s mineral development policy is to discover and utilize deposits that will provide raw materials for local industrial development, and contribute to the country’s export earnings. In the past the

---

**Table 6—Value of Mining Output in 1963 and 1964**

<table>
<thead>
<tr>
<th></th>
<th>Value (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1963</td>
</tr>
<tr>
<td><strong>Metals</strong></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>504,700</td>
</tr>
<tr>
<td>Gold</td>
<td>128,900</td>
</tr>
<tr>
<td>Silver</td>
<td>25,200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>658,800</td>
</tr>
<tr>
<td><strong>Other Minerals, Processed</strong></td>
<td></td>
</tr>
<tr>
<td>Soda ash</td>
<td>1,283,600</td>
</tr>
<tr>
<td>Crushed soda</td>
<td>19,300</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>54,200</td>
</tr>
<tr>
<td>Diatomite</td>
<td>71,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,428,100</td>
</tr>
<tr>
<td><strong>Other Minerals, Non-Processed</strong></td>
<td></td>
</tr>
<tr>
<td>Limestone, gypsum, other, used for cement</td>
<td>157,000</td>
</tr>
<tr>
<td>Limestone and lime, other</td>
<td>97,400</td>
</tr>
<tr>
<td>Salt</td>
<td>278,100</td>
</tr>
<tr>
<td>All other minerals</td>
<td>9,100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>541,600</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>2,630,000</td>
</tr>
<tr>
<td><strong>Grand Total (Excluding minerals produced and used by cement factories)</strong></td>
<td>2,470,000</td>
</tr>
</tbody>
</table>

* Estimate on the basis of cement production.
Government has been mainly concerned with extending the geological survey of Kenya, a long-term programme designed to lay the foundations for mineral exploration and development. Although there is still a need for further extension of the survey in various areas, the main effort has been switched from extensive geological survey towards intensive, specific, mineral development. The provision of basic geological information has not been sufficient to attract investment for the exploration and development of deposits. During the Plan period, projects will be undertaken to prove and develop promising deposits which have been indicated by the geological survey. These intensive efforts should encourage private prospectors to further explore and develop Kenya's mineral deposits. In order to induce local and overseas investors to contribute to Kenya's mineral development, consideration will be given to possibilities of providing certain tax concessions for companies who undertake prospecting or mine development, in recognition of the hazardous nature of mineral exploration. The existing mining legislation will also be reviewed, particularly as regards granting of licences or other rights to private persons to search for, extract and sell minerals, with provisions for compensation for disturbance to the owners or occupiers of the land.

68. In the field of mineral exploration, there is considerable scope for attracting competent private enterprises. The recorded level of expenditure on private prospecting and mineral exploration averaged £680,000 over the last eight years. Most of this expenditure has been on oil exploration. Diamond prospecting by a private firm is continuing, and oil exploration is likely to be resumed in 1966. The platinum prospecting which was carried out by two companies in West Pokot and other areas stopped without discovery of economic deposits, but it is being continued in a part of the area by a local group. There has been a good deal of interest by local prospectors in nickel-chrome, beryl, and semi-precious stones in some areas, and some development may take place.

69. Major exploration activities are taking place in the framework of the United Nations Mineral Resources Survey in Western Kenya. The survey started in 1964 in Nyanza and Western Provinces, and is due to end in 1967. The objective of the survey is to carry out a thorough exploration of the area, with particular reference to (i) undertaking all possible investigations in the Migori belt which may lead to the discovery of new copper deposits in the vicinity of the existing milling and treatment plant; (ii) the development of gold mining in Western Kenya; and (iii) the investigation of possible phosphate deposits in the area west of Homa Bay. Any attempt to evaluate the results would be premature, but so far no economic copper deposits have been located in the area. Explorations for gold in the Migori and Kakamega belts are continuing, and findings suggest that a number of small- to medium-sized gold deposits in the area will prove to be economic. In regard to small-scale gold mining, methods of legalizing and improving the efficiency of existing enterprises and of extending such operations are being considered.
70. The Mines and Geological Department, concerned with surveys, research and development of mineral resources, will have important tasks to perform, in particular starting in 1967/68 when the United Nations Mineral Resources Survey will be completed. Follow-up tasks will be required, including extensive mineral exploration, feasibility studies, mineral extraction and beneficiation research. Consequently, consideration is being given to the future structure of the Department, including its need for suitable accommodation. When the United Nations Mineral Resources Survey ends, the Department will probably be left with a quantity of geophysical and geochemical equipment, a drill, laboratories and temporary technical staff who have been trained in the use of this equipment and in various new techniques. The men and equipment will have to be integrated into the Department. Developments in the discovery of small gold deposits in Western Kenya will require closer administration of the Mining Act in that area, and the provision of technical advice to small-scale gold miners. The establishment of a departmental outstation in Kisumu for this purpose is needed, and provision for this is included in the development programme.

71. With the completion of the United Nations Mineral Resources Survey, the major follow-up tasks will fall on the Mineral Exploration Team, a division of the Mines and Geological Department designed to provide a means of utilizing overseas experts on special exploration tasks, and to provide drilling and specialized laboratory staff and equipment not available at present. The team will also absorb staff currently being trained in exploration procedures by the United Nations Mineral Resources Survey. The Mineral Exploration Team is currently engaged on investigations of deposits not being developed by private interests, including the investigation of copper deposits at the Tsavo-Galana confluence in Eastern Province, lead-zinc deposits in the Mazeras-Jibana area in the Coast Province, a continued research on extraction problems of the Mrima niobium-rare earth deposit and the Kiwara manganese deposit in the Coast Province. In addition, an assessment programme is proceeding for the following mineral deposits which are well documented, and for which treatment, cost estimates and market research are required: the Makinyambo asbestos deposit in the Coast Province; the Turoka wollastonite deposit near Kajiado in the Rift Valley Province; and the Kanziku graphite deposit in the Eastern Province. Various industrial possibilities are kept under review, including caustic soda manufacture using Magadi soda; and sulphuric acid manufacture using pyrites from Bukura in the Western Province, for use in superphosphate manufacture at Tororo, Uganda.

72. Mineral exploration always contains a considerable element of speculation, because there is usually no certainty that investigations will have positive results. However, if some extensive mineral deposits are found, the benefits to the economy would be immense. While it is impossible to forecast what the
results of current investigations will be, it is still useful to make some crude estimates of the size of the economic return of various investigations in the event of success.

<table>
<thead>
<tr>
<th>Mineral</th>
<th>Potential additional value of production (£ per annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold and silver (Western Kenya)</td>
<td>200,000</td>
</tr>
<tr>
<td>Barytes (Coast Province)</td>
<td>90,000</td>
</tr>
<tr>
<td>Niobium and rare earth (Coast Province)</td>
<td>2,300,000</td>
</tr>
<tr>
<td>Graphite (Eastern Province)</td>
<td>50,000</td>
</tr>
<tr>
<td>Kyanite, mullite (Coast Province)</td>
<td>200,000</td>
</tr>
<tr>
<td>Soda/Salt for caustic soda</td>
<td>150,000*</td>
</tr>
<tr>
<td>Pyrites for sulphuric acid</td>
<td>60,000*</td>
</tr>
</tbody>
</table>

*Assuming import substitution for the East African market, based on 1964 imports.

Projects in hand, therefore, if completely successful, could yield £3 million per annum, or more than twice the present output. This estimate excludes the possibilities presented by lead/zinc, wollastonite, asbestos, manganese, copper, diamonds or oil, for which no useful estimates can at present be made. This figure serves only to indicate the order of magnitude of the returns that are aimed at, and can be compared with the recurrent cost to the Government of the geological survey, which is approximately £50,000 per annum.

Table 7—Estimated Expenditure—Mines and Geology

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<tr>
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</thead>
<tbody>
<tr>
<td>Mineral Resources Survey in Western Kenya</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenya Government contribution</td>
<td>23,200</td>
<td>18,300</td>
<td>2,000</td>
<td>2,000</td>
<td>2,000</td>
<td>47,500</td>
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<tr>
<td>U.N. Special Fund Contribution</td>
<td>81,400</td>
<td>51,500</td>
<td></td>
<td></td>
<td></td>
<td>132,900</td>
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<tr>
<td>Mineral Exploration Team</td>
<td>17,350</td>
<td>12,650</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td>66,000</td>
</tr>
<tr>
<td>Departmental Outstation in Kisumu</td>
<td></td>
<td>17,000</td>
<td>6,500</td>
<td>1,500</td>
<td>1,500</td>
<td>9,500</td>
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<tr>
<td>Laboratory Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>121,950</td>
<td>99,450</td>
<td>20,500</td>
<td>15,500</td>
<td>15,500</td>
<td>272,900</td>
</tr>
</tbody>
</table>
CHAPTER 8—INDUSTRY, COMMERCE AND CONSTRUCTION

A—Industry

Industrialization is an essential ingredient of rapid and sustained economic growth. Its basic purpose, from the nation’s point of view, is to help raise the living standards of the people and their skills and experience in modern production techniques. Industrialization provides employment, training opportunities and incomes to men and women who otherwise might have been under-utilized or unemployed. It also supplies consumers with goods and services that, with time and increasing efficiency, should become cheaper and better than those that could be imported. Finally, industrialization is the means by which products of the nation’s natural resources can be processed in Kenya before sale, thus increasing their value to the nation.

2. If the factories required for rapid industrialization and economic growth are to spring up throughout the country the Government’s limited resources must be supplemented with domestic, private and foreign capital. The Government’s policy towards investment and industrialization is therefore basically positive and non-restrictive, characterized by encouragement and support where needed, in order to secure a maximum rate of economic growth and the structure and location of industry which will benefit the country the most.

Factors Determining Industrial Priorities

3. The Government welcomes industrial ventures where investors, be they citizens or foreigners, are willing to risk their own money and effort to increase production and employment. Where Government support of one kind or another is necessary to secure the establishment of an industry or the expansion of an existing undertaking, there must be an order of priorities, to permit a rational choice between competing projects. The factors which are generally taken into consideration when an industrial project is rated by the Government are the following:—

(i) Is the project likely to be profitable, or will it require greater-than-normal assistance in the form of customs tariffs, duty drawbacks, protective import restrictions, subsidies, or Government equity participation, loans or loan guarantees?

(ii) If the project needs support, is it likely to become efficient and competitive after a few years, or will it require support for an indefinite period?

(iii) Is the project likely to result in a net saving of foreign exchange, considering both the short and long term?

(iv) Is the project reasonably labour-intensive, so that every pound invested can be expected to result in a maximum degree of local employment?

(v) Are there important side effects on other sectors or industries which might justify investment in a seemingly unprofitable project?
(vi) Does the project provide numerous openings for skilled personnel, and, if so, are the sponsors prepared to train local people? Will the project speed up Africanization of industry?

(vii) Can the project be located in a small town or rural area, so as to spread out the employment effects of industrialization?

4. The overriding consideration in allocating industrial priorities is, of course, the actual or potential efficiency of the proposed industry. Efficient industries can meet international competition at home or abroad with a limited need for concessions and protection. The basic criterion for assessing an industry's contribution to the Kenya economy lies in its ability to pay decent wages to its workers and yield a reasonable profit on the capital invested while charging prices which compare favourably with international levels. This latter condition is important. It is easy to increase the profitability of an industry through high tariffs which permit it to charge prices far above those that rule internationally. This approach would mean, however, that the cost of industrialization would have to be borne by the Kenya consumer. It is not Government policy to create industrial employment by permanently lowering the living standards of the people.

5. On the other hand, it is recognized that Kenya is likely to be at least a moderately high-cost producer of various industrial products for some years to come while the skills, experience and discipline of the labour force increase and domestic industries grow toward economic size. The Government is prepared to protect those infant industries which show promise of growing out of their difficulties. In the case of export industries, tariff protection of the home market may have to be supplemented in the early years with direct financial support by the Government. If the overall effects on the economy appear to be beneficial and there are reasonable prospects for profitable operations in the future, such support is warranted.

6. The possibility of saving foreign exchange through industrialization is an important consideration in establishing priorities for industrial protection and support. It is clear that production which substitutes for imports will reduce our direct import expenditure. But the method of financing a project affects Kenya's foreign exchange position as well. Domestic sources are preferred because interest and dividends then accrue to Kenya citizens and are likely to be reinvested at home. But domestic sources must be supplemented by foreign capital and those who provide it rightly expect some return for the use of their money. This return becomes an outflow of resources and a drain on Kenya's foreign exchange. To keep this outflow within reasonable bounds, the Kenya Government encourages foreign investors—

(i) to invest in growing enterprises so that some of their future profits can be reinvested in Kenya; and

(ii) to accept domestic participation in the enterprise on an increasing scale.
7. The Government favours labour-intensive projects so as to make the limited capital available provide maximum employment opportunities. Some projects are highly capital-intensive in a narrow sense but generate substantial employment in related activities. An example is the projected pulp mill at Broderick Falls. Looked at in isolation, it is a very capital-intensive project. The mill itself is estimated to cost about £8 million and yet employ only 500 men of which a large proportion will be highly skilled. Apparently the capital required to create one job is about £16,000, far above the average for Kenya industry. But associated operations which are essential for the running of the mill will give direct employment to many more people and the capital cost of these activities is substantially smaller. The logging of timber in the forests, annual replanting of 5,000 acres, short hauls of pulpwood to the mill, long hauls of pulp to the Coast, loading in the harbour, repairs, maintenance and other service activities are together expected to bring total employment related to the project to about 5,000 workers. Taking the total productive investment required in and outside the mill (but not counting housing and social overheads), the capital intensity per worker will be rather less than £3,000.

8. In assigning industrial priorities the Government also pays attention to the degree of integration in a project. Those industries which process output of agriculture, forestry and other natural resources are especially favoured. It is expected also that firms producing consumer and industrial goods with a high import content will make every effort to substitute domestic inputs for materials now imported.

9. The Government's concern regarding the skilled manpower requirements of any new project is two-fold. First, if the necessary managerial, marketing and technical personnel are not available in Kenya, the Government would like to be assured that they will be supplied from abroad. Second, the Government expects that such firms will immediately establish training programmes designed to develop the skills of Kenya citizens to the point where they may share actively in the managerial and other skilled functions of the enterprise. Industries requiring skilled manpower are given a high priority because of the excellent training opportunities they can provide.

10. The Government also has a strong interest in ensuring that economic development affects all parts of the country and is not unduly concentrated in Nairobi and Mombasa. Other things being equal, therefore, the Government will assign a higher priority to a project that can be economically located outside of the two cities. The emphasis that is being placed in the Plan on the development of agricultural processing industries is motivated in part by the fact that such industries normally can be located in the areas where the products are grown. This is an effective way to achieve a wider geographical distribution of industry.
11. Amongst the main factors that determine the economic location of an industry are nearness to source of raw materials, power supplies, consumers and markets. The need for good transport facilities, water, sewerage, electricity and other infra-structure means that in many cases the choice of location is, in fact, limited to only a few places. These factors alone do not explain the existing concentration of industries in Nairobi and Mombasa. The Government will inform manufacturers of the possibilities that exist elsewhere in the country, and will improve infra-structure in places that can become additional focal points in Kenya’s industrial development. Such measures as adjustments in tariffs for water, electricity and transport will also be taken to encourage the establishment of new centres for industry and where appropriate, the Government will persuade those industries seeking some form of Government support (protection, financial assistance or Government participation), to establish themselves in areas preferred by the Government.

Encouraging Industrial Investment

12. The first question of interest to a foreign investor is whether he will be allowed to repatriate his earnings and his capital if he so desires. The Government and the nation attach great importance to these matters. The rights of ownership are fully guaranteed by the Constitution, which states that no property shall be compulsorily acquired for public purposes except on “prompt payment of full compensation”. The Constitution also provides that “every person having an interest or right in property which is compulsorily taken possession of, or with interest in or right over any property that is compulsorily acquired shall have a right of direct access to the Supreme Court for the determination of his interest or right in the taking of the position or acquisition of the property and the amount of any compensation to which he is entitled”.

Approved Status Certificates

13. Any proposed foreign investment that contributes significantly to development will get an Approved Status Certificate (issued by the Treasury), which entitles the owner to repatriate earnings and capital whenever he wishes irrespective of any exchange restrictions which might otherwise apply. The provisions are laid down in detail in the Foreign Investments Protection Act (1964). All prospective investors should consult the Treasury with regard to obtaining such a certificate before investment is undertaken. Any investor who qualifies will also be entitled to a certificate which he can present to his own Government to obtain that Government’s guarantee for the investment, if available and necessary. The provisions of the Act apply not only to industrial investments (in new industries or expansion of existing ones), but also to financial institutions, tourism, agriculture, building and other undertakings.
Investment Allowances, Tariff Protection, Duty Refunds and Import Licensing

14. When a project has been evaluated according to the criteria in paragraph 3 above, the Government has powers to accord it protection against foreign competition by means of customs tariffs, duty refunds on imported raw materials and quantitative restrictions on competing imports. These instruments are used with a view to giving the project as large a domestic market for its products as possible without raising consumer prices unduly.

15. Often, what a new enterprise needs is not the opportunity to charge prices higher than import prices, but a domestic market large enough to attain an economic scale of operation. A tariff imposed with the agreement of Tanzania and Uganda can assure such a market in many cases, but when a market even larger than East African is required, the more extensive co-operation of the proposed Economic Community for Eastern Africa will be needed.

16. The period from industrial planning to production for the market may be fairly long. Some assurance may be needed at the planning stage that the required tariff protection will be available when production commences. In this event the Government will consider granting a suspended duty which becomes operative once the articles specified are produced locally.

17. The rate of tax on company income is 37.5 per cent, considerably lower than rates charged in many other countries. In addition, an investment allowance of 20 per cent of the costs of new industrial buildings, machinery and fixed equipment is available both to new investors and to existing firms. Taken together with the usual depreciation allowances, an industrialist can write off 120 per cent of his investment against taxable income over a period of years. In addition, further incentives in the form of refunds of customs duties are available to companies utilizing imported raw materials in the manufacturing process. These refunds are normally granted when the duty on imported raw materials hinders competition with comparable imported manufactured products, where raw materials are imported for manufacture prior to re-export as part of the finished product, or where an anomaly in the tariff rates has unforeseen and unintended adverse effects on a local industry. Normally, duty refunds for the home market are granted only for a limited period, and in some cases according to a sliding scale. For example, a firm might get 100 per cent duty refund the first year, 80 per cent the following year, and so on. This system has been found particularly useful for new industries that require some years of operation before they can reduce their costs to the level permitted by normal tariff protection.

Financial Participation

18. Many industrial projects would not be initiated as early as desired without active financial support or participation by the Government. With
regard to industrial projects generally, financial assistance is largely the
responsibility of the Development Finance Company of Kenya and the
Industrial and Commercial Development Corporation.

19. The projects which may require public financial participation can be
classified as follows:

(i) Profitable but needing encouragement.—A large number of industrial
projects are desirable from a public point of view and also profitable to
the private investor. In some cases, however, foreign firms in particular
might hesitate to start such businesses in Kenya unless they know that
the Government supports their activities. The most straightforward method
of showing public approval and encouragement is through Governmental
financial participation, which need not be large to be effective.

(ii) Profitable but risky, in which Government participation is needed
to reduce risk.—Private investors may be willing to risk their money only
if they see that the Government too is willing to take some financial risk.
In these cases, financial participation by the Government may be necessary
simply to set in motion profitable enterprises which otherwise would never
come about. Through equity participation the Government will share in
the profits of such enterprises, quite apart from the tax revenues that will
be generated.

(iii) Marginally profitable by themselves, but involving external econo-
 mies which make them highly desirable for the economy as a whole.—In
these cases, the Government is prepared to step in and carry some of the
financial risks, through equity investment or otherwise, so that these highly
desirable projects are not by-passed.

(iv) Too big for individual private domestic investors and entrepeneurs.
—Participation by the Government is required to provide initiative,
organization, co-ordination and managerial talent as well as finance. The
plan to establish five industrial estates, described more fully in a later
section, is a case in point.

(v) Projects in which a strong public interest exists and financial partici-
pation is desirable to establish public control, promote Africanization,
prevent abuse of monopoly powers or generally ensure operation in
accordance with the public interest.—Projects which require the whole of
the Kenya market in order to be economic must also be given substantial
monopoly power. Abuse of monopoly power can be controlled and pre-
vented through legislation, but for smooth operation and maximum flow
of information between the enterprise and the Government, it is often
more practical to have Government representatives on the Board of
Directors. Representation on the Board is also an effective way of ensuring
that the firm will carry out training programmes and Africanization. The
normal method of getting Board representation is through investment in
the company concerned.
20. The funds and skilled management that Government can allocate to industrial development are limited and must be used to attract finance and management from other sources in order to generate the maximum amount of industrial development. Government planning for the private sector is designed to identify opportunities and priorities, carry out selected feasibility studies, and encourage by every other means at its disposal a strong, active and growing sector of private commerce and industry geared to the development needs of the economy. The Government will influence private decisions by its tax, tariff, and investment policies, by assisting industry on a selective basis, controlling the allocation of particularly scarce resources, such as domestic high level manpower, and undertaking certain activities on its own account when private industry fails to seize opportunities, or when public policy so demands. In the last analysis, however, expansion in the private sector is a matter for private decision.

21. The development finance institutions through which Government funds for industrial development are channelled are the Development Finance Company of Kenya, the Industrial and Commercial Development Corporation and the Agricultural Development Corporation. The Development Finance Company of Kenya was formed in 1963 with an initial capital of £1.5 million, equally subscribed by the Commonwealth Development Corporation, the (West) German Development Company and the Industrial and Commercial Development Corporation, a statutory corporation controlled by the Kenya Government. The D.F.C.K. has been highly successful in its operations and will by March 1966 have invested the whole of its initial capital of £1.5 million in the form of loans and equity in various projects. Its activities will by then have induced participating finance from other sources of approximately £4.5 million. Thus on the average each pound channelled through D.F.C.K. has attracted three pounds from other sources. The D.F.C.K. has concentrated its investments in projects which showed promise of being profitable without substantial protection. Nevertheless, given the conditions prevailing at the time of Independence and after, many of the projects would not have been started without D.F.C.K. initiative and finance. In future, it is expected that D.F.C.K. will investigate and participate in more risky ventures, leaving the more obviously profitable ones to private investors.

22. By February 1966 D.F.C.K. had invested in or was committed to investment in a total of fifteen projects. These include two sugar mills, three other projects in food processing, three textile factories, five other manufacturing projects, an insurance company and a hotel. At that time investigations and inquiries into loans or participation by D.F.C.K. had been carried out for about twenty more industrial projects, including a tea machinery factory. Investigations were also under way into an international hotel project in Nairobi and a number of small hotel projects on the Coast. When the Tourist Development Corporation starts to operate, D.F.C.K.'s
participation in hotel projects will be carried out in co-operation with that body, which will be responsible for Government participation in the hotel industry and tourist lodges.

23. The success of D.F.C.K. has resulted in a preliminary agreement among the three partners to double their original investments in the company, so that the total equity will shortly be £3 million. Other financial institutions abroad will be invited to become partners in D.F.C.K. to expand its financial resources even further. By 1970 D.F.C.K. should have a total share capital of between £5 million and £6 million and its gross investment in industrial projects during the Plan period is expected to amount to about £4.5 million. On the basis of past experience, the total value of these projects should be around £20 million.

24. The role assigned to the Industrial and Commercial Development Corporation (I.C.D.C.) differs from that of D.F.C.K. in some important respects. I.C.D.C.’s major emphasis during the Plan period will be on industrial and commercial projects which require not only financial participation but also active extension services by technical and commercial experts provided through I.C.D.C. I.C.D.C.’s objective will be to make marginal projects economic and to assist and promote those projects which would form a spearhead for Africanization of the industrial and commercial sectors of the economy. This requires a careful selection of projects and training of Africans to become skilled workers, foremen, managers and entrepreneurs. It will also require a substantial effort to provide all the required technical and commercial assistance, particularly during the first critical years, so that the new enterprises will be successful.

25. Where possible, I.C.D.C. financial participation will take the form of loans, so that ownership of the enterprises will rest with those who manage them. However, since most I.C.D.C.’s investments will be in small and medium-scale firms whose African owner/managers command very limited funds, equity participation will be more common. The entrepreneurs will still have an option to buy up the I.C.D.C. share as their firms progress and they accumulate savings of their own. I.C.D.C. will also help entrepreneurs to get bank loans and supplier credits, but will expect the entrepreneurs themselves to put up some risk capital.

26. The I.C.D.C. programme, including establishment of five industrial estates, is to be carried out in conjunction with the private sector and will require financial participation by private individuals, firms, banks, and suppliers in addition to Government. The total public and private investment involved during the Plan period is estimated at £8 million of which roughly £3 million will be required for the small and medium-scale industries programme for individual enterprises, and about £5 million for the industrial estate programme.
27. Of the £3 million required for investment in individual enterprises up to £1 million will have to be financed by I.C.D.C. directly. The percentage distribution of investments in the £3 million programme over different sectors of the economy is forecast as follows:

**INDUSTRIAL PROJECTS UNDER REVIEW BY THE INDUSTRIAL AND COMMERCIAL DEVELOPMENT CORPORATION**

<table>
<thead>
<tr>
<th>Type of Industry</th>
<th>Approximate investment allocation</th>
<th>% of total programme investment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOOD INDUSTRIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish processing, vegetable factories, plum canning, rice processing, chicken feed concentrates, bakeries</td>
<td>£500,000</td>
<td>17</td>
</tr>
<tr>
<td><strong>TEXTILES, CLOTHING, FIBRES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handloom weaving, woollen products, jute weaving (bags and sacks)</td>
<td>£500,000</td>
<td>17</td>
</tr>
<tr>
<td><strong>FOOTWEAR, LEATHER, HIDES AND SKINS</strong></td>
<td>100,000</td>
<td>3</td>
</tr>
<tr>
<td><strong>SAW-MILLING AND WOOD PRODUCTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saw-mills, bamboo products, wood carvings, orange boxes, plywood, chip board, straw board and sisal board</td>
<td>£400,000</td>
<td>13</td>
</tr>
<tr>
<td><strong>PAPER PRODUCTS</strong></td>
<td>200,000</td>
<td>7</td>
</tr>
<tr>
<td><strong>CHEMICALS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmaceutical products, castor oil, synthetic resins, glues, starches, acids, alcohol</td>
<td>£300,000</td>
<td>10</td>
</tr>
<tr>
<td><strong>MINERAL PRODUCTS (Non-metallic)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asbestos cement pipes, wall tiles, sanitary household ceramics, industrial minerals (kaolin, calcium carbonate, talc, soapstone), diatomite, glass bead making</td>
<td>£250,000</td>
<td>8</td>
</tr>
<tr>
<td><strong>METAL WORKING, ENGINEERING AND ELECTRICAL PRODUCTS</strong></td>
<td>500,000</td>
<td>17</td>
</tr>
<tr>
<td>Metal containers, battery containers, tin canning, wire drawing units, various assembly and repair operations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MISCELLANEOUS PRODUCTS</strong></td>
<td>250,000</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>£3,000,000</td>
<td>100</td>
</tr>
</tbody>
</table>

The total investment requirement for all projects under investigation and listed in the Table far exceeds £3 million. New projects which undoubtedly will turn up would add further to the amount required. On the other hand, it is unlikely that all projects will be implemented during the Plan period.

28. The Industrial Estate Programme is designed to stimulate industrial growth with maximum African participation. An industrial estate is not just an industrial area, but an organization that builds up an integrated structure of individual enterprises which share common services, transport arrangements and commercial and technical assistance in the form of extension services. If small and medium-scale enterprises are geographically scattered,
it is difficult for them to operate as sub-contractors and suppliers to bigger units or to assembly works; and it is also difficult and expensive to provide them with technical and commercial services. Industrial estates are able to give advice and guidance, help small entrepreneurs obtain bank loans and supplier credits, assist in the ordering of equipment and materials, and process applications to the I.C.D.C. for Government loans or equity participation. Another important advantage of concentrating enterprises in industrial estates is that visiting industrialists and prospective investors can quickly survey the existing manufacturing activities and get the information required to decide how these enterprises might fit into plans to produce or assemble new products. The physical lay-out of an industrial estate such as planned for Kenya consists of an area large enough for about fifty enterprises, with scope for further expansion of successful firms, and with standardized factory buildings and warehousing facilities.

29. Five industrial estates are to be established during the Plan period, the first in Nairobi and the others in Eldoret, Kisumu, Mombasa and Nakuru. I.C.D.C. will provide financial and technical assistance to the industrial estates, which will be run by a separate organization under I.C.D.C., each estate having its own manager. Land and buildings will be leased to the individual enterprises on commercial terms, and the estate should collect enough revenue to cover their costs. However, some of the extension services will be provided free.

30. The basic investment in each industrial estate is estimated at about £650,000 covering costs of the site, common service buildings and equipment, and factory buildings (which alone represent about £0.5 million per estate). In addition, it is expected that I.C.D.C. will have to advance a certain amount of funds towards costs of equipment and working capital for the individual enterprises which make up the estate. Thus, each estate will require about £0.8 million of Government funds or loan guarantees before it can operate at full capacity. Full implementation of the Industrial Estate programme will therefore require about £4 million of direct or indirect financial participation by the Government. Total finance for industrial development to be channelled directly through I.C.D.C., including investments in individual small and medium-scale industries, will thus amount to about £5 million.

31. Government investment in manufacturing industries or facilities for such industries, in the form of direct investments, equity participation or loans, is estimated as follows:—

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Finance Company of Kenya</td>
<td>£4.5 million</td>
</tr>
<tr>
<td>Industrial and Commercial Development Corporation</td>
<td>£1.0 million</td>
</tr>
<tr>
<td>Investments in individual enterprises</td>
<td>£4.0 million</td>
</tr>
<tr>
<td>Industrial Estates</td>
<td>£0.5 million</td>
</tr>
<tr>
<td>Agricultural Development Corporation (Factory investment)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£10 million</strong></td>
</tr>
</tbody>
</table>
32. Overseas and local investors and manufacturers interested in setting up new production facilities in Kenya can seek advice from the Ministry of Commerce, Industry and Co-operative Development, which will indicate among other things whether a project qualifies in principle for Government participation via D.F.C.K. or I.C.D.C. The Kenya Government share in D.F.C.K. is held by the Industrial and Commercial Development Corporation, and the two institutions are regarded as complementary. In the past, I.C.D.C. participation in a project was for practical purposes limited to less than £5,000, while D.F.C.K. only dealt with projects requiring more than £20,000. This division was not workable, since it left a gap for projects requiring £5,000-£20,000 of Government investment. There is now no upper limit on the size of investments which can be handled by I.C.D.C., and in the future I.C.D.C. and D.F.C.K. are likely to finance a number of projects jointly. The essential difference between their roles is that I.C.D.C. is the more appropriate organization to deal with projects requiring technical assistance, extension services or some other form of close supervision. Larger projects will, in general, still be handled by D.F.C.K.

**Industrial Opportunities**

33. The foregoing survey of I.C.D.C.'s industrial programme gives one indication of the nature of projects which would be likely to qualify for Government financial participation, provided that the projects are economically feasible. The list below is a further indication of products for which there are markets in Kenya or abroad, and the manufacturing of which could be undertaken on economic terms locally. It includes both processing of local raw materials and manufacturing of goods that are now imported.

**Food Manufacturing**
- Fisheries and fish processing.
- Meat packaging.
- Cereal products, breakfast foods.
- Dehydration and canning of fruit and vegetables (including tomato puree, paste and concentrate, passion fruit, mangoes, nuts).
- Confectionery (sugar and chocolate).

**Textiles**
- All kinds of cotton and woollen textiles and synthetics (excluding rayon).
- Canvas, towelling, blankets, etc.

**Clothing, Footwear**
- Skirts, trousers, shirts, blouses, outer garments, knitwear, socks, underwear, plastic rainwear.

**Leather**
- Tanning, prepared sheepskins and allied products.

**Wood Products**
- Hardboards, plaster boards, furniture.
Chemicals
Industrial alcohol, sulphuric acid, vegetable oils, fertilizers, pharmaceuticals.

Non-metallic Mineral Products
Asbestos, cement products, roofing cladding, downpipes, guttering, pressure pipes, processing of common minerals for filters and scourers, diatomite, rock wool, insulation board.

Metal Goods, Engineering Products, etc.

Electric goods
Fractional horse power electric motors, electric refrigerators.

Miscellaneous Products
Brushes: toothbrushes, paintbrushes.
Insulation materials: moulded pipe lagging.
Plastic goods: bottles, buttons, zip fasteners.
Polythene houseware: vacuum flasks, gramophone records.
Rubber tyres and tubes.
PVC building material substitutes.
Pencils (wooden—lead and crayon).
Suitcases.

The above is only a partial list of the wide range of industries which are worth investigating by prospective investors and entrepreneurs.

34. Because of shortage of personnel and finance, market surveys and feasibility studies in manufacturing have until now been carried out mainly on an ad hoc basis; when investors have indicated strong interest in a particular project, the Government has arranged for an investigation to determine as far as possible the feasibility of the undertaking. In future, the Ministry of Commerce, Industry and Co-operative Development will investigate a number of potential industries so as to have a list ready to show interested parties when they arrive in Kenya without specific knowledge of conditions prevailing in different sectors of the economy. I.C.D.C. will maintain its own documentation service which will include information on suitable production methods for conditions prevailing in Kenya, and will run its own
market research services which, in part, will serve the needs of the Ministry of Commerce, Industry and Co-operative Development. In order to reduce the time between initial inquiries by prospective investors and the implementation of projects, the Government will have available a standard questionnaire which sets out in detail the different elements of information which normally are required for a decision by the Government and/or any of its financial agencies to participate in the financing of a project or to give it support by other means.

35. The industrial projects which have been discussed in the preceding paragraphs are either based on Kenya's own home market or on markets available in other countries. If industrial development could be planned on the basis of a wider domestic market than Kenya's alone the scope for industrialization would be larger and the pattern different. For instance, assembly operations which at present are uneconomic would become feasible if the products could be sold in the whole of East Africa or, even better, in the entire Eastern African sub-region. The Government firmly believes that the development of industries on a wider sub-regional and eventually on continental basis will generate considerable benefits to all participants.

36. Kenya recognizes that each East African country must industrialize. However, the present volume of industrial investment in East Africa is so small that priority must be given to measures and policies designed to increase industrial investment in East Africa as a whole. In particular, the present difficulties in the Common Market must be solved as quickly as possible and replaced by arrangements which will promote industrialization in each country. A commission of inquiry consisting of three Ministers from each country with a jointly appointed chairman is currently studying the problem with a view to producing a lasting agreement on the operation of the Common Market and other forms of economic co-operation.

37. The prospects for economic co-operation in the Eastern African sub-region are now most encouraging. At a conference in Lusaka late in 1965, the representatives of the Government of Burundi, Ethiopia, Kenya, Malawi, Mauritius, Ruanda, Tanzania, Uganda and Zambia passed a unanimous resolution to establish an Economic Community of Eastern Africa. The Economic Community of Eastern Africa will eventually mean much more than a Common Market. The Community will not only aim at abolition of customs tariffs and other trade barriers between the member countries, but also make a concerted effort to improve communications in the sub-region and implement a number of other resolutions designed to stimulate trade and production.

38. Co-ordinated planning of industrial development is one of the most important objectives of the Community, and there is no doubt that all the member countries will benefit from implementation of the Lusaka resolutions. A preliminary study has been carried out by the Economic Commission for
Africa on the distribution of industries in the sub-region. This study lists the following industries which deserve attention as potential investments in Kenya.*

**Textiles**

**Pulp and Paper**

**Rubber Manufactures**
- Tyres and tubes (for motor vehicles and bicycles).

**Basic Chemicals and Fertilizers**
- Chlorine, caustic soda, insecticide (D.D.T.).

**Petroleum Industry**
- Lubricants.

**Mechanical Engineering**
- Internal combustion engines, agricultural machinery, office machines, textile machinery, sewing machines, milling machinery, pumps.

**Electrical Engineering**
- Electrical machinery and apparatus, insulated cables, bulbs and lamps.

**Transport Equipment**
- Railway freight cars, assembly of commercial vehicles.

Many of the products proposed above by E.C.A. can only be produced economically if there is agreement between the member countries of the sub-region to give preference to each other’s products. The list quoted above is only an extract from a much longer list of proposals which in toto would require an aggregate fixed investment in Kenya of £120 million during a ten-year period.

**Training and Research**

39. Continued industrialization and Africanization of industry depend, to a large degree, on the training of people with different skills. An important role in this context will be played by the Management Training and Advisory Centre to be established in Nairobi. This is a United Nations Special Fund-supported project which will become operational in 1966. The Centre will have sections on management consulting, management development and training, and productivity. An average of six international experts will be working with the Centre at any one time over a five-year period and provisions have been made for the training of counterparts so that the training functions can be taken over by local personnel in due time. The Special Fund’s contribution will be about £240,000 and the Government’s nearly £160,000.

40. The Government is at the moment engaged in consultations with the United Nations concerning the establishment of an Industrial Research Institute which could serve both Kenya and its partners in the East African Common Market. Such an institute would investigate key areas of industrial technology which will play a major role in the national development programmes. Among existing institutions in the industrial research and development field, the East African Industrial Research Organization, run jointly with Uganda and Tanzania with laboratories in Nairobi, is playing a useful role. Its main fields of research have been in coffee processing, in chemical analysis, and clay products. Successful experiments on reconstituting meerschaum laid the basis for a factory for pipe manufacture in Tanzania. The chemical engineering section has undertaken work on fruit and vegetable dehydration, economic uses of cassava stalk, vinegar from pineapple waste and production of cotton-seed flour for human consumption. The emphasis now is largely on food processing.

41. Important training programmes have been developed by the Ministry of Natural Resources, Wildlife and Tourism, through its Forest Department. As mentioned below a Forest Industrial Training Centre is being established in Nakuru with the objective of training Africans in aspects of the saw-milling industry. Another institution is the Small Industry Research and Training Centre, established in Nakuru in 1965. The Centre provides two courses, a Technical and Management Course, and a Management Course. Students at the Centre will be training in different trades, such as metal-working and assembly and repairs of small machinery and equipment, including bicycles, scooters, motor-cycles, crushers, mixers, etc. There are also courses dealing with electrical components and machines, tailoring and dressmaking, furniture-making and joinery, and leather-working. About sixty students have already been enrolled and are leaving the Centre at the end of April 1966 with training in different trades and a knowledge of management problems. One of the functions of the I.C.D.C. programmes referred to above is to ensure that the people who have received this training find appropriate employment in industry.

42. Existing training facilities are far from sufficient—even taking into account the Government-operated technical and trade schools. The Government has, therefore, recently applied to the United Nations for technical assistance in developing a National Industrial Vocational Training Scheme. The application is for a project that will assist the Government in—

(i) setting up a National Council of Industrial Vocational Training, and supporting Trade Committees;

(ii) implementing the decisions of the Council through the Controller of Industrial Vocational Training and Trade Testing who will assist managements to provide training in their enterprises; and
(iii) establishing a National Industrial Vocational Training Centre to train the necessary teaching personnel and undertake supplementary training of apprentices which cannot be arranged in industry due to lack of facilities, equipment and personnel.

The direct training to be undertaken in the project would cover mainly personnel employed in plants and those who will undertake instructional duties in industry.

43. The full programme of the National Industrial Vocational Training Centre will include—

(i) training in shop skills and teaching techniques for instructors from Government Trade Schools (Ministry of Education) and instructors to work in training schemes operated by industrial enterprises, public works and training institutes;

(ii) training of foremen in the skills of their particular trade;

(iii) further training of employed workers irrespective of whether they have been trained in trade schools or by systematic apprenticeship;

(iv) supplementary training for apprentices in techniques for which facilities in individual firms are inadequate;

(v) setting standards for and control of industrial vocational training done in industry and institutes.

The total cost of the project is estimated at £440,000, of which the Government has applied for £280,000 from the United Nations Special Fund. The project will only partly be implemented during the Plan period, with a total cost to the Government of about £100,000. The Government, in consultation with employers, will work out a scheme to enable workers to participate in vocational training schemes during working hours.

Present Industrial Structure and the Rate and Pattern of Future Growth

44. The latest available detailed data on manufacturing industries are contained in the “Kenya Census of Industrial Production, 1963”, and the quantity index of manufacturing production (provisional data) for 1964. Table 1 gives data for net output* in manufacturing at current prices in 1954 and 1963, crude estimates in 1963 prices for 1964, and projected output in 1970. How the data for 1970 are arrived at will be explained in the next section of this chapter. Table 1 also includes estimates of the total contribution of manufacturing and handicrafts to Gross Domestic Product.

* Net output is defined as gross production less all current costs other than labour costs, interest, bad debts and depreciation. Thus, net output corresponds basically to the value-added concept used in economic statistics in many countries, and represents the industrial component in the Gross Domestic Product.
### Table 1

**Manufacturing Industries—Structure and Growth**

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Net output (£ million)</th>
<th>Rates of Growth (Compound rates, per cent per year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat, dairy, fruit processing</td>
<td>0·86</td>
<td>1·67</td>
</tr>
<tr>
<td>Other food processing</td>
<td>1·43</td>
<td>2·81</td>
</tr>
<tr>
<td>Beverages, tobacco</td>
<td>0·83</td>
<td>2·14</td>
</tr>
<tr>
<td>Textiles, clothing, footwear</td>
<td>2·62</td>
<td>3·42</td>
</tr>
<tr>
<td>Wood, paper, printing</td>
<td>2·04</td>
<td>2·68</td>
</tr>
<tr>
<td>Rubber, chemicals, petro-chemicals (same excluding petro-chemicals)</td>
<td>1·16</td>
<td>1·42</td>
</tr>
<tr>
<td>Non-metallic minerals products</td>
<td>2·04</td>
<td>5·12</td>
</tr>
<tr>
<td>Metal working industries (excluding the railway workshops)</td>
<td>0·27</td>
<td>0·21</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>13·15</td>
<td>21·59</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Industries covered by the Census of Industrial Production (excluding the railway workshops)</strong></td>
<td>24·38</td>
<td>29·38</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>14·14</td>
<td>22·09</td>
</tr>
</tbody>
</table>

**NOTES:** SOURCES: BREAKDOWN OF OUTPUT—1954: Survey of Industrial Production 1954, 1963: Kenya Census of Industrial Production 1963, 1964: 1963—figures extrapolated by the means of the Quantity Index of Manufacturing Production. 1970: based on figures for increased net output shown in Table 2 and a provisional estimate of net output in 1965 (£26·1 million, excluding the railway workshops). **GRAND TOTAL:** 1954, 1963 and 1964, published estimates of the contribution of manufacturing to the Gross Domestic Product. The projection for 1970 includes small-scale manufacturing and handicrafts, which have been assumed to grow by 3·5 per cent only per year. This may appear small compared with the growth during 1954–64, but this growth was only apparent, in part, since the coverage of firms not included in the Census of Industrial production has been broadened between 1954 and 1964.

The present structure of manufacturing in Kenya is a fairly balanced one for a developing country. Quite naturally food processing industries are the largest group, closely followed by beverages and tobacco. The metal product industries group is the next in rank and represents about 15 per cent* of the total net output. This is low compared with highly industrialized countries in which these industries represent the very hub of industrial development. But it is high compared with many less developed countries, and even though the main activities of this group consist of repair work, it forms a basis upon which further development can take place. The heterogeneous group of wood, paper and printing industries is almost as large as the metal industries. The printing industry represents almost half the net output of this group. The wood products industries were in a fairly depressed state in 1963/64 due to the low level of activity in the building industry. Textiles, clothing and footwear industries represent still less than 10 per cent of the net output in manufacturing—

* Excluding the railway workshops.
rather low for a developing country. The non-metallic mineral products industries are dominated by cement. This group was also depressed in 1964 due to the low level of building activity.

45. The value of net output in manufacturing industries increased at an average rate of 7.6 per cent per year between 1954 and 1964. As shown in the Table, growth among the various groups of industries was fairly uneven. The textile and clothing industries had by far the most rapid rate of growth, although these started from an extremely low level in 1954. Less than average growth was registered in the wood, paper and printing industries, the non-metallic mineral products industries and the chemical industries (excluding the oil refinery). In the two first groups of industries the comparatively slow growth was partly caused by the stagnation of the building industry after 1957. The chemical industries are strongly influenced by soda ash manufacturing which has suffered a serious setback since exports to South Africa were stopped.

46. For the period 1964-1970 the detailed data on individual industries suggest that the average rate of growth may be as high as 9 per cent. Although all factories which are being planned are not likely to be in production by 1970, there is evidence to suggest that this may be offset by the realization, before 1970, of other investments not taken into account here. It seems, therefore, not unduly optimistic to expect that the rate of industrial growth will be as high as 8½ per cent per year. Such a rate of growth is not exceptional in countries in which the development process really gets under way. The data for individual industries show that the two leading sectors in development during 1965/70 should be textiles and food processing. There is ample scope for growth in the textile industry and by 1970 it will still represent only a comparatively small proportion of industrial output. In the food industries the growth rate is projected to be practically the same as in the textile industry. Four factors combine to yield such a rapid increase. First, there will be a rapid expansion in industries processing agricultural goods for exports. Second, two large sugar factories will come on stream during the Plan period. Third, the urban population will grow rapidly and a large number of subsistence farmers will enter the monetary economy, thus stimulating demands for processed foods. Finally, there will be extensive import substitution in certain food industries. The expansion in the chemical industries (excluding petro-chemicals), in the wood, paper and printing industries and in the non-metallic mineral products industry is expected to be 8 per cent per year or more. The chemical industries usually expand rapidly in an industrializing society and in the case of Kenya the expected recovery of the soda ash industry will help in raising the rate of growth. The high rate of expansion in the wood, paper and printing industries will be largely due to a substantial growth in the output of sawmills, the pulp and paper mill at Broderick Falls and a continued rapid expansion in the printing industry. The non-metallic mineral products industries should also grow fast due to a higher rate of activity in the building and construction
industries. The projected expansion in the metal products industries may seem modest in comparison with what is expected for other industries. However, expansion in this field is difficult due both to the high requirements of skill in these industries and to the small Kenya market which prevents the establishment of many factories which produce capital goods or household durables. The tobacco and beverage industries are expected to grow at an even lower rate since they will continue to suffer somewhat from shrinking opportunities for exports to the other East African countries.

**Investments in Manufacturing**

47. Plan targets for development of manufacturing imply a net investment of nearly £45 million during 1965/70. As stated above, Government-controlled funds play an important role in promoting projects which are regarded as particularly desirable and in need of such finance. But the sector depends overwhelmingly on private investment in the form of equity or loan capital, bank credits and supplier credits from both within Kenya and abroad. Out of the total of nearly £45 million of net investment in the sector, it is expected that at most £10 million will be channelled through Government-controlled development finance institutions and other parastatal bodies. The finance to be forthcoming cannot be estimated precisely: the Government is continuously negotiating with foreign governments and development finance institutions abroad to achieve the maximum rate of industrialization compatible with the needs for finance of other sectors of the economy. Since the outcome of present and future negotiations for further industrial development cannot be regarded a certainty, the estimate of £10 million of Government-controlled funds for manufacturing investment must be regarded as a target figure.

48. Of the total projected investment in manufacturing nearly £35 million must be financed privately by domestic and foreign interests. It is therefore obvious that the total amount of net investment may be subject to substantial revision as the Plan proceeds. The bulk of private finance is expected to come from abroad. This is not unrealistic in view of the many investment opportunities in the manufacturing sector during the five-year period.

49. The estimate of total net investment has been arrived at on the basis of information from various sub-sectors of manufacturing in respect of actually planned projects, combined with statistical projections for each sub-sector and estimates of their growth potential during the Plan period. Expansion of existing enterprises, which should contribute substantially to industrial growth during the Plan period, is thus taken into account. Combination of concrete plans with statistical projections is necessary because in many branches of manufacturing the existing enterprises are not planning their own investments for periods beyond one or two years. For purely technical reasons the global net investment figure of £44.5 million should be regarded as a target figure rather than a firm projection. Even when a particular project is well defined and the output target clearly laid down in terms of physical quantities and qualities, there is a choice between production methods which can make a
substantial difference in the amount of investment required. A good example is a nitrogenous fertilizer project which is presently being studied by the Government: one method of production, based on the use of naphtha as feedstock, will require an investment of about £6 million in the factory, plus an unknown (at present) amount of investment in the local oil refinery if it is further decided to use locally produced naphtha on the basis of imported crude oil. But there is also the possibility of producing nitrogenous fertilizers on the basis of imported liquid ammonia, which is a semi-manufactured nitrogenous product in itself. In this case the nitrogenous fertilizer plant is likely to cost only about £3 million with no special investment in the oil refinery. Due to such uncertainties, the programme for manufacturing must be tentative and the figures presented here are rather conservative, based on the total of likely, desirable and profitable investments. As an example of this conservative approach, in the particular case of fertilizers the lower investment figure of £3 million has been included, and also the correspondingly lower figure for its contribution to Gross Domestic Product. If it is decided to use the naphtha method the investment figure will be roughly doubled, and the growth of net output would increase by an extra £1 million.

50. Another matter affecting the amount of investment during the Plan period is timing. This will be discussed in more detail later, but it should be noted that in the investment programme as presented more than half of the total projected investment will take place during the last two years of the Plan. During the last year of the Plan investment in manufacturing is projected at nearly three times the present annual rate. It is obvious that even a slight shift in timing can cause a substantial change in the total amount of investment during the Plan period. In many cases the assumed timing is based on assessments of when certain projects will get under way and how long it will take to complete them physically, start production, and reach full-scale operation. Temporary delays in the delivery of machinery and equipment can have very serious repercussions on achievement of progress. If the completion of the investments projected in Table 3 were postponed on average by, say, half a year, due to delayed start of the projects or longer construction or installation periods than foreseen, the capital costs of many of the projects would be increased, the total investment during the Plan period would be reduced by about £6 million and the estimated 1970 net output would be lowered by about £2 million. On the other hand, new industrial projects may arise during the Plan period, and more rapid expansion may take place within certain existing enterprises than is envisaged at present. This assessment is based on recent experience when many new investment projects have been proposed within a comparatively short period of time. In the case of some industries, it is quite conceivable that actual investment will be considerably more rapid than now projected. All in all, it is wise to allow a margin of £5 million on either side of the estimated £45 million total investment. Estimates for value added, net output and additional employment are subject to the same degree of uncertainty.
Table 2 indicates that more than a quarter (26.3 per cent) of the total net investment during the five-year period is planned to take place in the food-processing sector, which will account for an even larger share of total net output increase (27.7 per cent). This means that the relative importance of the food-processing industries is likely to increase during the Plan period; in 1963 the same industries accounted for only one-fifth of the total output in manufacturing (19.8 per cent). It can also be seen that food processing is going to increase its share of the total labour force in manufacturing; out of an estimated total employment increase of 17,000 workers, food processing will account for 29.4 per cent, as compared with its 18.3 per cent share in 1963 manufacturing employment.

| TABLE 2—MANUFACTURING INDUSTRY: NET INVESTMENT AND INCREASES IN OUTPUT AND EMPLOYMENT, 1965/70 |
|-------------------------------------------------|---------------------------------|-----------------|-----------------|-----------------|
| | INVESTMENT DURING PLAN PERIOD (£‘000) | GROSS OUTPUT INCREASE (£‘000) | NET OUTPUT INCREASE (£‘000) | EMPLOYMENT INCREASE |
| 1. FOOD PROCESSING | | | | |
| (a) Meat products | 1,000 | 3,000 | 400 | 400 |
| (b) Dairy products | 1,000 | 2,600 | 300 | 400 |
| (c) Grain milling including maize, wheat, rice, coffee, nuts, etc. | 1,000 | 5,200 | 1,100 | 900 |
| (d) Sugar | 6,300 | 6,000 | 1,400 | 1,500 |
| (e) Fruits and vegetables and miscellaneous foods | 2,400 | 5,500 | 1,200 | 2,000 |
| SUB-TOTAL | 11,700 | 22,300 | 4,400 | 5,200 |
| 2. NON-FOOD | | | | |
| (f) Drinks and tobacco | 2,000 | 2,000 | 800 | 200 |
| (g) Textiles and clothing and cordage—twine | 5,000 | 6,000 | 2,500 | 4,000 |
| (h) Shoes and leather | 800 | 800 | 300 | 600 |
| (i) Pulp and paper | 7,800 | 3,300 | 1,500 | 500 |
| (j) Other wood products | 1,200 | 1,800 | 800 | 1,800 |
| (k) Printing | 1,000 | 1,200 | 500 | 600 |
| (l) Chemicals* etc. | 9,000 | 9,000 | 3,000 | 1,800 |
| (m) Metal working† | 6,000 | 7,500 | 2,000 | 3,000 |
| SUB-TOTAL | 32,800 | 31,600 | 11,500 | 12,500 |
| 3. TOTAL MANUFACTURING | 44,500 | 53,900 | 15,900 | 17,700 |

* Includes plastics, rubber, paints, soap, glass, cement, clay-products.
† Includes metal products, mechanical engineering, electrical products, motor-vehicles and repairs, ship-building and repairing, miscellaneous manufacturing.
TABLE 3—PROJECTED TIME-PHASING OF INVESTMENT IN MANUFACTURING, 1965–1970 (£'000)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (a) Meat</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>—</td>
</tr>
<tr>
<td>(b) Dairy</td>
<td>200</td>
<td>200</td>
<td>300</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>(c) Grain milling</td>
<td>—</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>(d) Sugar</td>
<td>1,500</td>
<td>3,200</td>
<td>1,500</td>
<td>100</td>
<td>—</td>
</tr>
<tr>
<td>(e) Fruits and vegetables</td>
<td>150</td>
<td>250</td>
<td>400</td>
<td>600</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>TOTAL FOOD PROCESSING</strong></td>
<td><strong>1,950</strong></td>
<td><strong>3,950</strong></td>
<td><strong>2,700</strong></td>
<td><strong>1,550</strong></td>
<td><strong>1,550</strong></td>
</tr>
<tr>
<td>2. (f) Drinks and tobacco</td>
<td>400</td>
<td>600</td>
<td>1,000</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>(g) Textiles, etc.</td>
<td>400</td>
<td>500</td>
<td>1,000</td>
<td>1,200</td>
<td>1,600</td>
</tr>
<tr>
<td>(h) Shoes and leather</td>
<td>—</td>
<td>—</td>
<td>100</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>(i) Pulp and paper</td>
<td>—</td>
<td>400</td>
<td>1,000</td>
<td>3,000</td>
<td>3,400</td>
</tr>
<tr>
<td>(j) Other wood products</td>
<td>50</td>
<td>100</td>
<td>250</td>
<td>350</td>
<td>450</td>
</tr>
<tr>
<td>(k) Printing</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>(l) Chemicals</td>
<td>1,000</td>
<td>1,000</td>
<td>2,000</td>
<td>2,000</td>
<td>3,000</td>
</tr>
<tr>
<td>(m) Metal working</td>
<td>700</td>
<td>900</td>
<td>1,000</td>
<td>1,500</td>
<td>1,900</td>
</tr>
<tr>
<td><strong>TOTAL NON-FOODS</strong></td>
<td><strong>2,650</strong></td>
<td><strong>3,950</strong></td>
<td><strong>6,550</strong></td>
<td><strong>8,600</strong></td>
<td><strong>11,050</strong></td>
</tr>
<tr>
<td><strong>TOTAL MANUFACTURING</strong></td>
<td><strong>4,600</strong></td>
<td><strong>7,900</strong></td>
<td><strong>9,250</strong></td>
<td><strong>10,150</strong></td>
<td><strong>12,600</strong></td>
</tr>
</tbody>
</table>

52. This relatively strong emphasis on food processing reflects both the importance of agriculture as the dominant sector of Kenya's economy and the opportunities which exist to increase the national product by processing the output of agriculture and fisheries. In fact, manufacturing industry based on agriculture is playing an even more important role than indicated by the conventional division between food processing and other industries. For example, breweries, which are planning a substantial expansion, are based on grain; the rapidly expanding local textile industry will be based to a large extent on Kenya cotton and wool; and the leather and tanning industry on local hides and skins. It may thus be estimated that about two-fifths of the output expansion in manufacturing will be based on agriculture and animal husbandry, and if pulp and paper and other wood products are taken into account, more than half of the expansion will be based on agriculture and natural resources. The structure of the planned industrial expansion is therefore largely complementary to the planned development in agriculture, animal husbandry and natural resources, and will stimulate and stabilize demand for locally produced raw materials.

53. The development programme for the manufacturing industries is fairly capital-intensive. Total net investment of £44.5 million will result in an estimated increase in factory employment of 17,700 workers, so that the average net investment per new worker will be about £2,500. The projected employment increase means a significant reversal of the trend during the decade 1954-64 when, according to available statistics, employment in manufacturing and handicrafts actually fell while net output rose by 6½ per cent.
per year at current prices. Between 1964 and 1970 employment is projected to grow by less than 5 per cent per year, while output should grow by 9 per cent. Thus the reversal of the trend in previous years is explained by the substantial increase in output at constant prices. The difference in capital per worker between food and non-food industries as groups is not very large or significant, but the differences among different sub-sectors of manufacturing are very large indeed. The most capital-intensive expansion will be in pulp and paper, beverages and tobacco, chemicals and sugar, with investment figures per new employee far above the present national average of £2,500. The capital intensity of the manufacturing expansion as a whole is reflected also in the high figure for net output per worker, i.e. £900, which is twice the average of 1963.

Labour productivity as measured in terms of net output per employee is expected to increase by more than 4 per cent per year during the Plan period. A considerable proportion of this productivity increase is, however, offset by an increase in annual capital costs (depreciation and interest), and will not therefore be available to increase net profits or wages.

Food-processing Industries

54. Sugar.—In the food-processing sector a major expansion is now taking place in the sugar industry, where Kenya is aiming at near self-sufficiency shortly after 1970. Total net output of sugar factories is expected to be nearly five times higher in 1970. Investment of £6,300,000 in sugar factories and auxiliary works is planned to take place early in the Plan period and to be practically complete by the middle of 1968.

55. The sugar expansion accounts for more than half of the investment in the food-processing industry. It is also a very capital-intensive industry, based on large units with modern machinery. The capital-output ratio is estimated to be about two-thirds higher than in the rest of the food-processing industries and in manufacturing industries as a whole. However, while investment per worker is high in the sugar industry, this investment makes possible the creation of many more job opportunities outside manufacturing.

56. Fruit and Vegetable Processing.—In the food-processing sector important increases are also expected in fruit and vegetables, which together with bakery products and miscellaneous foods are expected to absorb nearly £2 1/2 million in new investment during the Plan period. The pace of investment in this sector is expected to increase rapidly during the Plan (see Table 3) and net output by 1970 is likely to be £1.2 million higher than in 1965, while employment may increase by 2,000 persons. Amongst the more important developments are a passion fruit factory for export of juice concentrate and the expansion of a newly established industry for production of dehydrated vegetables, both of which show great promise as earners of foreign exchange. Kenya Canners is expected to spend nearly £2 million on a general expansion of its manufacturing activities in the field of pineapples and vegetables. This is only a first step towards a major expansion, most of which will take place
in the next Plan period, entailing expenditure of about £5 million on planting and processing pineapple. The pineapple project is an illustration of the wide scope which exists in Kenya for a major breakthrough into world markets for processed fruit and vegetables. The advantages of fruit and vegetable processing in Kenya are particularly great because in many places processing plants can operate around the year. Unlike many countries Kenya can locate factories in areas where variations of rainfall and altitude in the vicinity of the factory enable fruit and vegetables to be supplied throughout the year, thus facilitating much higher capacity utilization of plant and skilled labour. This comparative advantage is expected to more than offset the higher transport costs to European markets. In the expanding markets in the Arabian Gulf and in the countries of the Indian Ocean area generally, demand for canned or dehydrated vegetables is particularly promising, and in those areas Kenya is advantageously placed with regard to transport as well as production costs.

57. Fish Canning and Processing.—Several projects in this field are under investigation at the moment, including a deep-sea fisheries enterprise, which, if shown feasible, is likely to involve an investment of £3-4 million in fishing fleet, port installations and processing plant. The Indian Ocean is very rich in fish along Kenya’s coastline, and preliminary reports from a F.A.O. study are promising. Kenya has applied to the French Government for assistance in carrying out a proper feasibility study for a commercial undertaking of deep-sea fishing, processing and marketing. This report should be available during 1966, and, if possible, a commercial project will be negotiated during 1966/67. Several countries have shown strong interest in deep-sea fishing and processing based in Kenya and the proposed project embraces, among other things, tuna fishing and canning and the production of fishmeal for human and animal consumption. In a similar field a preliminary agreement has been reached for a pilot project in Kenya’s inshore waters involving catching and processing of shell-fish mainly for export. The proposed company, Kenya Inshore Fisheries Ltd., will have marketing arrangements with two overseas enterprises—one in the U.K. and one in U.S.A.—so as to develop sales of frozen shell-fish (mainly lobster-tails) in the West European and North American markets. This project, which initially implies a total net investment of only £60,000, may develop into an important industry. The Government investment is at present limited to £30,000, but Government has an option to acquire a majority shareholding at a later stage preparatory to allowing local fishermen’s co-operatives to buy into the enterprise and eventually own it. This project could set a model for the development of deep-sea fisheries as well on a co-operative basis. Only a small part of the potential investment and increased output in fish processing is included in the figures for the Plan period. Full realization of these projects within the next five years would result in considerable additional investment, output and employment.

58. Bakery Products, Confectionery and Miscellaneous Foods.—Baking is the most important industry within this group and accounted for more than one-third of the group’s total employment and half its total net output in 1963.
The expansion envisaged for fruits and vegetables has a counterpart in bakery products. Local demand for bread is expanding rapidly, especially in the urban areas where consumption patterns are changing in favour of wheat flour and bread. At the same time production of other bakery products such as biscuits and spaghetti is replacing imports and opening up export markets.

59. For the whole field of fruit and vegetable processing, fish processing, and bakery products and miscellaneous foods, the Table 3 estimate that net output by 1970 will be about three times higher than in 1964 may be rather conservative. The corresponding increase in employment can be estimated at 75 per cent.

60. *Grain Milling and Related Industries.*—There is at present some surplus capacity in maize, wheat and rice milling. Two of the largest milling firms have recently merged, and this and other steps toward rationalization will enable output to increase without much net investment before 1970. It has been assumed that net output will increase by £600,000-£700,000, if not more, while only £280,000 will be needed in net investment. Net investment in coffee milling, groundnuts, cashew nuts, cotton seed and raw feeds is together estimated at roughly £800,000, yielding a total increase in net output of between £400,000 and £500,000. These figures might in fact become higher if a new cashew nut factory, the economic feasibility of which will be examined, should become a reality during the Plan period. For the time being, only part of the investment cost and net output related to that project has been included in the Plan. The increase of net output in grain milling and other industries under this heading should total £1.1 million, with an employment increase tentatively estimated at 900. The Government will examine the organization and operation of the grain milling industry and if necessary bring the industry under public control.

61. *Meat and Dairy Industries.*—Estimates of investment and net output used here are consistent with the plans for the development of the livestock industry, discussed in Chapter 6. Exports in 1970 of most products, frozen or canned, will depend more on supply considerations than on demand, which is on a rapidly rising trend. A number of countries are showing strong interest in buying high-quality Kenya meat, and sales to markets as wide apart as Zambia and Israel could become very important. It is estimated that investment in processing of meat and dairy products together will amount to at least £2 million during the Plan period, net output will increase by £700,000, and employment by 800.

**Beverages and Tobacco**

62. In Table 2 it is estimated that £2 million of net investment will take place in the beverages and tobacco industries. Recent information suggests that this figure is likely to be exceeded considerably. Thus, prospects for the breweries, which now sell 80 per cent of their output in the domestic market, are so promising due to the rapid growth of local beer consumption that they
alone may invest £2 million in expansion. Major expansion is scheduled in the soft drinks industry, while the tobacco industry, after a difficult period of adaptation to a smaller market, again will grow rapidly. In the tobacco industry the policy of the Government is to achieve virtual self-sufficiency by 1970 on the basis of home-grown tobacco. This is likely to entail substantial investments in agriculture, in the curing of tobacco leaf, and also possibly in new cigarette machinery.

Textiles and Clothing

63. The textile and clothing industries are rapidly expanding and present plans involve an investment of £5 million during the Plan period, resulting in an estimated net output increase of £2.6 million by 1970. This represents very rapid growth indeed (about 17 per cent per year), but such a growth rate is not exceptional for new textile industries in developing countries. Net imports of textiles in 1964 amounted to more than £6 million and there is considerable room for expansion on the basis of import substitution alone, while the rapid rate of growth of domestic textile consumption* which can be expected to take place during the Plan period will expand the market further. Such global figures are obviously not enough in themselves to show that local production of textiles is a worthwhile proposition; actual imports consist of thousands of varieties of yarn, cloth and clothing, and it would be uneconomic to aim at self-sufficiency in all varieties. It is important that local manufacturers be able to concentrate on long runs of production, so as to reduce overheads, and a profitable industry must therefore be based as far as possible on specialization.

64. Eighty per cent of the figures for investment, output and employment in the textile and clothing industries given in Table 2 are based on knowledge of actual projects being undertaken or having reached an advanced stage of preparation by the enterprises concerned. These include production of nylon and polyester fabrics, coloured rayon fabrics, woollens including blankets, knitwear and socks, as well as expansion of the cordage and twine industry. Altogether these investments will approximate £4 million. It is regarded as highly likely that at least another £1 million of clothing and textile projects will be proposed, found to be viable and implemented during the Plan period. In particular the Industrial and Commercial Development Corporation is expected to participate in a number of new textile knitwear and clothing enterprises, either as individual projects or within the framework of the industrial estates programme. The knitwear and clothing industries are suitable for medium- and small-scale enterprises which would fit well into I.C.D.C.’s general strategy of fostering African-owned enterprises. The textile industry is comparatively labour-intensive, and the employment effect of the above programme will represent about 4,000 new jobs. The net investment per worker is £1,250, about half of the value for the manufacturing sector as a whole, and the net capital output ratio is also low at 1.9.

* Consumer expenditure on textile fabrics in East Africa has been increasing by 10 per cent per year in recent years.
Footwear, Leather and Tanning Industries

65. Footwear and Leather Goods.—Total net investment in the footwear, leather and tanning industries during the Plan period is estimated at £800,000, mainly in shoes and leather products, which may account for £0.5 million of the total. The small-scale industries and industrial estates sponsored by I.C.D.C. may include a certain number of enterprises producing shoes and leather products. The footwear industry has an expanding home market and also exports to neighbouring countries. It is believed that important markets in the Indian Ocean and Persian Gulf area may also be developed.

66. Tanning.—Two new tanneries are likely to be built, increasing the value-added of hides and skins which at present are exported after rather crude processing. Investment in the tanning industry is likely to account for about £300,000. One prerequisite for successful development of the tanning industry is improved quality of cattle delivered to the abattoirs. At present a high proportion of these animals have poor and thin hides, frequently damaged by unskilled flaying, and scarred by insects, thorn bush, branding or deterioration during transport. Such hides fetch low prices in the world markets and do not provide a sound basis for a tanning industry: what is required is improvement of the cattle through good husbandry. It has been estimated by the Veterinary Department that a one-grade increase in the quality of all dried hides and skins in grades II, III and IV would alone result in increased export income of about £200,000 (the value of undressed skins exported from Kenya in 1964 was £1.3 million). But additional export earnings could be derived from further processing of improved hides by tanning into leather. The commercial tanneries in Kenya at present take less than 5 per cent of Kenya’s raw hides and skins for conversion into leather to supply both the local and export markets.

Pulp and Paper

67. The possibility of establishing a large mill at Broderick Falls, Western Province, in order to exploit existing and potential forest resources in that area has been under study for some time. There is a choice between a pulp factory to manufacture pulp for export and a pulp and paper factory that will use the pulp for manufacturing paper, mostly for the East African market but also for export. The Government is currently studying various alternatives and negotiating with interested foreign investors. Compared to a pulp factory, a pulp and paper factory would have the advantage of savings in transport costs (less transport of paper to East Africa, and of pulp to foreign markets), and the disadvantage that both pulp and paper manufacturing would be on a comparatively small scale. Thus, two types of pulp and many different types of paper would have to be produced in a factory with an initial capacity of, say 50,000 tons of pulp. Either type of factory would benefit from the low cost at which pulpwod can be produced in the area. For the purposes of the Plan, a factory costing £7.8 million, with a net output of £1.5 million and direct
employment of 500, has been included in Table 2. Whatever alternative is chosen, the factory should be in operation in 1970, but investment, net output and employment may, of course, differ from the figures used here.

**Other Wood Products**

68. The sawmilling industry is picking up after a depressed period since 1960. The outlook for the next five years is promising and Africanization is expected to proceed at an accelerated rate. By 1970 about 25 per cent of the sawmills are expected to be wholly African-owned and operated, while in many of the long-established European and Asian-owned mills there will be a significant African participation in both management and shareholding. Renewed building and construction activity is increasing the domestic demand for structural timber, and F.A.O. studies indicate that there are large potential markets for softwoods from East Africa. Thus far, exports have been limited by the quality of the raw material, lack of standardization in sawn lumber, the inability to consolidate large export orders and the high cost of hauling to the Coast. However, solutions are being found for these problems, and export prospects are improving. Royalty rebates have been introduced for export orders; a greater supply of quality softwoods will become available as plantations mature; and closer co-operation between mills in consolidating export orders is being realized.

69. The forest economy is undergoing a transition from dependence on indigenous species to exotic softwood plantations. The logging unit of the Forest Department has shown that plantation logging costs can be reduced well below previously accepted levels. The establishment of plantations at the Coast to supply export markets is now under consideration. Production in the sawmilling industry is expected to double between 1965 and 1970, while the increase in employment will probably not exceed 15 per cent because mills are running below capacity, with inefficient use of labour.

70. An important part of forestry development will be the establishment of a Forest Industrial Training Centre at Nakuru with the help of New Zealand and Canada. Trainees will come from established mills as well as new African-owned mills. The Centre will train Africans for all occupations in the sawmilling industry.

71. Investments in the sawmilling industry have been small in recent years because of excess capacity. Given suitable licence terms and with brighter marketing prospects ahead, the larger established mills are expected to modernize. Several African-owned and operated mills have been established with assistance from the I.C.D.C. Plans are under way to establish other mills, and among possible areas being considered are Kiandongoro, Meru, Ragati, Marmanet, and Nandi. These new mills will contribute to the geographical rationalization of sawn-wood production. A team of New Zealand and Canadian advisers will carry out feasibility studies and assist in the design, establishment and operation of such mills.
72. Over 50 per cent of the domestic sawn wood consumption is used in other wood products such as furniture, matches, pencil slats, builders’ woodwork, boxes and carvings. In the case of furniture a rapid expansion is expected on the basis of continued import substitution, a growing domestic market based on increased purchasing power of African consumers, and rapidly rising exports. The production of matches, pencil slats, builders’ woodwork, boxes and carvings accounts for a small proportion of the timber used, but represents a rapidly increasing contribution to exports. Exports of these items rose from £259,000 in 1961 to £413,000 in 1963 and are expected to double by 1970. Production of new types of wood products will be encouraged. For instance, several proposals to establish a plywood factory are currently under consideration. An agreement has been reached for production of box shooks for export.

73. For the sawmilling and other wood products industries as a whole, it is estimated that total net investment during 1965-70 will be about £1.2 million (of which about £1 million is for projects likely to be associated with I.C.D.C.). It is estimated conservatively that net output for the group as a whole will increase by £800,000, which would be about 75 per cent above the 1964 level. Total employment may increase by about 1,800, or a little over 25 per cent.

74. The printing industry has expanded rapidly in recent years, its net output increased by at least 10 per cent per year since 1961. In view of the spread of the reading habit and increased school attendance by children and adults it is safe to predict expansion of net output in the seventy-three existing enterprises at not less than 5 per cent per year during the Plan period. This would raise output from £2.0 million in 1964 to £2.7 million in 1970, and probably require investment of about £1 million including £225,000 which will be invested by the Government to modernize and expand the Government Press in the near future. Employment would increase by some 600 over the 1964 level of 3,000.

Rubber, Chemicals, Petro-chemical and Non-metallic Mineral Products

75. These industries together accounted for 20 per cent of gross output and 25 per cent of net output in manufacturing in 1963. The sector has a rapid growth potential although its development during the last decade has been very uneven. For the sector as a whole output almost doubled between 1954 and 1959 but remained virtually constant between 1959 and 1964 if no account is taken of the oil refinery at Mombasa. The rubber and chemicals sub-group has not expanded since 1955 although a temporary peak was reached in 1961. The fall from 1961 to 1964 was mainly caused by a sharp reduction in the output of soda ash due to the halt in exports to South Africa. Output of the non-metallic mineral products industries expanded by four times between 1954 and 1959. After four years of stagnation output rose again in 1964 due to a sharp increase in cement exports. The growth potential of this sector depends on so many uncertain factors that it is
hazardous to forecast its growth rate during the next five years by subgroup or even in total. However, since the sector is important a projection is necessary and this must be made on the basis of known investment plans. Amongst the industries in this sector are: rubber, soda ash, paints, plastics, soaps and detergents, refined oil products, cement, concrete and clay products and glass. Prospects for the soda ash industry depend on export markets. In the rubber and miscellaneous chemicals industries, the growth rate will be determined by the growth of the domestic market, import substitution, and potential markets in the rest of East Africa. The demand for non-metallic mineral products is mostly linked with construction activity but it should be noted that at present only 20 per cent of cement output is consumed at home, and exports outside East Africa are twice as important as sales in Kenya.

76. The table below shows known planned investments and corresponding increases in net output during the period 1965 to 1970. These figures are not necessarily optimistic, as will be explained below. However, in Table 2 the group’s share in the total increase in net output has been reduced from £3.9 million to £3 million in order to take into account the many uncertainties which face these industries. The investment requirement of about £9 million during 1965/70 is expected to be distributed between different project groups roughly as follows:

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Fertilizer plant</td>
<td>£3,000,000</td>
<td>£1,000,000</td>
</tr>
<tr>
<td>Oil refinery</td>
<td>£1,000,000</td>
<td>—</td>
</tr>
<tr>
<td>Cement industry</td>
<td>£1,000,000</td>
<td>£300,000</td>
</tr>
<tr>
<td>Soap and cleansing material</td>
<td>£1,000,000</td>
<td>£1,000,000</td>
</tr>
<tr>
<td>Pyrethrum</td>
<td>£100,000</td>
<td>£700,000</td>
</tr>
<tr>
<td>Other existing enterprises.</td>
<td>£1,900,000</td>
<td>£600,000</td>
</tr>
<tr>
<td>I.C.D.C. and associated firms</td>
<td>£1,000,000</td>
<td>£250,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£9,000,000</strong></td>
<td><strong>£3,850,000</strong></td>
</tr>
</tbody>
</table>

77. The table forecasts expenditure of £5 million on three major projects, namely: a *nitrogenous fertilizer plant* in Mombasa costing at least £3 million, an expansion of the Mombasa *oil refinery* which is likely to involve about £1 million, and development of the *cement industry* which is likely to require about £1 million during 1966-68. The increased net output associated with these major investments is expected to be about £1 million for the nitrogenous fertilizer plant and between £200,000 and £300,000 for the cement.
expansion. As for the Mombasa refinery, which started producing towards the end of 1963, the investment cited is part of a programme scheduled for completion by 1972, which will probably not result in any increase in net output during or immediately after the Plan period. In fact, value added is likely to fall by about £350,000 when the new refinery in Tanzania starts operating, but the growth of the Kenya and Uganda markets and increased demand elsewhere will gradually lead to a reduction in excess capacity and a need for further expansion. If demand for refinery products increases faster than expected the refinery will be able to accelerate expansion of its output accordingly. The rapid development of building and construction activity in Kenya resulting from implementation of the Plan is likely to call for further investment in the cement industry, so that the figures for investment suggested here may in fact turn out to be underestimated. In conjunction with the nitrogenous fertilizer plant in Mombasa there are tentative plans to establish a plant for compounding of nitrogenous and phosphatic fertilizers in the Rift Valley, probably at Eldoret. The phosphatic fertilizers would in that case be supplied from Tororo in Uganda. A Rift Valley location would be near the geographic centre of demand for fertilizers, and thus result in minimum transport costs. However, this compounding plant is not specifically included in the Plan estimates, since the project has not yet been analysed in detail.

78. For soap and cleansing materials there is a rapidly rising market in Kenya. Population increase, urbanization and rising incomes and hygienic standards all contribute to increased domestic demand. Kenya is a net exporter of such products, mainly to Uganda and Tanzania, where increasing local production will reduce the markets for Kenya manufactures. On the other hand, export opportunities elsewhere in Africa are increasing, and it seems probable that total sales outside Kenya will not fall during the Plan period. A small amount of Kenya’s own consumption is covered by imports, which are likely to become insignificant by 1970. Assuming constant exports and declining imports, and a (conservative) 10 per cent annual increase in domestic consumption, 1970 output of these products should be about £1.0 million above the 1964 level to meet rising demand. One local firm, Colgate-Palmolive, recently opened a new plant costing about £350,000, in late 1966 East African Industries Ltd. are opening a plant representing an investment of similar amount, and it appears likely that further investments will take place in this sub-sector, bringing total investment to about £1 million during the Plan period.

79. The pyrethrum industry is planning an investment of about £100,000 in manufacturing, which together with existing excess capacity will enable an increase in net output of about £700,000. Other enterprises in the chemical and non-metallic mineral products field, ranging from basic and miscellaneous chemicals to rubber products, paints, glass, and clay products, produced a 1964 output of over £3 million. Even a moderate expansion of these existing
enterprises, by only 5 per cent per year, would result in a £1 million increase in their net output by 1970. Allowing for unexpected difficulties, the increase has been projected at only £750,000, requiring an investment of £2.3 million.

80. The Industrial and Commercial Development Corporation has plans for about £1 million of investment in joint undertakings with private enterprises in this industrial sector. These investments would range over a very wide field of products which fit well into I.C.D.C.'s programme for development of small- and medium-scale industries and of industrial estates: manufacturing of starch, yeast, alcohol, gelatine, glue, plastics, bakelite, and synthetic resine products, pharmaceuticals, citric acid, technical rubber products, rubber hoses, asbestos, cement pipes, block concrete, plaster of Paris, ceramics and domestic earthenware. The increase in net output associated with this investment programme is difficult to estimate, but should at least reach £250,000.

Metal-working and Miscellaneous Industries

81. The metal-working and miscellaneous groups, as defined in Table 2, embrace a wide range of industries, engaged in both manufacture and repair. In 1963 the net output of the group including the railway workshops was worth £4.3 million, spread over more than 250 establishments employing 14,700 workers. Thus, this group represents about 20 per cent of net output and nearly 30 per cent of employment in manufacturing. The rate of expansion has been rather uneven during the last ten years; virtual stagnation between 1954 and 1960, growth between 1960 and 1962 (33 per cent) and no growth from 1963 onwards.

82. The metal-working complex of industries represents the hub of industrial development: metal products, both consumer and investment goods; mechanical engineering, i.e. non-electrical machinery and equipment, producing both capital equipment and consumer durables; electrical engineering, with a similar variety of production; and transport equipment. In Kenya repair work is the main function of these industries (the railway workshops, shipyards and vehicle repair accounting for 70 per cent of total employment and half of total net output).

83. From a long-term point of view this is a sector with excellent growth prospects and many opportunities for both large and small-scale enterprises. The latter, in particular, would offer many openings for skilled Africans to become entrepreneurs, and accordingly the Government is encouraging the creation of small-scale metal-working enterprises with the help of I.C.D.C. and through expansion of technical training facilities. Experience of other countries which have passed through Kenya's present stage of economic development indicates that metal-working industries, apart from being an important growth sector, offer the greatest variety of on-the-job training opportunities, which a developing country can exploit to build up a cadre of skilled workers.
84. The increase in net output for the sector over 1965-70, as given in Table 2, is estimated at £2 million, corresponding to an implied annual rate of growth of approximately 7 per cent. This should require a total net investment of about £6 million during 1965-70 (assuming a capital-output ratio of 3), while the corresponding increase in gross output should reach about £7.5 million*. It is difficult to project the increase in employment in the metal-working industries. Some operations are highly capital-intensive while others require much labour. A conservative estimate suggests 3,000 additional jobs, only 15 per cent increase for the whole period or 2½ per cent annually. This figure may easily be exceeded, particularly since the demand for servicing and repair work will rise rapidly. No attempt has been made to assess separately the scope for growth of the statistical group "miscellaneous industries", which in 1964 represented slightly above 1 per cent of the output in manufacturing. It has therefore been included with the metal-working industries.

B—Commerce

85. No other economic activity is in direct contact with so many people as commerce. As long as the people as consumers depend on retail shops that are overwhelmingly owned or operated by non-Africans, they will conclude that, although Africans have gained control over the political and administrative machinery of the country, the economic life of the nation is still in the hands of non-Africans. This popular image of the situation is, however, false: both through the Government, and directly in the form of increasing control and participation in all sectors, the African majority exercises a definite influence over the economy. But the present situation in commerce has a tremendous psychological impact, and a planned Africanization of the commercial sector is therefore one of the Government's important objectives. This policy is necessary because of the need to create opportunities for Africans in commerce which is one of the main sectors of the economy in terms of income and employment.

86. In Kenya rapid transformation of subsistence agriculture and other subsistence activities will depend very largely on the establishment of channels of distribution in all regions of the country in order to provide an outlet for marketable surpluses from agriculture, fishing, etc., and to supply consumer goods and material inputs needed to raise production in the former subsistence sector. Furthermore, availability of adequate supplies of consumer goods is an important incentive to people to work harder in order to buy them.

87. The importance of the distribution system does not mean that it should be as extensive and employ as many people as possible. While geographical expansion of the distribution system is necessary it should at the same time be

*In 1963, the ratio between net and gross output of the sector was \( \frac{1}{3} \). The ratio forecast for 1965-1970 is nearer \( \frac{1}{4} \) because it is expected that expansion of output will involve production of generally more complex equipment and of specialized assembly work in which materials and components play an increasingly important role.
made as efficient as possible. Unlike most other activities, high employment in distribution cannot be regarded as an economic means of achieving full employment of the labour force. This does not mean that the employment impact of expanding the distribution system would be modest. In 1964 the reported employment in distribution was about 57,000 salaried employees, to which must be added approximately 38,000 self-employed. These figures cover only a part of the total employment in distribution. Tens of thousands of people involved in marketing operations, in rural or urban markets or as pedlars, are not covered by the official labour survey. Productivity in the distributive trades will grow slightly as rising standards of living enable individual shops to increase their turnover without corresponding increases in employment. In general, however, the increase in trade accompanying expansion of the monetary economy during the Plan period will cause a nearly proportional rise in the sector's employment. The growth of employment in distribution may even outstrip the expansion of trade if employment opportunities in other sectors fail to expand adequately, forcing many people to try to earn a living in retail trade. Such a development would lower productivity and raise trade margins. In theory more competition should lead to lower prices, but in practice overpopulated distributive trades lead to restrictive practices and higher margins as traders seek to maintain their incomes in the face of reduced turnover.

Problems in the Commercial Sector

88. With Independence, Kenya inherited a commercial sector which now requires rapid change and modernization so as to meet the new needs and circumstances. The Government will make major efforts to help the sector to adapt itself rapidly and smoothly. The existing distribution system, which is almost entirely in the hands of non-Africans, evolved haphazardly, and while it compares favourably with the distribution systems in many other African countries, it certainly does not measure up to modern demands of efficiency. The problems in this sector include—

(i) inefficiency, restrictive practices, high prices to the consumers and low prices to the local producers;
(ii) inefficient service in small towns and rural areas; and
(iii) little African participation.

89. Economic development will lead to a higher standard of living for the masses, but this process may be slowed down by the inefficiency of the commercial sector, and the resulting high prices to the consumers. The haphazard growth of the network of wholesale and retail distribution has in many places and for many goods led to unnecessary middlemen between producers and consumers, and to uneconomic and inefficient enterprises. Far too many small shops, all offering virtually the same range of goods, have to cover their overheads out of a small turnover. Thus, high mark-ups are needed merely to assure barely profitable operations. This need to protect high trade margins
is one reason why the commercial sector is characterized by restrictive practices which restrain competition and enable many operators to charge higher prices than they would otherwise be able to. For the same reason, small producers, notably farmers, have to accept very low prices for their marketable surplus, and this tends to discourage production for sale.

90. Since most of the population is poor and illiterate and unable to compare qualities and prices, many of the poorest consumers frequently pay exorbitant prices for inferior goods. In order to protect African consumers against this kind of exploitation, the Government will stimulate healthy competition and ensure that the wholesale trade will supply retailers with essential goods of adequate quality at reasonable prices. In the interests of the economy as a whole and the consumers, it is essential that the distributive trades should be operated in a manner which will give quality and service at low costs. Consumer research, consumers' protection boards and voluntary organizations, co-operative organizations and inspection and enforcement of standards are further important elements in the protection of consumers.

91. Commerce in Kenya is concentrated in Nairobi and Mombasa, which are the only centres with a fair degree of competition between retail outlets offering a full range of suitable consumer goods, capital goods and implements. Even in these centres, however, there are serious impediments to true competition—one such impediment being agreements between traders not to undercut each other. The absence of fixed and published prices is the rule, and only the patient, persistent and knowledgeable consumers get the maximum discounts. The bazaar system of haggling went out of fashion in Europe a long time ago; but unless special measures are taken in Kenya it will prevail for a long time to come, to the detriment of all concerned, including the trading community as a whole.

92. While Nairobi and Mombasa at least offer adequate services in a physical sense, the rest of the country, and especially small towns and rural areas, suffers from a completely inadequate system of distribution. Most places have at best a row of small shops, offering virtually identical and very limited range of commodities. Turnover is low, transport is badly organized and transport costs are high. The traders also take advantage of the ignorance of the rural consumers. This is not a problem which the Government can ignore; it is essential that rural areas should be well served with a wide range of commodities at reasonable prices. There is no better stimulus for the people to work harder on the land than the knowledge that their local surplus produce will fetch a fair price and the proceeds could be used to buy a number of desirable commodities at fair prices.

93. While the absolute number of Africans who work in commerce or trade on their own account is much larger than the number of Asians and Europeans, non-Africans dominate completely trade in cities and towns. There are hardly any African-owned shops in the main shopping streets in the larger
cities and towns, and even the sales personnel in these shopping streets are overwhelmingly non-African. While the Government will respect the constitutional safeguard against discrimination, the present concentration of the trading activities in the hands of non-Africans must be reduced by actively promoting rapid entry of Africans into commerce. There are enough openings for the talent of non-African businessmen in sectors other than commerce, and their contribution to Kenya's development may indeed be more essential in those sectors.

94. The Government's policy for the commercial sector is guided by the need to—

1. ensure a rapidly growing African participation in retail and wholesale trade; and

2. ensure that the network of wholesale and retail trade is extended so that people in all areas of the country can buy and sell goods which they need or which they produce for the market; and

3. improve the efficiency of wholesale and retail trade so that trade margins can be reduced, curtail the number of middlemen between producers and consumers, improve the selection of goods as well as the standard of service to the consumers, and ensure the opening of marketing facilities to small farmers, fishermen and craftsmen.

Africanization

95. During the Plan period the monetary Gross Domestic Product in Kenya is projected to expand by about 7 per cent per year, and this growth, both in production and in income, will probably lead to an increase in the annual turnover of trade by 6 per cent per year. This necessary expansion in trading activities will in itself make room for increased African participation in commerce. The scope is particularly great in rural areas where increased trading facilities must be established. However, the expansion in trade will very much benefit urban commerce and, unless special steps are taken, the existing trading communities will take the largest share. Thus the scope for increased African participation in urban areas on the basis of expanded trade activities alone may be very limited indeed. It may therefore be necessary in some cases to consider take-over of existing commercial enterprises by African businessmen, co-operatives or the State. The principal method of increasing African participation will, however, be to enable Africans to own new commercial enterprises.

96. Two factors constitute serious barriers to increased African participation in commerce: (i) shortage of capital, either to take over existing enterprises, establish new enterprises or expand existing ones and finance necessary inventories; and (ii) lack of knowledge of elementary trade practices. These factors are closely related. Traders who have no knowledge of elementary book-keeping run into repayment difficulties, become regarded as bad
debtors and find it difficult in future to obtain normal commercial credit. On the other hand, new traders or traders who want to expand from marketing of a limited number of products into a variety of modern goods will need initial credit facilities to establish themselves on a sound basis. The problem of credit is treated in a later section since it affects not only Africanization of commerce but is also a precondition in expansion of the commercial sector.

97. Extension Services.—The use of extension services to a large number of small operators has been very successful in the field of agriculture. This method can be used with equal success in the fields of commerce and small industry. Commerce is particularly suitable for such an approach because extension workers can be trained fairly easily to advise small traders on elementary business practices, on available distribution channels and on credit facilities. Trade development officers will be appointed in all areas where they are needed, and they will work closely with the trade development committees. These officers will maintain personal contact with traders in their district and help them to solve their problems. It is obvious, however, that as the number of traders grows the extension staff cannot devote sufficient time to each individual and it is therefore necessary that both existing and new traders be given adequate business training so that they can manage their own business without regular and frequent advice.

98. Training Facilities.—The Government is at present drawing up plans to establish adequate training facilities. Training centres will be set up in a number of towns where Africans with primary school education of sufficient standard will be able to attend courses in book-keeping, arithmetic and elementary business methods. When this training scheme is fully implemented, new traders will be required to have passed examinations before they can avail themselves of Government facilities to set up their own businesses. The possibility of setting up a national apprenticeship scheme will be reviewed, and commercial employers will be asked to take on as apprentices Africans who show aptitude and willingness to enter a commercial career. Employers will also be asked to ensure the participation of their staff in training courses.

Expansion of Commerce

99. Expansion of the commercial sector in the cities and larger towns will certainly continue without any special steps taken by the Government. However, some Government action will be needed in order to provide suitable marketing facilities in rapidly growing urban areas and ensure a planned development of retail outlets, including the construction of shopping centres in such areas. But outside the cities and larger towns Government action will be needed in order to facilitate monetization of the subsistence sector. In such areas it is not only necessary to encourage the establishment of retail outlets for consumer goods but also supply channels for fertilizers, insecticides, tools and other goods necessary for modernization of agricultural practices and marketing outlets for farm produce.
Rationalization of Commerce

100. During the last twenty years or so the retail and wholesale trades in industrialized countries have been undergoing a revolution, which has also had some effects in Kenya. For the consumers this revolution is visible in the form of new kinds of shops such as self-service shops, supermarkets, chain-stores and mail-order houses, and in cheaper goods. The changes which take place in the wholesale trade are even more fundamental than the new developments in retail trade. The success of the chain-store is based on the fact that it is its own wholesaler. Supermarkets have large enough turnovers to act as wholesalers for most products. In the United States and in Europe the small retailer who remained dependent on the traditional wholesaler was on the point of being ruined by the competition from chain-stores, co-operatives and supermarkets but is avoiding this by creating or joining new wholesale organizations. These new organizations are large enough to operate modern warehouses and transport facilities, and to organize sales and book-keeping in a most efficient manner. They provide the wholesale service much cheaper than the traditional wholesaler with his many agents and representatives.

101. Africanization of trade combined with its rapid expansion gives Kenya the opportunity to benefit from the experience of the industrialized countries and to avoid the mistake of expanding further an old-fashioned, expensive and cumbersome wholesale trade. Through the Kenya National Trading Corporation a modern wholesale system will be built up, with the primary purpose of fostering Africanization of trade and serving the economy as a whole more efficiently.

102. Shopping Centres.—Expansion of retail trade does not necessarily require heavy investment in buildings and other facilities. Traditional outdoor markets can handle a much larger variety of goods than they do at present. However, there are limits to the goods that can be handled without proper storage facilities. There will be a need for additional shopping centres in both urban and rural areas. Such development must be carefully planned and the Government will help in planning such centres by studying needs of various areas. Premature building of shopping centres that are too large would lead to empty shops, losses to the promoters and waste of national assets. In urban areas planning of shopping centres is closely related to new housing development. In rural areas planned location of trading centres is equally important. So far trading centres in rural areas have been established without proper planning. In future, sites of trading centres will be chosen only after complete examination of other planned developments. In particular there is need for co-ordination between the planning of market facilities and road building. If possible new roads should serve existing trading centres which in turn should be modernized, but if new roads mean that old centres lose their importance, new centres in more suitable locations will be established.
103. Co-operatives.—In countries where the co-operative movement in agriculture is highly developed, the co-operative societies not only process and market the farmer’s produce, but also supply at minimum cost part of his production inputs and, occasionally, consumer goods. Only a few of Kenya’s agricultural co-operatives have thus far extended their activities into the supply function but the number will increase with better training of co-operative society staff and other measures outlined in Chapter 6. The Plan period will see some development of purely consumer co-operatives although in general agricultural co-operatives will receive priority for Government assistance.

Credit to Commerce

104. Credit is needed to establish a new commercial enterprise; to take over an existing firm; to build facilities (shops, warehouses, etc.); to expand operations; and finally, to serve as working capital for current operations. For the first four purposes some long-term credit is frequently needed while credit which serves as working capital takes the form of short-term commercial bank credit. It is evident that during and considerably beyond the Plan period the Government must help the large majority of Africans in commerce to obtain the credits which they need, and this means that the Government will participate in financing a substantial part of the expansion of the commerce during the Plan period. The Government cannot do this entirely out of its own financial resources, and there is no hope of obtaining adequate foreign loans for the purpose. It is therefore necessary to channel the resources of the private credit system, especially the commercial banks, into financing African-owned commercial enterprises.

105. In order to ensure credit for African businessmen the Government will—

(i) expand training facilities and trade extension services in order to ensure that a rapidly growing number of Africans become eligible for credit;

(ii) where strictly necessary, offer long-term credit through its own organizations;

(iii) increase the short-term credit available by establishing a National Commercial Bank; and

(iv) persuade the commercial banks to offer credit to African businessmen. Qualified trade development officers who will be posted to districts will be available to guide the operations of inexperienced Africans. They will serve as secretaries to local trade development committees the major purpose of which will be to recommend Africans who will be eligible for Government support to establish themselves in trade or expand their present trade activities.

106. Short-term Credit.—Successful traders will normally be able to obtain loans from the commercial banks on the basis of the agreement which the Government will seek to conclude with the banks for this purpose. This agreement will rest on the principle that the banks will lend to traders, on normal
commercial terms and against the normal security for such loans, after recom-
mendation. As part of the agreement the Government will ensure the com-
mmercial banks against losses above an agreed level. One advantage of this
system is that the staff of the commercial banks will help in advising inexperi-
enced traders and in scrutinizing borrowers. When established, the National
Commercial Bank will play a prominent part in this system.

107. Long-term Credit.—Long-term credit is needed to cover credit needs
over and above those which can be obtained as normal short-term commercial
credit. Traders with resources of their own do not normally need any special
arrangements for long-term credit. They may, however, need long-term credit
for building purposes, and will normally be able to obtain this against security
in retail premises or warehouses. Most of the Africans who will enter trade
do not have enough resources of their own to do without some special arrange-
ment for long-term credit. The Government will review the system of credit
to traders with the view to make a clear distinction between normal com-
mmercial credit and credit on which longer repayment periods will be granted.
Without prejudicing the final decision in this respect, long-term credit will be
supplied through the I.C.D.C. and the Kenya National Trading Corporation.
The I.C.D.C. will provide long-term capital for new establishments and expan-
sions of African commercial enterprises while the Kenya National Trading
Corporation will provide some credit on longer terms for trading activities
within the framework of its own programme. All loan applications will have
to be screened by the trade development committees before reaching these
corporations.

108. The National Commercial Bank.—The commercial banking system in
Kenya is fairly well developed, but the banks are branches of foreign banks.
This situation has its advantages, but it is nevertheless desirable that Kenya
should gradually develop its own national commercial banking system. At the
present stage of Kenya’s development this can only be done on the initiative
of the Government, and the Government has decided in principle to establish
a National Commercial Bank. Through this bank the Government will channel
funds into economic activities which for one reason or another suffer from
lack of normal commercial credit facilities. The bank will, of course, be run
on a commercial basis, but it will be less tied to present clients than the exist-
ing banks. It will take time before the National Commercial Bank can play a
dominating role in Kenya’s banking system, but effort will be made to build it
up quickly so that it can diversify the supply of credit, promote Africanization,
and help in gathering savings.

109. Small Traders’ Loans Scheme.—The Government has since December
1964 operated a commercial loans scheme under I.C.D.C. The total lending
has until now been fairly small, about £75,000, with £500 as the minimum
amount lent to any individual borrower. This scheme will have to be
reorganized and expanded considerably so that net lending can be increased
to £100,000 per year. The I.C.D.C. will be allocated a number of experts to
assist African traders in dealing with the numerous practical problems which arise when a business enterprise is set up and firmly established. In addition, the Government is now establishing thirty-one Trade Development Joint Boards, which, together with four Municipal Loans Committees and Fishermen’s Loans Committee, will cover every area of the country. These bodies will allocate funds under the Small Traders’ Loans Scheme, whose objectives include—

(i) promoting the expansion of African business enterprises by granting loans for working capital to promising individuals or concerns;
(ii) developing African businesses by injecting additional capital into promising small businesses;
(iii) building up credit-worthiness of African traders;
(iv) ensuring availability of a wider selection of goods in rural trading centres.

This scheme is designed to help small traders who cannot obtain standard commercial credit from banks and suppliers or loans through I.C.D.C., and it has now been established that successful use of a small Government loan opens the door to such channels. Furthermore, these loans provide other benefits—

(i) the loans are for development and issued for periods up to five years, which gives the borrower time to build up his capital and gain experience in financial matters;
(ii) in many cases these loans permit a trader to purchase in bulk at fair wholesale prices for the first time;
(iii) the most important result of receiving a Government loan is the follow-up by the trade development officer who can advise and assist in business matters and put promising traders in touch with banks and commercial houses seeking reliable distributors.

110. The major emphasis of the loan scheme at the present time is to accelerate the movement of Africans into retail trade. With regard to wholesale trade, the chief instrument for the Government’s policy will be the Kenya National Trading Corporation which will become the sole wholesale distributor of certain commodities, especially those which are mainly consumed by Africans. The Corporation will also participate in the wholesale distribution of a wider range of goods.

111. In developed areas of the country situated near main centres of population there is less need for loans to shopkeepers as such, for many thriving African businesses already exist. In such areas more emphasis is to be placed on development of and assistance to small artisan industries and specialized businesses. In these areas the progressive trader has been and can be assisted by larger commercial loans from the I.C.D.C., which means that the resources of the Small Traders’ Loans Scheme can be used to promote other forms of
African business enterprise. Thirteen more trade development officers have recently been employed to work in the field and will help supervise the scheme. These new officers have been given intensive training including all aspects of the control and operation of the loans scheme. As officers of the Ministry of Commerce, Industry and Co-operative Development, they will co-ordinate the efforts of the I.C.D.C. and the Kenya National Trading Corporation in the field with a view to assisting emergence of viable African enterprises which can compete on equal terms with old-established concerns.

112. In order to maintain effective control over this programme, a Trade Promotion Division has been established in the Ministry of Commerce, Industry and Co-operative Development. A Manual of Instructions has also been issued to all Boards setting out in detail guiding policies so that the funds available can be used as effectively as possible. The Government has decided to allocate £50,000 during the scheme's first year of operation. The distribution of funds will favour less developed areas of Kenya. The Small Traders' Loans Scheme represents a first attempt to use trade development officers in co-operation with trade development committees in order to encourage the establishment of new African traders on a sound basis. The scheme will be continued and expanded until it can be replaced by the use of commercial banks for the same purpose.

113. **The Kenya National Trading Corporation Limited.**—The successful establishment of this State trading organization in 1965 was a major achievement. The K.N.T.C. has already had an impact in wholesale distribution and has brought about a significant Africanization of sugar distribution, to the extent that 70 per cent of sugar consumed is now channelled through African-owned and operated concerns. The K.N.T.C. has also managed to introduce Africans into the distribution of rice. The Corporation's future development will have a particularly significant impact on the wholesale trade and the distribution system in Kenya's rural areas. The Corporation will continue to receive Government support to enable its expansion to the extent required.

114. The Government will immediately review the tasks of the K.N.T.C., outline its major objectives and proceed with detailed studies of how to implement a new and expanded programme. The major aspects of this expanded programme are already evident, and include reorganization of wholesale trade and participation in import and export business.

115. **Trade Practices.**—The effects of Government actions to expand trading facilities, rationalize trade methods and strengthen competition will not be felt fully for some years. In the meantime action will be taken to supervise, control and reduce restrictive business practices, introduce fair trade practices and control and unify prices on essential consumer goods, especially foodstuffs. Legislation against restrictive business practices will be introduced. Trade organizations will also be asked to co-operate with the Government in promoting fair trade practices.
116. Export Promotion.—In the past, Kenya has been exporting its agricultural commodities mainly to Europe, and its manufactures to Uganda and Tanzania. In future it will be necessary to cast the net wider in order to reduce dependence on a few markets, and to tap new markets for the planned increases in output. In the past many promising markets in East and Central Africa and in the Indian Ocean area have been virtually neglected, and the Government is now embarking on a vigorous programme of export promotion. The Export Promotion Council will be reorganized and strengthened; trade missions consisting of businessmen and officials will be regularly sent abroad to establish contacts; and the Government will appoint commercial attachés to be attached to Kenya embassies abroad. More exports will be needed not only to balance our payments with the rest of the world but also to give our new industries a sufficiently large market for mass production at low prices. A great number of trade agreements have already been made with countries which have not in the past been our traditional customers. These agreements will be followed now by active sales efforts, especially for agricultural products.

C—The Construction Industry

117. The construction industry is a key industry in a developing country in which a large proportion of national resources is being devoted to formation of capital. Normally at least half of capital formation will consist of buildings and other types of construction. The construction industry in Kenya has been depressed for a number of years, although in 1965 there were strong signs of a revival. Admittedly the very rapid expansion of construction activities in the early fifties was partly due to the Emergency which led to a large volume of military construction and related works. The volume of residential building and civilian construction in general was, however, also high. The peak year was 1957 when the contribution of the construction industry to the national income reached almost £10 million, and this figure fell to £4.3 million in 1964. Reports from construction companies suggest that the level of activity was somewhat higher in 1965.

118. The Development Plan will lead to a big increase in the activities of the construction industry. Thus in 1970 it is expected that its contribution to national income will reach £12 million. In volume this may not be appreciably higher than the exceptional level of 1957 since some increase in construction costs has taken place. The latest information on the structure of the construction industry is available in the Census of Industrial Production, 1963. In that year about 35 per cent of the net output in construction originated from private construction firms. This represents a sharp drop from 1957 when private firms accounted for 48 per cent of the net output. It is expected that the major part of the expansion of the construction industry will take part in the private sector. There are certainly many construction firms which have substantial unused capacity and which can expand their operations very rapidly when demand calls for it. The Government wants to take the opportunity, however, to stimulate African participation in the construction industry. This is why
the National Construction Company will be established in order to undertake some major construction works and to assist small contractors in developing their activities.

119. Hardly any industries offer such a wide scope for different production techniques as the construction industry. In highly industrialized countries with severe shortages of unskilled and cheap labour a range of construction machinery has been developed which drastically reduces demand for labour. To use such labour-saving machinery extensively in Kenya would mean almost a waste of capital and foreign exchange in the purchase of such machinery, spare parts and in maintenance expenditure and fuel. It cannot be denied, however, that technological progress in the construction industry has been so rapid that many operations can be undertaken cheaper by machinery than by the use of cheap labour. Moreover, in some cases the use of machinery will be necessary because it shortens the construction period very considerably. This is the case of many large construction projects, such as trunk roads, power stations and large factories which will represent dead capital until they are completed and can be put in use. The Government will keep this situation under review and will promote measures which would encourage use of manual methods wherever cost discrepancies are not prohibitive.

120. At present around 30,000 people are employed in the construction industry. It is difficult to project increases in employment in it up to 1970 as employment depends so strongly on the composition of the construction programme and on the technical methods chosen. It is likely though that employment in this key sector will double during the Plan period. In other words, the construction industry will create almost twice as many additional jobs as manufacturing industries.

121. National Construction Company.—Preparations are under way to establish a National Construction Company, the principal objective of which will be to promote African entrepreneurship and to bring more African contractors into the construction industry. The National Construction Company should provide the means to overcome the main barriers to the development of African contracting firms. These barriers are lack of knowledge of managerial and commercial administrative matters, inexperience in site organization, insufficient financial means including difficulties in obtaining credit from suppliers of materials, and inadequate plant and transportation equipment. One of the essential functions of the company will be to provide practical training opportunities to Africans, in particular in the fields of tendering and contracting procedures, site organization, building techniques, the keeping of accounts and costing of work. The National Construction Company will also undertake some construction activities on its own account.

122. The actual form which the National Construction Company should take is subject to further investigation. Technical assistance will be sought, especially for the training and extension services programme.
CHAPTER 9—BASIC SERVICES

A—Roads

The execution of an extensive programme for the development of all types of roads will be undertaken to enable communications to keep pace with social and economic development in Kenya. The country's road system consists of about 26,000 miles of classified roads, about 3,750 miles of which are trunk roads. The vast majority of these roads are of earth or gravel standard, and only about 940 miles of the trunk roads had bitumen surfaces by the middle of 1965. In wet weather even some of the more important gravel trunk roads are subject to temporary closure to heavy vehicles so that the trunk road system at its present state of development cannot be considered an entirely reliable source of transport.

2. Since 1960, Kenya has had a balanced road construction and improvement programme, in which £4.8 million was spent on trunk roads under a Contractor Finance Scheme and about £2 million on lesser trunk and secondary roads with the help of a World Bank loan. Continued development of trunk roads will be carried out during the Plan period at a total capital expenditure of about £11.9 million. This emphasis on trunk roads will not, however, be at the expense of programmes of road building aimed at fostering continued development of agriculture. In giving priorities to individual trunk and secondary road projects, the agricultural potential of the area to be served will be a major consideration. Secondary and minor roads in support of the development programmes for agriculture, settlement, tourism and fisheries will require a total investment of £9.6 million over the Plan period. Total capital expenditure for roads during the Plan period will therefore be about £21.5 million. In evaluating this extended programme, the strategic role of road transport in the process of economic growth should be borne in mind. The present total recurrent expenditure incurred by the Government and local authorities, mainly for the maintenance of roads, amounts to approximately £2 million, of which about £1.6 million is spent by the Central Government. The total recurrent cost may be expected to increase to about £2.5 million per annum by 1970.

3. The Central Government is responsible for construction and maintenance of all national and international trunk roads, and will make grants for the maintenance of all secondary roads. Improvement and maintenance of minor roads are the responsibility of the respective local authorities. The raising of loans for development projects is undertaken by Government. Funds may be provided from internal revenue for certain specific projects connected with special development programmes, such as tea growing. In the construction and improvement of national and international trunk roads, the Government will, for the most part, use contractors, because the present capacity of the Ministry of Works to undertake these works is insufficient.
In the construction and improvement of lesser trunk roads, secondary and minor roads, and the Nairobi-Mombasa and the Nairobi-Addis Ababa roads, however, the Government expects to use its own resources in the Ministry of Works and the National Youth Service, and the resources of local authorities to the limit of their capacities. Where Government or local authority resources are insufficient, use of contractors may be needed for the balance of the work. The maintenance of secondary roads will normally be carried out by local authorities, partly using Government grants. In some cases local authorities may also be authorized to carry out the maintenance of national and international trunk roads as agents of the Government. Generally, however, the maintenance of these latter roads will be the responsibility of the Government itself, through the Ministry of Works' provincial organization.

4. The Government will build up sufficient staff to carry out forward planning and investigations for future road development, as well as tasks of supervision and inspection to cover road maintenance works carried out directly or on its behalf. In addition, Government will build up sufficient staff to design and supervise construction for a basic work load of development projects. The National Construction Company which will be established soon, will also participate in road construction, and thus contribute to Kenya's capacity to extend and maintain its road system.

5. The number of vehicles is a good indicator of the need for roads, although a better road system will lead to more vehicles. The present number of licensed vehicles in Kenya is about 90,000, of which almost 50 per cent are cars, 25 per cent light dual-purpose vans and 12 per cent lorries, trucks and trailers. The increase, since 1959, in the number of registered trailers may indicate a certain trend towards the use of heavier cargo transport vehicles and may explain, to some extent, the decline which can be observed since 1960 in the number of registered lorries and trucks. An additional explanation for this may be that the present road facilities and licensing laws discourage and in some cases forbid the carriage of goods by road. The Government's principal policy for road transport licensing will be reviewed with a view to providing a well co-ordinated overall transportation system to serve the country's needs in the most efficient way. The number of motor-cars increased at a rate of 5 per cent per annum between 1958 and 1964, in spite of a slight drop in 1963. It is expected that the increase will be about 8 per cent per year in the near future. Estimates of road traffic are very uncertain, but the total number of ton-miles covered by commercial vehicles seems to have remained fairly constant during recent years. Studies based on traffic counts and origin-destination inquiries such as those undertaken by the East African Transport Planning Research Unit (Kenya) at various sites spread over the country, may make valuable contributions to the future planning of an optimum pattern for road construction and improvement, linked with the spatial dispersion of economic activity in Kenya.
6. Preliminary estimates show that the main trunk roads listed for development—except for the Nairobi-Addis Ababa Road—have rates of return of the order of 30 per cent per year or more. This is based on traffic counts projected from past trends and on savings to vehicle operators and savings on maintenance. On this basis they have a greater priority than other possible trunk road improvements. The programme for 1967 to 1970 is not rigid, and changes in traffic patterns or increased knowledge of these patterns during the Plan period may cause alterations.

7. Of the main trunk roads shown in the programme, work is already in progress on the Nairobi-Mombasa Road using funds provided by the British Government, although finance for the balance of this work has not yet been finally secured. More than half of the 307 miles of this road has now been bituminized. The Ulu-Sultan Hamud gravel realignment, providing work for 550 men under the Unemployment Relief Programme, will be ready for bituminization by May 1966. One year after that, the portion from Kibwezi to Mtito Andei, on which 750 men are employed under the Relief Programme, will be completed. Both these sections will then be bituminized immediately thereafter. Negotiations with the United States Agency for International Development for finance for the Athi River-Namanga and Eldoret-Tororo roads are under way.

8. An agreement has been negotiated with the International Development Association (World Bank) for a loan to cover 75 per cent of the estimated cost of the following main road projects already in progress:

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Embu—Sagana</td>
<td>175,000</td>
</tr>
<tr>
<td>Kisumu—Yala, and Bomala—Busia</td>
<td>205,000</td>
</tr>
<tr>
<td>Ahero—Kisii, and Kijaur—Sotik</td>
<td>290,000</td>
</tr>
<tr>
<td>Kiganjo—Nanyuki</td>
<td>400,000</td>
</tr>
<tr>
<td>Mombasa—Malindi (part)</td>
<td>95,000</td>
</tr>
<tr>
<td>Miscellaneous Bridges</td>
<td>85,000</td>
</tr>
<tr>
<td>Thika—Gatanga</td>
<td>45,000</td>
</tr>
<tr>
<td>Chevakale—Kaimosi</td>
<td>100,000</td>
</tr>
<tr>
<td>Add for planning, supervision and contingencies</td>
<td>456,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>£2,150,000</strong></td>
</tr>
</tbody>
</table>
Negotiations will be opened with the International Development Association for financing additional main trunk road projects to be implemented when the present programme is completed in 1966/67. This further programme contains:

<table>
<thead>
<tr>
<th>Route</th>
<th>Description</th>
<th>Cost (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malindi—Kilifi</td>
<td>38 miles of bituminization</td>
<td>300,000</td>
</tr>
<tr>
<td>Kakamega—Broderick Falls</td>
<td>26 miles reconstruction and gravel surfacing.</td>
<td>170,000</td>
</tr>
<tr>
<td>Mombasa—Lunga Lunga</td>
<td>25 miles of bituminization</td>
<td>250,000</td>
</tr>
<tr>
<td>Kisumu—Kisii</td>
<td>50 miles of bituminization</td>
<td>500,000</td>
</tr>
<tr>
<td>Embu—Ena</td>
<td>10 miles of bituminization</td>
<td>120,000</td>
</tr>
<tr>
<td>Eldoret—Kapsabet</td>
<td>28 miles of bituminization</td>
<td>300,000</td>
</tr>
<tr>
<td>Kisii—Isebania</td>
<td>55 miles reconstruction and gravel surfacing.</td>
<td>330,000</td>
</tr>
<tr>
<td>Nanyuki—Meru</td>
<td>40 miles reconstruction and gravel surfacing.</td>
<td>350,000</td>
</tr>
<tr>
<td>Miscellaneous Bridges, etc.</td>
<td>Add for planning, supervision and contingencies.</td>
<td>680,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>£3,200,000</strong></td>
</tr>
</tbody>
</table>

9. Provision is made for surveys and construction of one road where existing traffic would not normally justify development at present, but which it is thought may have a considerable development potential. This is the Nairobi-Addis Ababa Road, the Ethiopian part of which is expected to be completed by 1970. The construction of the 300 miles of road from Isiolo to the Ethiopian border would require an estimated investment of £2 million if constructed to gravel standard. Finance for part of the cost of this project will be sought from external aid sources. In order to complete the work by 1970, it is the intention to start construction on Kenya's part of the road as early as possible. Since the Ministry of Works' Roads Branch is presently overloaded with work, arrangements have been much for a firm of consulting engineers to carry out not only an engineering feasibility study, but also a full preliminary design for the road, and to undertake supervision and direction of the road construction by the National Youth Service which will be the construction agency. Provision is also made in the programme for a feasibility study concerning a spine road between Nakuru and Lodwar, through a relatively undeveloped area of Kenya where it is thought possible that the general development of the whole area, including tourism and further fisheries development in the Lake Rudolf area, might be stimulated by better roads.

10. The programme contains a number of miscellaneous roads, including many secondary and minor roads, required in support of the Government's development programmes for agriculture, settlement, tourism and fisheries. So far, finance has been secured only for the tea roads, but negotiations are under way or will be opened as soon as possible to secure finance for
the balance of these projects. A plan has been prepared for the construction of 75 miles of major roads, 135 miles of distribution roads and 180 miles of minor access or feeder roads to serve sugar development projects in the Miwani, Chemelil and Muhoroni areas. The total capital cost of this road project will amount to £3 million, of which £2\(\frac{1}{2}\) million is included in the present programme, and £\(\frac{1}{2}\) million will be carried over into 1970/71. A programme for the construction of roads to serve tourist developments in various areas of the country, which will require a capital expenditure of about £1 million, is also included. Some non-public roads within national parks and game reserves are included under these tourist roads. Forestry roads in forest areas that will supply the planned pulp and paper mill at Broderick Falls are not included in the programme, since the Forest Department will deal with this as in the past. The item “Contributions to Municipal Road Development” is intended to cover Government’s contribution towards the cost of trunk and secondary road development within municipalities. Other projects shown in the programme include construction work by the National Youth Service on the Thika-Seven Forks Road which is required in support of the Kindaruma dam project, and which is shown as being continued on to Kitui; and roads given priority by the provinces to meet local needs and development.

11. An attempt has been made to select the most urgent schemes proposed by the provinces, but as yet no finance has been secured. A proposed construction programme has been prepared, and this programme has been divided into three overlapping phases, the last of which will not be completed within the Plan period. Only the Phase I programme has been set out in detail. It would be premature at this stage to select projects for Phases II and III of the programme, because provincial priorities may change as general development proceeds.

<table>
<thead>
<tr>
<th>Phase I</th>
<th>1966/67</th>
<th>1967/68</th>
<th>1968/69</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Mwatate—Wundanyi</td>
<td>£35,000</td>
<td>£35,000</td>
<td>—</td>
<td>£70,000</td>
</tr>
<tr>
<td>(2) Garsen—Lamu</td>
<td>£15,000</td>
<td>£10,000</td>
<td>—</td>
<td>£25,000</td>
</tr>
<tr>
<td>(3) Athi River Bridge and approaches on Kitui—Kibwezi Road</td>
<td>£20,000</td>
<td>£50,000</td>
<td>—</td>
<td>£70,000</td>
</tr>
<tr>
<td>(4) Riuki—Mangu</td>
<td>£15,000</td>
<td>£30,000</td>
<td>£35,000</td>
<td>£80,000</td>
</tr>
<tr>
<td>(5) Embu—Meru Old Road</td>
<td>£40,000</td>
<td>£50,000</td>
<td>—</td>
<td>£90,000</td>
</tr>
<tr>
<td>(6) Gilgil—Ol Joro Orok</td>
<td>£60,000</td>
<td>£80,000</td>
<td>£85,000</td>
<td>£225,000</td>
</tr>
<tr>
<td>(7) Thomson’s Falls—Nanyuki</td>
<td>£10,000</td>
<td>—</td>
<td>—</td>
<td>£10,000</td>
</tr>
<tr>
<td>(8) Kakamega—Bungoma via Mumias</td>
<td>£20,000</td>
<td>£40,000</td>
<td>—</td>
<td>£60,000</td>
</tr>
<tr>
<td>(9) Isiolo—Wajir (Habaswein Causeway)</td>
<td>£15,000</td>
<td>—</td>
<td>—</td>
<td>£15,000</td>
</tr>
<tr>
<td>(10) Miriu Bridge</td>
<td>£20,000</td>
<td>£10,000</td>
<td>—</td>
<td>£30,000</td>
</tr>
<tr>
<td>(11) Kisii—Manga</td>
<td>£10,000</td>
<td>£20,000</td>
<td>—</td>
<td>£30,000</td>
</tr>
<tr>
<td>(12) Homa Bay access road</td>
<td>£30,000</td>
<td>£40,000</td>
<td>—</td>
<td>£70,000</td>
</tr>
<tr>
<td>(13) Widening of Kericho—Sotik Road</td>
<td>£8,000</td>
<td>£7,000</td>
<td>—</td>
<td>£15,000</td>
</tr>
<tr>
<td>Contingencies</td>
<td>£30,000</td>
<td>£100,000</td>
<td>£30,000</td>
<td>£160,000</td>
</tr>
<tr>
<td>Total</td>
<td>£328,000</td>
<td>£472,000</td>
<td>£150,000</td>
<td>£950,000</td>
</tr>
</tbody>
</table>
### Table 1.—Estimated Expenditure—Roads

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
</tr>
<tr>
<td><strong>Main Trunk Roads</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athi River—Namanga</td>
<td>30,000</td>
<td>100,000</td>
<td>340,000</td>
<td>530,000</td>
<td>530,000</td>
<td>1,530,000</td>
</tr>
<tr>
<td>Eldoret—Tororo</td>
<td>30,000</td>
<td>100,000</td>
<td>370,000</td>
<td>370,000</td>
<td>—</td>
<td>870,000</td>
</tr>
<tr>
<td>Nairobi—Mombasa</td>
<td>650,000</td>
<td>750,000</td>
<td>630,000</td>
<td>—</td>
<td>—</td>
<td>2,030,000</td>
</tr>
<tr>
<td>Nairobi—Addis Ababa</td>
<td>150,000</td>
<td>450,000</td>
<td>500,000</td>
<td>500,000</td>
<td>400,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>I.D.A. Loan Programme—Credit 70 KB</td>
<td>800,000</td>
<td>1,350,000</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2,150,000</td>
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<tr>
<td>Proposed Further Programme</td>
<td>—</td>
<td>—</td>
<td>1,100,000</td>
<td>1,100,000</td>
<td>1,000,000</td>
<td>3,200,000</td>
</tr>
<tr>
<td>Land Acquisition</td>
<td>15,000</td>
<td>50,000</td>
<td>50,000</td>
<td>50,000</td>
<td>35,000</td>
<td>200,000</td>
</tr>
<tr>
<td><strong>Total Main Trunk Roads</strong></td>
<td>1,675,000</td>
<td>2,800,000</td>
<td>2,990,000</td>
<td>2,550,000</td>
<td>1,965,000</td>
<td>11,980,000</td>
</tr>
<tr>
<td><strong>Secondary and Other Roads</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tea Roads</td>
<td>150,000</td>
<td>690,000</td>
<td>500,000</td>
<td>180,000</td>
<td>—</td>
<td>1,520,000</td>
</tr>
<tr>
<td>Chemelil—Muhoroni Area</td>
<td>100,000</td>
<td>900,000</td>
<td>900,000</td>
<td>500,000</td>
<td>350,000</td>
<td>2,750,000</td>
</tr>
<tr>
<td>Agricultural Roads</td>
<td>30,000</td>
<td>150,000</td>
<td>260,000</td>
<td>294,000</td>
<td>300,000</td>
<td>1,034,000</td>
</tr>
<tr>
<td>Settlement Area Roads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourist Roads</td>
<td>30,000</td>
<td>50,000</td>
<td>200,000</td>
<td>100,000</td>
<td>100,000</td>
<td>450,000</td>
</tr>
<tr>
<td>Fisheries Roads (between Kilifi and Ferguson’s Gulf)</td>
<td>5,000</td>
<td>50,000</td>
<td>245,000</td>
<td>—</td>
<td>—</td>
<td>300,000</td>
</tr>
<tr>
<td>Contributions to Municipal Road Development</td>
<td>500,000</td>
<td>750,000</td>
<td>500,000</td>
<td>500,000</td>
<td>750,000</td>
<td>500,000</td>
</tr>
<tr>
<td>Thika—Seven Forks—Kilifi Road</td>
<td>165,000</td>
<td>180,000</td>
<td>115,000</td>
<td>—</td>
<td>—</td>
<td>460,000</td>
</tr>
<tr>
<td>Miscellaneous Road Projects</td>
<td>98,500</td>
<td>60,000</td>
<td>—</td>
<td>—</td>
<td>158,500</td>
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<tr>
<td>Phase I Programme</td>
<td>328,000</td>
<td>472,000</td>
<td>150,000</td>
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<td>920,000</td>
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<tr>
<td>Phase II Programme</td>
<td>231,000</td>
<td>432,000</td>
<td>105,000</td>
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<td>—</td>
<td>750,000</td>
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<tr>
<td>Phase III Programme*</td>
<td>300,000</td>
<td>400,000</td>
<td>300,000</td>
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<td>300,000</td>
<td>1,500,000</td>
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<tr>
<td>Unemployment Relief Schemes</td>
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<td>71,000</td>
</tr>
<tr>
<td>Planning and Engineering</td>
<td>75,000</td>
<td>75,000</td>
<td>85,000</td>
<td>95,000</td>
<td>100,000</td>
<td>430,000</td>
</tr>
<tr>
<td><strong>Total Secondary and Other Roads</strong></td>
<td>758,500</td>
<td>2,579,000</td>
<td>3,070,000</td>
<td>1,851,000</td>
<td>1,355,000</td>
<td>9,613,500</td>
</tr>
<tr>
<td><strong>Total Roads</strong></td>
<td>2,433,500</td>
<td>5,379,000</td>
<td>6,060,000</td>
<td>4,401,000</td>
<td>3,320,000</td>
<td>21,593,500</td>
</tr>
</tbody>
</table>

*Total scheme value of Phase III is £750,000 of which the remaining £450,000 is to carry over into 1970/71.

### B—Railways and Harbours

12. The East African Railways and Harbours Administration is a self-contained service of the East African Common Services Organization, and is operated under a single management. It provides a co-ordinated and integrated rail and inland waterway transport system for the three East African countries, including coastal harbour facilities and auxiliary road services. In 1964 the railway network consisted of approximately 3,700 route-miles of track and serviced 285 stations. In addition, East African Railways and Harbours is operating some 3,500 miles of inland waterways using thirty-five piers and jetties on Lakes Victoria and Tanganyika, and some 2,500 road-miles of haulage services on specific routes in Uganda and the Tanzania mainland. The Administration also provides harbour services at Mombasa, Dar es Salaam, Tanga, Mtwara, Kilwa, Masoko and Lindi along the coasts of Kenya and Tanzania.
13. In general, the financial position of East African Railways and Harbours has been satisfactory. Revenues have been sufficient to provide for adequate maintenance and accumulation of special reserves for normal replacements of equipment and structures, improvement of operations and a rates stabilization fund. Revenues have, of course, depended on traffic flow as well as on rates charged. In 1964, the total traffic moved on all railways, lake, marine and road services of East African Railways and Harbours was reported as: (a) 4.3 million passengers carried—a decrease of 20 per cent from 1960, mainly due to increased competition from bus services; (b) 4.1 million tons of freight and 1,630 million public ton-miles of freight traffic—an increase of 2.3 per cent over 1960 in quantity of freight carried, and an increase of 7.9 per cent over 1960 in ton-miles of freight traffic.

14. To meet development needs in the three countries, East African Railways and Harbours Administration is planning to spend a total of £37.5 million over the period 1965-1970. Of this amount, £31.3 million will be invested in the railway system, including East African Railways and Harbours’ water transport and road services, and £6.2 million in ports and harbours. The total operating expenditures of the Administration in the three countries are expected to increase from £26.6 million in 1965/66 to about £29 million in 1969/70. The development expenditure for the period 1965/67 will be financed mainly by a loan from the World Bank. A further loan has been obtained from the British Government for the purchase of locomotives. The fact that East African Railways and Harbours is operated in the three countries as a fully integrated enterprise in diverse fields of transportation, poses a very complex problem in allocating projected development and recurrent expenditures among the three countries. But on the basis of traffic volume and revenues, it may be expected that approximately £20 million of the planned capital investment for the period 1965-1970 relates to operations in Kenya, of which £16.7 million will be in railways, and the remaining £3.3 million in harbours.

15. Railways.—No major new railway track developments are envisaged in Kenya over the next five years. Planned capital expenditure in permanent way, yards and depots, stations, and signalling improvements will improve and increase the operational capacity of existing lines. The main emphasis will be on increased rolling stock capacity and improved efficiency of goods handling throughout the system. However, additional transportation facilities will be provided to serve the pulp and paper project at Broderick Falls which will require rolling stock and some additional track capacity at an estimated capital cost of £1.4 million.

16. Kenya is highly dependent on its export and import trade, which to a very large extent is handled by the railways. Consequently, the railways'
operational performance has a widespread influence on the economy and its development. There has been a good deal of discussion on whether the railways will be sufficiently flexible to handle the rapidly growing requirements of the country's economy, particularly with regard to the railways' capacity to transport goods with sufficient speed and in the most economical way. Doubts on the railways' ability to meet future demands arise from the periodic congestions in the port of Mombasa, an insufficiently rapid turn-round of rolling stock to relieve congestion, and slow speed in transportation. Although several of these occasional frictions in the services are not caused by factors inherent in the railway system as such, it is necessary to consider how the total transport network can be expanded most efficiently in the service of the country's economic development. In particular, the division of functions between railways and road transport throughout Kenya must be reviewed, and this may necessitate closing down some of the minor railway stations, especially on Nairobi-Mombasa line which parallels the realigned and bituminized Nairobi-Mombasa road to be completed in 1967/68. In carrying out this review, such factors as the economic advantages and capacities of each system, the existing railway differential tariff system which indirectly subsidizes several agricultural and industrial activities, and the present system of licensing road traffic must be taken into account and changed where necessary. Because of the complexity of the problems involved, and the need to have a co-ordinated overall transportation system providing maximum benefit to the country's economy, an extensive study is required.

17. Work is being done to adapt docks, piers and wharves at Kisumu to higher lake levels. A waggon ferry terminal will be constructed during the Plan period.

18. Harbours.—The total quantity of cargo handled at Kilindini Harbour increased by 53 per cent between 1960 and 1964. In order to meet the demands placed on it, a total capital investment of £3.3 million is planned over the Plan period. The main developments will be to put berths 13 and 14 into operation, fully equipped with cranes and sheds. In addition, the programme includes the renewal of sheds 7 and 8 as well as more shore and floating plant and machinery. Besides increasing the physical capacity of the port, efforts will be made towards better use of the existing working areas and improvement of the cargo-handling services.

19. In view of the occasionally serious congestion in the harbour of Mombasa, having severe repercussions in many sectors of the country's economy, and considering the need for more capacity to cope with increasing traffic in the near future, the Government will review the administrative and organizational structure of the harbour.
**Table 2—Estimated Expenditure in Kenya—Railways\(^*\)**

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<thead>
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</thead>
<tbody>
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<td><strong>Existing Lines</strong></td>
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<td></td>
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<tr>
<td>Permanent Way</td>
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<td>950,000</td>
<td>665,000</td>
<td>n.a.</td>
<td>100,000</td>
<td>n.a.</td>
</tr>
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<td>Station Buildings</td>
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<td>135,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td>Machinery and Equipment</td>
<td>70,000</td>
<td>100,000</td>
<td>95,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<td>Telecommunications</td>
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<td>100,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Miscellaneous Works</td>
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<td>25,000</td>
<td>25,000</td>
<td>n.a.</td>
<td>138,000</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,030,000</td>
<td>1,490,000</td>
<td>1,020,000</td>
<td>850,000</td>
<td>1,088,000</td>
<td>5,478,000</td>
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<td><strong>Rolling Stock</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locomotives and Equipment</td>
<td>500,000</td>
<td>1,075,000</td>
<td>—</td>
<td>n.a.</td>
<td>600,000</td>
<td>n.a.</td>
</tr>
<tr>
<td>Coaching Stock</td>
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<td>35,000</td>
<td>35,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Goods Wagons</td>
<td>1,470,000</td>
<td>1,155,000</td>
<td>1,285,000</td>
<td>n.a.</td>
<td>562,000</td>
<td>n.a.</td>
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<tr>
<td>Brake Improvement</td>
<td>25,000</td>
<td>125,000</td>
<td>—</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,035,000</td>
<td>2,390,000</td>
<td>1,320,000</td>
<td>1,100,000</td>
<td>2,262,000</td>
<td>9,107,000</td>
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<tr>
<td><strong>Manufacturing and Repairing Works and Plant</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Steamers, Tugs and Lighters</td>
<td>110,000</td>
<td>180,000</td>
<td>50,000</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Docks, Piers and Wharves</td>
<td>105,000</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>300,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Road Services</td>
<td>180,000</td>
<td>165,000</td>
<td>135,000</td>
<td>—</td>
<td>—</td>
<td>2,130,000</td>
</tr>
<tr>
<td>Staff Quarters</td>
<td>65,000</td>
<td>65,000</td>
<td>40,000</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>230,000</td>
<td>230,000</td>
<td>230,000</td>
<td>—</td>
<td>300,000</td>
<td>2,130,000</td>
</tr>
<tr>
<td><strong>Railway TOTAL (KENYA)</strong></td>
<td>3,720,000</td>
<td>4,415,000</td>
<td>2,680,000</td>
<td>2,250,000</td>
<td>3,650,000</td>
<td>16,715,000</td>
</tr>
</tbody>
</table>

*Including E.A.R. & H.'s water transport and road services. A detailed capital works programme for the years 1968/69 and 1969/70 will be determined by the end of 1966. For these years only totals are included.

†Including rolling stock, additional track capacity and contingencies required for pulp and paper factory.

**Table 3—Estimated Expenditure in Kenya—Harbours\(^*\)**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wharves, Quays and Jetties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mombasa—making Berths 13 and 14 operational</td>
<td>420,000</td>
<td>400,000</td>
<td>—</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Miscellaneous Works</td>
<td>25,000</td>
<td>10,000</td>
<td>10,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>445,000</td>
<td>500,000</td>
<td>20,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Floating Plant and Machinery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mombasa—renewal of Sheds 7 and 8</td>
<td>15,000</td>
<td>170,000</td>
<td>200,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Staff Quarters</td>
<td>15,000</td>
<td>15,000</td>
<td>10,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other Buildings</td>
<td>65,000</td>
<td>5,000</td>
<td>5,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>195,000</td>
<td>290,000</td>
<td>355,000</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
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<tr>
<td><strong>Harbours TOTAL (KENYA)</strong></td>
<td>650,000</td>
<td>740,000</td>
<td>270,000</td>
<td>750,000</td>
<td>900,000</td>
<td>3,310,000</td>
</tr>
<tr>
<td><strong>Railways TOTAL (KENYA)</strong></td>
<td>3,720,000</td>
<td>4,415,000</td>
<td>2,680,000</td>
<td>2,250,000</td>
<td>3,650,000</td>
<td>16,715,000</td>
</tr>
<tr>
<td><strong>OVERALL TOTAL Railways and Harbours in Kenya</strong></td>
<td>4,370,000</td>
<td>5,155,000</td>
<td>2,950,000</td>
<td>3,000,000</td>
<td>4,550,000</td>
<td>20,025,000</td>
</tr>
</tbody>
</table>

*A detailed capital works programme for the years 1968/69 and 1969/70 will be determined by the end of 1966. For these years only totals are included.

†Warehouse for pulp and paper factory.

### C—Civil Aviation

**Airports**

20. The improvement and extension of aerodrome facilities are particularly important to Kenya’s economy in order to enable civil aviation to perform effectively its growing role in internal and international transportation. Not only can international airlines provide major assistance in
attracting tourists to East Africa, but frequent air services will also be vital to the needs of commerce, to meet the travelling requirements of the business community and to provide for the transport of many types of cargo for which speed of delivery is essential.

21. The airports development programme over the Plan period amounts to £1,735,000. Capital expenditure in the first two years of the programme is comparatively modest (£135,000), covering mainly improvements to airports serving tourists, and planning the extension of Nairobi International Airport (Embakasi). The programme for the period 1967/68-1969/70 consists mainly of further development of Nairobi Airport (£900,000), and of Mombasa Airport (£600,000). In view of the East African policy of securing a wider spread of international air services between the three countries and because of the time needed to carry out detailed planning before site work can begin, these major projects will be undertaken in the second half of the Plan period. The aim will be to devise a scheme which is flexible as regards the extent of the development and timing. The annual recurrent expenditure needed for this development programme, including expenditure of the Directorate of Civil Aviation in Kenya, will rise from about £960,000 in 1965/66 to an estimated £1.6 million in 1969/70. Over the same period income from landing fees and other charges for use of airport facilities should increase substantially.

22. Nairobi Airport.—The Terminal Building at Nairobi International Airport, which was opened in 1958, was originally designed to handle 200,000 passengers annually. However, the airport has managed to handle much larger numbers of passengers, as shown in the Table below. This has been achieved through improvisation which has caused at times some inconvenience to passengers, especially during peak-periods.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Passengers Landed, Embarked and in Transit at Nairobi Airport ('000)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>196</td>
</tr>
<tr>
<td>1960</td>
<td>244</td>
</tr>
<tr>
<td>1961</td>
<td>302</td>
</tr>
<tr>
<td>1962</td>
<td>338</td>
</tr>
<tr>
<td>1963</td>
<td>367</td>
</tr>
<tr>
<td>1964</td>
<td>418</td>
</tr>
</tbody>
</table>

23. It is expected that by 1970 the total number of passengers to be handled by the airport will be double of what it is at present. If Nairobi Airport is to maintain standards of an international airport and continue to be a focus of a network of international air services in East Africa, its extension will be urgently required. In planning the airport's capacity, the daily and seasonal patterns of traffic are most important. If the distribution

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* The number of passengers in transit is counted once. The projections are based on the assumptions that tourist traffic will expand by 15 per cent and world air traffic by 10 per cent annually.
of arrivals and departures of aircraft over time is fairly even, an airport of a certain size can cope with many more passengers than when the traffic pattern has some high peaks during the time period. Unfortunately, the daily pattern of traffic at Nairobi Airport is very unequal: for most days of the week, it shows two very pronounced peaks. The possibilities of staggering traffic throughout the day seem to be rather small, particularly because Nairobi is a midway-station for most of the airlines calling at the airport.

24. The capacity of Nairobi Airport to handle passenger and freight traffic will therefore mainly be determined by the size of terminal buildings and the efficiency in passenger processing. Phased extensions of the terminal buildings will be undertaken with a view to tripling their capacity, while an immediate review of immigration and customs procedures will be undertaken to simplify and co-ordinate passenger processing.

25. The capacity of Nairobi Airport to handle freight will also be extended to meet the increasing demand. The accommodation available has remained unchanged since 1958, though the total quantity of freight handled (including mail) has doubled since that year. The average annual increase in the quantity of freight handled at the airport over the period 1959-1964 was 14 per cent, and this rate is likely to be maintained during the coming few years. Total freight, including mail, is expected to increase from 10,460,000 kilograms in 1964 to 22,960,000 kilograms by 1970.

26. The capacity of Nairobi Airport with regard to the number of aircraft movements is defined by the runway, loop, taxiway and part of the apron. The number of aircraft movements (excluding R.A.F., military, police, training, testing and private aircraft movements) increased from 6,900 in 1958 to 14,400 in 1964. Aircraft movements can be expected to increase during the coming five years. In addition, the need for capacity to accommodate testing and training movements is expected to increase substantially in 1966/67 and 1967/68, and to remain high in future years. However, the airport's runway of 13,500 ft. will be adequate for foreseeable needs, and the planned extension of Nairobi Airport will involve three major schemes—

(i) extension of the Terminal Buildings to provide three times the existing passenger and freight capacity. The estimated capital expenditure for this extension amounts to £700,000;

(ii) provision of a new aircraft parking apron for domestic and cargo services, at a capital cost of £100,000;

(iii) construction of a new taxiway from the turning loop to the apron, which will allow aircraft to taxi immediately to the parking apron, thus leaving the runway free for take-off and landing aircraft. The capital cost of this work is estimated to be £100,000.

27. Including expenditures planned for 1965/66 and 1966/67 on apron transport and the electrical ring-main at a cost of £14,000, the capital expenditure required for the extension of the airport is estimated at £964,000. The
annual recurrent expenditure needed may rise from £300,000 in 1965/66 to £540,000 in 1969/70. Prior to undertaking the planned extension, an early review of the plans by an expert on aircraft development would be very useful, and an application has already been sent to the International Air Transport Association to provide such an expert.

28. Mombasa Airport.—At Mombasa (Port Reitz), plans are under consideration to construct a 7,000-7,900-ft. runway, in order to provide an opportunity for big jet airliners to call at the airport. This would enable jet aircraft operating services and the package-tour industry to make use of Mombasa Airport. An estimated capital investment of £600,000 will be needed for this runway construction and for extension of the terminal buildings. Further and more detailed studies are required on the various aspects of this planned airport development at Mombasa, taking into account the development of communications and tourist industry in the Coast area, as well as the pattern of air services in East Africa. For the moment, however, a sum of £20,000 is being spent to provide a visual approach slope indicator and the re-siting of the aircraft hangar in order to increase the available apron space.

29. Other Airports.—The programme includes improvements at a number of other civil airports. At Malindi, which will receive a high priority in view of its tourist potential, it is planned to install night lighting (£25,000), to construct a control tower (£4,000) and improve the terminal facilities (£5,000). The plans include also provision for bituminizing runway surfaces at the airports of Kisumu and Wilson (Nairobi West) which will improve their operational characteristics. At Kisumu Airport the murram surface of the runway and apron is unsatisfactory for turbo-prop aircraft and will be bituminized to give a smoother dust-free surface (£50,000). Wilson Airport in Nairobi is extensively used for charter and private flying. The runways are partly tarmac and partly murram and £10,000 will be spent in the first half of the Plan period to enable additional lengths of runways to be bituminized. Garissa airstrip is at present being improved. It is the Government’s long-term policy to provide airstrips to all the provincial headquarters and later on to all district headquarters. Provision of £8,000 is made in the programme for the construction and improvement of airstrips in national parks to serve tourist traffic.

30. The expansion of air traffic will create a need for more operational and maintenance staff at the airports, and this will involve a requirement for housing in the airports’ vicinity. Additional housing will also be needed for aerodrome fire service personnel, sweepers and cleaners, and possibly for some administrative staff. The need will arise mainly at Nairobi and Mombasa airports and there may also be requirements elsewhere. An estimate of £15,000 is included for this purpose.
31. The planned development of airports means that staff training at various levels for the operation of airports requires due consideration. The main part of the training for this purpose is taking place in the Civil Aviation Training School, run by the East African Directorate of Civil Aviation at Wilson Aerodrome, for trainees of the three East African countries. The existing school activities are aimed at training 80 air traffic controllers, 140 telecommunications operators and 75 telecommunications engineers in a period of six years. Other such six-year courses are being planned to train 72 air pilots and 40 aircraft maintenance engineers. In this context, the training organized by the East African Meteorological Department which has a Regional Forecast Office at Nairobi Airport may also be mentioned. A few East African students are studying meteorology at University College, Nairobi, and as from April 1965, technical officers are being trained at the Regional Meteorological Training Centre at Nairobi. Training courses for technical assistants are held periodically at the Training School at Dagoretti Corner, Nairobi.

### Table 4—Estimated Expenditure—Airports

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>Nairobi Airport</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Terminal Buildings</td>
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<td>100,000</td>
<td>100,000</td>
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<td>700,000</td>
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<tr>
<td>Parking Apron</td>
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<td></td>
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<tr>
<td>Taxiway Extensions</td>
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<td>100,000</td>
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<td></td>
<td></td>
<td>50,000</td>
</tr>
<tr>
<td>Electrical Ring-Main and Apron Transport</td>
<td>5,000</td>
<td>9,000</td>
<td>14,000</td>
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<td></td>
</tr>
<tr>
<td>Mombasa Airport</td>
<td>14,000</td>
<td>6,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>620,000</td>
</tr>
<tr>
<td>Malindi</td>
<td>16,000</td>
<td>18,000</td>
<td>20,000</td>
<td>20,000</td>
<td>10,000</td>
<td>56,000</td>
</tr>
<tr>
<td>Kisumu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garissa</td>
<td>12,000</td>
<td>7,000</td>
<td></td>
<td></td>
<td></td>
<td>19,000</td>
</tr>
<tr>
<td>Wilson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Air strips in National Parks</td>
<td>5,000</td>
<td>3,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Staff Housing</td>
<td>10,000</td>
<td>5,000</td>
<td></td>
<td></td>
<td></td>
<td>15,000</td>
</tr>
<tr>
<td>Miscellaneous Works</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>62,000</td>
<td>73,000</td>
<td>460,000</td>
<td>525,000</td>
<td>615,000</td>
<td>1,735,000</td>
</tr>
</tbody>
</table>

### East African Airways

32. Commercial scheduled air services within Kenya, Uganda and Tanzania are provided by the East African Airways Corporation, which also operates scheduled external lines between East Africa and certain foreign countries. East African Airways is a self-sustaining statutory organization deriving its powers under the E.A.C.S.O. East African Airways Act, 1963. The Wheatcroft Commission, appointed by the Communications Ministerial Committee of the East African Common Services Organization in 1965 to inquire into the constitution of East African Airways, has in the main recommended the continuation of the present form of constitution in which links with the E.A.C.S.O. are less comprehensive than for the East African Railways and Harbours and Posts and Telecommunications Administrations. The financial structure of East African Airways is based on equal participation by the Governments of the three countries, in addition to a loan from the British Overseas Airways
Corporation to assist in financing the Comet 4 aircraft project. Apart from these contributions, the East African Airways' aircraft re-equipment programmes have been financed by depreciation funds and in later stages by profits and bank overdraft facilities guaranteed jointly by the three Governments.

33. At present East African Airways operates a fleet of three Comet 4, four Friendship F27, and nine DC3 aircraft. In addition, the Corporation is hiring one Comet 4 in order to meet the increasing demand. The increase in East African Airways' traffic is shown by the following operating statistics:

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers transported (millions of passenger-miles)</td>
<td>121</td>
<td>152</td>
<td>187</td>
<td>220</td>
<td>221</td>
</tr>
<tr>
<td>Freight transported (millions of ton-miles)</td>
<td>2.4</td>
<td>2.4</td>
<td>2.9</td>
<td>4.1</td>
<td>6.9</td>
</tr>
</tbody>
</table>

The Corporation's international traffic has been increasing steadily. The rate of growth in the traffic within the three East African countries has, however, been irregular, fluctuating in recent years between an annual growth of 3 and 27 per cent in terms of additional passenger miles. Many of the domestic services operate at a loss and are subsidized by the profitable international and intercontinental services. Losses on domestic services arise from steadily increasing costs, and a deliberate restraint as regards increases in fares and rates. The last upward revision of the basic structure of domestic fares and rates was as long ago as July 1956. East African Airways intends to continue this policy of avoiding increases in local fares and rates as long as the profitable international services permit. Fares and rates on international services are, however, governed by the decisions of the International Air Transport Association and are thus beyond the control of an individual airline.

34. The programme for East African Airways during this Plan period is based on continued expansion of the East African economy and continued growth of air traffic in general, which will lead to a rapid growth in demand for air transport services on the domestic and international networks. A special factor is the increasing importance of tourist travel and the measures being taken to develop the tourist industry. As the main part of its development programme, East African Airways has ordered three Super VC 10 aircraft and associated spares and equipment, involving a total capital expenditure of £11.2 million. In order to adapt the Corporation's route structure and frequencies of services to the operational capability of the three additional aircraft, a considerable extension of East African Airways' intercontinental network and services is being planned.

35. The Super VC 10s will release the Comet 4 aircraft for the present regional routes operated by Friendships for an increased frequency on some of these routes, for newly planned regional routes, and for service on the main
domestic trunk routes Entebbe-Nairobi-Mombasa-Dar es Salaam. The use of Comets on regional and domestic routes will be limited, however, because a number of the airports concerned provide facilities which are insufficient for use by Comets. The Friendship aircraft will be used on services now operated with DC3 aircraft and existing Friendship services will be expanded. An additional Friendship aircraft may probably be required for delivery in 1968, and is included in the Development Plan. The DC3 aircraft replacement programme is expected to start in 1968/69 at the earliest.

36. The considerable additional transport potential in the form of Comet and Friendship operation hours which will be available in late 1966, opens up the possibility of more non-scheduled traffic, which will be particularly important for the promotion of the tourist industry throughout East Africa.

37. In order to handle the new Super VC 10 aircraft, a large extension to the hangar and workshop buildings at the engineering base at Embakasi are under construction. A flight simulator for training of aircrew to operate the Super VC 10 and for subsequent routine checks is to be installed in 1966 at a cost of approximately £200,000. It is also planned to provide more housing at the Embakasi Village to accommodate some of the additional staff required over the 1966-1968 period.

38. Training.—The Corporation started training local people several years ago and is expanding this programme as rapidly as is consistent with the maintenance of the standards necessary in the various aspects of civil aviation. The commercial school provides training courses in sales, reservations and traffic procedures, and the cabin staff training school is responsible for equipping African cabin staff with a basic knowledge of their craft. The engineering school controls the instruction given to the young men enrolled under the approved indentured apprenticeship scheme. In addition to this, a number of African apprentices are undergoing engineering training overseas.

<table>
<thead>
<tr>
<th>TABLE 5—ESTIMATED EXPENDITURE—EAST AFRICAN AIRWAYS CORPORATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comet aircraft</strong></td>
</tr>
<tr>
<td><strong>Super VC 10 aircraft</strong></td>
</tr>
<tr>
<td><strong>Fifth Friendship aircraft</strong></td>
</tr>
<tr>
<td><strong>DC 3 aircraft replacement</strong></td>
</tr>
<tr>
<td><strong>Asset replacement</strong></td>
</tr>
<tr>
<td><strong>Buildings at Embakasi Village</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td><strong>Estimates of Expenditure in Kenya</strong></td>
</tr>
</tbody>
</table>

*Includes Flight Simulator.
†The estimates include one-third of the planned investment in aircraft with associated spares, equipment and cargo-handling equipment, while expenditures to be made in Kenya are fully included.
39. A possible merger of the airlines of Eastern and Central Africa, which is being considered, would certainly have repercussions for the future plans of East African Airways. Many complex problems will have to be overcome before such an amalgamation can become a reality.

40. In addition to East African Airways, several smaller private carriers operate charter services within Kenya, Uganda and Tanzania, and when the occasion demands, flights are made to other places on the African continent. These companies use mainly light aircraft, able to call at small airstrips. One of them is operating a scheduled air service round Lake Victoria, mainly with Cessna aircraft.

D—Posts and Telecommunications

41. The East African Posts and Telecommunications Administration, one of the self-contained services of the East African Common Services Organization, provides postal, telephone, radio-call, telegraph, telex, money order and savings bank services in Kenya, Uganda and the Tanzania mainland. It also has a controlling interest in the East African External Telecommunications Company Limited—jointly owned by the Postmaster-General and Cable and Wireless Limited—which provides most of the international telecommunications services.

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### East African Posts and Telecommunications: Operating Statistics for Kenya

<table>
<thead>
<tr>
<th>Year</th>
<th>Mail handled (‘000)</th>
<th>Value of postal and money orders (£1,000’s)</th>
<th>Number of international telegrams handled (‘000)</th>
<th>Number of telephones in use (‘000)</th>
<th>Number of telephone trunk calls* (‘000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Letters</td>
<td>Parcels</td>
<td>Issues</td>
<td>Payments</td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>76,700</td>
<td>760</td>
<td>2,400</td>
<td>1,700</td>
<td>510</td>
</tr>
<tr>
<td>1958</td>
<td>66,700</td>
<td>680</td>
<td>2,300</td>
<td>1,800</td>
<td>530</td>
</tr>
<tr>
<td>1959</td>
<td>72,500</td>
<td>670</td>
<td>2,200</td>
<td>1,700</td>
<td>520</td>
</tr>
<tr>
<td>1960</td>
<td>74,200</td>
<td>650</td>
<td>2,100</td>
<td>1,700</td>
<td>500</td>
</tr>
<tr>
<td>1961</td>
<td>73,100</td>
<td>600</td>
<td>2,300</td>
<td>2,000</td>
<td>480</td>
</tr>
<tr>
<td>1962</td>
<td>73,900</td>
<td>620</td>
<td>2,300</td>
<td>2,200</td>
<td>500</td>
</tr>
<tr>
<td>1963</td>
<td>72,900</td>
<td>680</td>
<td>2,800</td>
<td>2,500</td>
<td>510</td>
</tr>
<tr>
<td>1964</td>
<td>73,600</td>
<td>690</td>
<td>2,800</td>
<td>2,900</td>
<td>540</td>
</tr>
</tbody>
</table>

* The number of telephone trunk calls handled before 1961 has not been shown as the classification was changed in that year.

42. In planning the expansion of postal services, the highest priority is given to their extension into the rural areas. Good progress is being made in implementing the three-year postal development programme 1964/66, which is aimed at increasing the number of post offices from one per 50,000 inhabitants in 1964 to one per 32,000 inhabitants by the end of 1966. Half of this programme, which implies the establishment of 85 new post offices and sub-post offices in the rural areas of Kenya, had been completed by the beginning of 1966. Consideration is being given to the introduction
of a second three-year plan for the improvement and expansion of postal services, including a scheme to establish mobile post offices.

43. Although the extension of telecommunications services will, in the main, take place in response to the most urgent needs in commercial centres, the Administration will allocate certain amounts for the provision of uneconomic facilities which are much needed on the basis of other considerations. The Administration endeavours to ensure that the regional distribution of its services in Kenya is in accordance with the pattern of development that will result from the overall Development Plan. With a view to projected developments, close liaison is and will be maintained with the Government. The Administration maintains a close co-operation with other countries in the East and Central African Sub-Region in the fields of telecommunications as well as postal services, thus facilitating improvements in Kenya’s trade with these countries. Direct telephone communications are being strengthened, for instance with Zambia, Malawi, Ethiopia and Sudan, and an East-West link with Nigeria and Ghana was established recently. Negotiations for establishing direct telephone communications with Leopoldville are under way.

44. In 1962, the Administration drew up a ten-year development programme for its system in East Africa which was based on a traffic growth factor of 5 per cent per annum. A review of traffic trends since 1962 has led the Administration to embark upon an expanded programme for the period 1965-1970, basing expansion of the system on an annual growth rate of 6 per cent. During this Plan period it is planned to spend £2,376,500 on capital works in Kenya for strengthening and expanding the telecommunications system, and £397,600 on postal and administrative buildings in Kenya. This is considered a flexible programme, to be revised in the light of developments which may alter priorities and change the scope of individual projects. It is possible that another review of traffic trends at the end of 1966 will lead to a further expansion of the telecommunications programme from 1968 onwards. At this stage, however, it is not possible to forecast the content of such an expanded programme which will depend on experience during the next twelve months. Planning in this sector is flexible and can be adapted fairly quickly to changing conditions.

45. Projected capital expenditure on that portion of the Administration’s system which lies within the boundaries of Kenya is shown in the Table below. In considering this expenditure, it must be borne in mind that East Africa’s postal and telecommunications network is fully integrated and that a high proportion of development funds is applied to strengthening and expanding the common portion of the network. All three countries benefit from many of the capital works executed in a particular country. It would, therefore, be misleading to draw conclusions from a comparison of estimated capital expenditure for each of the countries. The capital expenditure planned for 1965/66 and in particular for 1966/67 on telecommunications plant, and for 1966/67 and 1967/68 on buildings, are considerably higher
than in any other year of the decade 1960-1970. These higher investments during the first three years of this programme will enable the Administration to catch up with arrears in telecommunications and administrative buildings. The total investment planned for this programme over the period 1965-1970 amounts to £2,774,100.

46. The planned expansion of postal and telecommunications services in the period 1965-1970 will be financed to an extent of 60 per cent from the Administration's own recurrent earnings, and the remaining 40 per cent by means of loans. By financing the main part of the development from its own means, the Administration continues to ensure that annual surpluses of revenues over recurrent expenditures are being ploughed back into improvements of the services, in accordance with development needs.

| TABLE 6—Estimated Expenditure—Posts and Telecommunications |
|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Telecommunications: |
| Plant               | £529,600 | £741,700 | £245,200 | £273,700 | £411,600 |
| Buildings           | £12,700  | £76,000  | £70,000  | £7,500   | £8,500   |
| Postal and Administrative Buildings | £42,000 | £164,600 | £100,000 | £56,000  | £35,000  |
| **Total**           | £584,300 | £982,300 | £415,200 | £337,200 | £455,100 |

**E—Electricity**

47. Normally the demand for electricity will rise more rapidly than the national income in any country in which a satisfactory distribution system has been established. Figures for Kenya show that between 1955 and 1964 the sales of electricity rose from 195 million kWh, in 1955 to 426 million kWh, in 1964, or by 9 per cent per year on average. During the same period the Gross Domestic Product at constant prices rose only by 3 per cent per year. A recent market survey for electricity suggests that demand will grow by an average 13½ per cent per year between 1965 and 1970. Since the Gross Domestic Product should increase by at least 6 per cent per year during the same period, and the distribution system will be widened, such a growth rate seems quite likely. It should be noted, however, that demand during the last few years has grown slower than envisaged in market surveys, and the actual plans for power development are drawn up on the assumption that the growth in demand may fall somewhat short of 13½ per cent annually. The programme is sufficiently flexible to be altered if the growth of demand makes it necessary.

48. Electric power is supplied by two major companies—the Kenya Power Company and the East African Power and Lighting Company Ltd. The Kenya Power Company generates electricity at the Wanjii and Tana Hydro-Electric Schemes and purchases from the Uganda Electricity Board at Tororo in Eastern Uganda. The supplies from these sources are transmitted to Nairobi and sold in bulk to the East African Power and Lighting Company Ltd. for
distribution. The major transmission line from Tororo to Nairobi is also tapped for bulk deliveries to E.A.P. & L. at Lessos and Lanet to serve Western Kenya. The E.A.P. & L. also operates diesel power stations as required in the Central and West Kenya areas and operates a steam power station at Mombasa to supply the Coast area. A new company has been formed—the Tana River Development Company Ltd.—with the Kenya Government Power Securities Ltd., the Commonwealth Development Corporation and E.A.P. & L. as equal partners, to meet future additional electricity requirements by the construction of new power schemes on the Tana River. It is the Government’s policy to increase its participation in generation and distribution of power, and an investigation will be made early in the Plan period as to whether or not E.A.P. & L. should be nationalized.

49. The only proved natural source of electric power in Kenya is the hydro-electric potential of the Tana River. The utilization of this potential must be co-ordinated with eventual plans for irrigation of the lower Tana basin. Part of the up-stream power development can be implemented without prejudicing later irrigation development downstream, and will therefore be implemented forthwith in order to meet the early demand for additional power. Long-range plans have been made for a three-stage development up-stream at Seven Forks. The ultimate generating capacity has been estimated at 240 megawatts, but this figure may be modified later when plans for the development of the entire basin have been elaborated. The first phase of the Seven Forks project is a power station at Kindaruma below the Seven Forks Rapids. Two 20-megawatt units and one 2-megawatt unit will be installed initially. Provision will be made for the ultimate installation of another 20-megawatt set. The first 40 megawatts are expected to be commissioned early in 1968. Work on the larger Otaru scheme, which involves the construction of a large reservoir which will serve as a means of regulating water flows for irrigation purposes as well, will be started during this Plan period.

50. The development of Seven Forks includes a transmission line to Nairobi and from Nairobi to Mombasa. This will allow an interchange of thermal and hydro-electric power as required, which will ensure the most economic use of all generating capacity. The transmission line will also complete the Uganda-Kenya network from Kampala to the Coast.

51. The distribution of electricity to the consumers is already well established in the principal centres. Most of the projected growth of demand will take place in such centres and is likely to require considerable investment so as to keep pace with and facilitate the industrialization process. There is little doubt that increases in demand in those centres will be cheaper to satisfy per unit of demand, than demand increases in outlying areas.

52. In addition, the Government is considering ways and means of providing amenity schemes for a certain number of centres where the population density is low and the prospects of industrial development are limited. Such schemes
are likely to remain sub-economic for a long time. In certain cases where an amenity scheme is sub-economic from the point of view of the costs of providing electricity supply looked at in isolation, there may, nevertheless, exist possibilities that external economies, accruing to the community and the country as a whole through advantages to local industry, will develop and this should be weighed against the financial burden. The analysis of costs and benefits is a lengthy technical process, but it may be assumed that during the Plan period a certain number of amenity schemes will be found worthwhile from a general development point of view. Supply of electricity to areas with low population density is not merely a matter of economic consideration. Electricity is a necessary element of modern living. As a source of light it is far superior to other alternative sources, and proper reading light is a pre-requisite for spreading literacy and exploiting the ability to read and write. The electric motor is the most adaptable form of motive power and access to electricity will promote small-scale industrialization. Its use in agriculture is also widespread. The Government will therefore study ways and means of providing electricity to all areas of the country. This is a long-term objective since the costs will be high. Operating losses can be financed in two ways: through Government subsidies or through a tariff structure in which the consumers in urban areas subsidize those in the rural areas. This matter will be reviewed further in connection with the planning of a geographical extension of electricity supplies. No figures for the number of amenity schemes and their costs can be given at present, and they are, therefore, not included in the Table below which is strictly confined to what is expected to represent estimated expenditure for normal viable development. However, it is the Government’s policy to supply electricity to all district headquarters. Twenty such schemes will be undertaken during this period, at an approximate capital cost of £500,000, provided that a suitable method can be found for financing the capital cost and the ensuing recurring deficits.

53. The Table below shows the planned investments in the expansion of the electricity supply during the Plan period. They include substantial expenditure on projects which will not be completed until after 1970. The plans, while based on past trends and present market surveys, are being continuously reviewed. The time horizon for planning is pushed forward as time passes so that the needs for a long period ahead are always taken into account in planning. Figures for future needs are not only based on rising demand in areas at present supplied with electricity, but also on an assessment of demand in new areas to be supplied. The investment programme consists of small increments in various types of capacity to meet the expected increase in demand from year to year, and is flexible since the magnitude of annual increments can be easily adjusted to changes in demand conditions.

54. It is expected that about 75 per cent of the power generation development programme can be financed by loans and equity participation from abroad.
Table 7—Investments in Electricity Generating Capacity Distribution Systems, Auxiliary Investments

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<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Hydro-Electric works*</td>
<td>1,656</td>
<td>3,327</td>
<td>3,547</td>
<td>3,181</td>
<td>2,837</td>
<td>14,548†</td>
</tr>
<tr>
<td>Major Transmission lines</td>
<td>314</td>
<td>851</td>
<td>1,382</td>
<td>1,442</td>
<td>703</td>
<td>4,692‡</td>
</tr>
<tr>
<td>E.A.P. &amp; L. Power Stations</td>
<td>375</td>
<td>232</td>
<td>100</td>
<td></td>
<td>705</td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td>606</td>
<td>580</td>
<td>580</td>
<td>580</td>
<td>580</td>
<td>2,926</td>
</tr>
<tr>
<td>Other Expenditure on buildings, land, vehicles, tools, furnishings, etc.</td>
<td>170</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>810</td>
<td></td>
</tr>
<tr>
<td><strong>Total for normal viable development</strong></td>
<td><strong>3,119</strong></td>
<td><strong>5,150</strong></td>
<td><strong>5,769</strong></td>
<td><strong>5,363</strong></td>
<td><strong>4,280</strong></td>
<td><strong>23,681</strong></td>
</tr>
</tbody>
</table>

* Based on the completion of:
  - Kindaruma by early 1968.
  - Kamburu by early 1969.
  - First 50 megawatts of Gitaru Canal by early 1972.

† This item covers expenditure on the Seven Forks Hydro-Electric Schemes up to 1970. In addition, approximately £10 million will be required after 1970, to complete the entire Seven Forks development.

‡ The main transmission line from Seven Forks and also the Nairobi/Mombasa transmission link are included in this total. Expenditure, after 1970, associated with Seven Forks, will be approximately £3½ million on the completion of major transmission links.

55. Continued co-operation in power development between Uganda and Kenya is envisaged. The development of Tana River will possibly permit export of electricity to Uganda through the Uganda-Kenya transmission system. Even if supply and demand in both countries on the average should be in equilibrium, the existing transmission link is of great importance as a means of exploiting generating capacity on both sides of the frontier in the most efficient manner. A further expansion of the international grid system may be envisaged, not only to Tanzania but to other countries in the Eastern Africa sub-region. This is, however, a long-term consideration which must be studied on the basis of the scope for the development of cheap sources for electric power in the various countries of the sub-region.

F—Water Supplies

56. Water is an important natural resource whose development must be carefully planned with a view to enhancing its contribution to economic and social welfare of the country. Many of the projects and programmes in this Plan cannot succeed without adequate supplies of water. Water is required for human and animal consumption, irrigation, ranching, manufacturing, power development, etc. Moreover, the development of towns depends very much on the availability of adequate water supplies at a reasonable cost. In Kenya there is also the pressing need to provide adequate and clean water in the rural areas. Water development, however, is costly and in some areas of Kenya even the provision of minimum supplies required entails heavy investments. The water development programme in this Plan, especially for the rural areas, is therefore only a modest beginning.

57. Water is required for so many different uses that its exploitation and measures to ensure its conservation must be co-ordinated. It is, therefore, necessary that all water development should be brought under one
organization which will co-ordinate all development. The most important recommendation made by the joint W.H.O./F.A.O. Mission which was requested by the Government to study and make recommendations on the organizational structure concerned with water development, was that a National Water Authority responsible to Parliament through the Minister for Natural Resources, Wildlife and Tourism on all matters of water development should be established. The organization, powers and responsibilities of such a statutory body are being considered in detail by the Government. Its role would include advice on water development and conservation policy to the Minister for Natural Resources, Wildlife and Tourism; raising funds for water development; construction, operation and maintenance of works; collection of revenue; and inspection of local authority water undertakings. The recommendations of the Mission also included the establishment of a technical Department of Water Development in the Ministry of Natural Resources, Wildlife and Tourism, to become the technical arm of the Water Authority; the establishment of Provincial Water Advisory Committees to enable water development and conservation planning to be built up from the provinces and districts; and the establishment of a Water Apportionment Board as well as a Catchment Board for the different catchment areas to deal with allocations of water. Except for the National Water Authority, these various bodies have either been established or agreed to in principle.

58. The Water Development Department of the Ministry of Natural Resources, Wildlife and Tourism was established in 1964. One of its basic tasks is to place as much water development as possible on a sound commercial basis. Water projects which create significant economic benefits for their users will be expected to produce sufficient revenue to cover both maintenance costs and the service charges on any loans for capital expenditure. Such viable schemes will perforce have the highest priority on the limited capital funds available. This does not mean that certain necessary but less economic schemes will not be undertaken. On the contrary, the urgent need for such schemes is recognized and efforts will be made to obtain capital for them.

59. Township Supplies.—The population of cities and towns is expected to grow 5-6 per cent per year, and it is essential that present standards of water supplies are maintained and continuously improved. Improved housing, better health standards and greater convenience for urban populations depend on better water supplies. Local authorities are able to obtain loan finance through the Local Government Loans Authority for major water projects. However, in the smaller towns local authorities are not able to finance or operate water supplies and the Central Government will continue to construct and operate these smaller systems until the local authorities are able to take them over. Approximately, £140,000 per year is provided for this purpose. Twenty-eight new water supply systems and expansion of twenty-five existing systems will be undertaken during the present Plan period. In addition, a loan of £1,000,000 will be granted to the Mombasa Pipeline Board for repayment of an outstanding credit.
Amongst schemes to be executed by local authorities can be mentioned the first stage of construction of the Chania Dam by the Nairobi City Council (£2.6 million), a pipeline from Mazeras to Sokoke by the Mombasa Pipeline Board (£300,000) and an extension of the water supply system in Thika (£120,000).

60. Rural Water Schemes.—Water development in rural areas requires proper, co-ordinated provincial and district organizations, able to execute a water policy which can benefit the economic development of those areas. Physical conditions dictate the systems under which water development planning is to be carried out. Under the present conditions it is, in many cases, not possible for inhabitants of rural areas to find all the capital funds necessary to finance a water supply project from its inception. It devolves on the Government to make funds available by loan or grant according to the financial ability of the areas. Once loans have been repaid on any project and the cost of maintenance is met, the balance of the revenue from the sale of water must be put back into further development.

61. Sub-economic Rural Projects.—A major effort will be made to undertake rural water schemes in the arid areas. Such schemes are essential for improved livestock management, upon which the economic development of these areas largely depends. £675,000 is provided for this purpose. The agricultural programme includes plans for development of the ranching lands of Kenya and these water projects are in support of those plans. The schemes contemplated range in value from £5,000 to £250,000. The economic return on these projects will not be great enough to enable loans to be repaid on commercial terms and some subsidy from the Government in the form of low-interest loans or capital grants will be required. It should also be noted that the large range management programme to be undertaken by the Ministry of Agriculture includes expenditure of about £2 million for water supplies.

62. Economic Rural Projects.—Water schemes in the more fertile areas of Kenya are expected to result in substantial economic benefits. Such schemes will make possible improved utilization of manpower in the district and reduction in the incidence of crop and livestock diseases, leading to improved production by small farmers. Benefits are expected in the form of increased farm income, improved health and convenience to the users. It is planned to achieve an annual rate of expenditure exceeding £700,000 per annum on such schemes by 1968/69. The total capital expenditure over the five-year period will be £2 million. The annual recurrent expenditure required for projects initiated by the Water Development Department is expected to be in the order of £1.2 million during this period.

63. Water Resources Surveys and Ancillaries.—To ensure the continuing development of Kenya’s water resources, an estimated £60,000-£70,000 a year will be used for water resources surveys and for special surveys such as the planned hydro-meteorological survey of the catchments of Lakes
Victoria, Kioga and Albert. Finally, £20,000 is provided each year to cover subsidies for dam and borehole construction. This subsidy is extended to encourage the development of small water supplies for agricultural purposes, thus including private capital into water development. £20,000 is needed for accommodation and laboratory equipment for the Department’s Training School, in order to strengthen training for water supplies.

### Table 8—Estimated Expenditure—Water Supplies

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Townships Supplies</td>
<td>£133,000</td>
<td>£143,000</td>
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<td>£155,000</td>
<td>£140,000</td>
<td>£711,000</td>
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<tr>
<td>Rural Water Schemes, Sub-economic</td>
<td>£45,000</td>
<td>£50,000</td>
<td>£180,000</td>
<td>£200,000</td>
<td>£200,000</td>
<td>£675,000</td>
</tr>
<tr>
<td>Rural Water Schemes, Economic†</td>
<td>£—</td>
<td>£100,000</td>
<td>£320,000</td>
<td>£700,000</td>
<td>£840,000</td>
<td>£1,960,000</td>
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<tr>
<td>Investigations and Subsidies</td>
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<td>£31,000</td>
<td>£80,000</td>
<td>£80,000</td>
<td>£90,000</td>
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</tr>
<tr>
<td>Loan to Mombasa Pipeline Board</td>
<td>£333,000</td>
<td>£333,000</td>
<td>£334,000</td>
<td>£—</td>
<td>£—</td>
<td>£1,000,000</td>
</tr>
<tr>
<td>Departmental Training School</td>
<td>£20,000</td>
<td>£—</td>
<td>£—</td>
<td>£—</td>
<td>£—</td>
<td>£20,000</td>
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<tr>
<td>Offices for Water Development Department</td>
<td>£2,000</td>
<td>£—</td>
<td>£—</td>
<td>£—</td>
<td>£—</td>
<td>£2,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>£537,000</td>
<td>£677,000</td>
<td>£1,054,000</td>
<td>£1,135,000</td>
<td>£1,270,000</td>
<td>£4,673,000</td>
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</tbody>
</table>

* Capital expenditures for water development in Settlement and Range Development Schemes by the Ministry of Agriculture through the Central Agricultural Board and Range Management Division are excluded.
† Including the Kiambu Supply Scheme which will require a total capital expenditure of £1.8 million.

### G—Other Buildings

**64. Buildings for the Public Administration.**—The expenditure on administrative buildings to be used by services responsible for various parts of the Development Plan is included with other costs under the respective programmes. Provision must also be made for buildings which accommodate other Government services, such as the legislature and the judiciary, and the general administration. The extension to the National Assembly Buildings was actually completed in the financial year 1965/66. The needs of the Judicial Department for more and better accommodation are pressing. First priority is given to new court buildings at Kiambu, Kisii and Kitui in the next three years, and at least one new magistrate’s court will probably have to be established in the succeeding two years. The separation of the High Court from the magistrates’ courts at Nairobi and Mombasa is required. In particular in Nairobi, pressure on the accommodation in the Supreme Court building is acute and a new court building to house twenty magistrates’ courts will be built in the second half of the Plan period. In addition, many African court buildings will require renovation and additions to make them suitable for their new functions, while a certain amount of staff housing will be required for lay magistrates in outlying stations. A total capital expenditure of £355,000 is included to provide for buildings for the Judicial Department.

65. A number of ministries and departments are at present accommodated in temporary structures or in rented accommodation which do not provide efficient working conditions. If all Government officers in unsuitable and non-institutional rented accommodation in Nairobi were to be re-housed, and
allowance made for the existing overcrowding, the Government's urgent need for office accommodation can be estimated at about 150,000 square feet. In order to meet this need, two office blocks will be erected, one to accommodate the offices of the Ministry of Works, Communications and Power, and the other as a fourth wing to the Central Government Offices, to provide accommodation for various ministries and departments. The capital expenditure required for each of these buildings amounts to £350,000. In addition, the Treasury Building is being extended by another storey in 1965/66, at a cost of £32,500. An amount of £76,500 is provided for the electrification of Government buildings and houses. An amount of £100,000 is included for a building to house all the United Nations agencies represented in Nairobi. Provision is also made in the development programme for the Administrative Training Centre (£45,000), and for various administrative buildings in the provinces and districts (£83,000).

66. The estimates of costs of buildings included in most sections of the public sector plan have been given at works cost. The cost of planning and supervision is provided in the recurrent budget, covered by a block contribution from development funds. This arrangement will be continued. Provision will also be made for non-recurrent minor works.

67. Buildings for the Private Sector Not Included Elsewhere.—No estimates have been made of the investment in office buildings, warehouses and other commercial buildings, including shops, which will be needed by such sectors as wholesale and retail trade, service trades, various professions, banks and insurance companies, etc. Such buildings will, in part, be financed by the firm or firms which will own them, while others will be built for renting. It is not possible to assess the global value of such buildings, but their value will certainly be substantial, and their construction will contribute in raising the level of activity in the building industry.

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>National Assembly Buildings</td>
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<td></td>
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<td>123,000</td>
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<tr>
<td>Magistrates' Courts</td>
<td>10,000</td>
<td>10,000</td>
<td>70,000</td>
<td>100,000</td>
<td>100,000</td>
<td>280,000</td>
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<td>Primary Courts including Staff Housing</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenya School of Law</td>
<td>10,000</td>
<td>10,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>65,000</td>
</tr>
<tr>
<td>Office Building for the Ministry of Works</td>
<td>8,000</td>
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<td></td>
<td></td>
<td></td>
<td>8,000</td>
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<tr>
<td>Fourth Wing to Central Government Offices</td>
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<td>150,000</td>
<td>50,000</td>
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<td>Treasury Building Extension</td>
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<tr>
<td>Electrification of Government Buildings and Houses</td>
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<td></td>
<td>76,500</td>
</tr>
<tr>
<td>United Nations Agencies Building</td>
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<td>40,000</td>
<td>60,000</td>
<td></td>
<td></td>
<td>100,000</td>
</tr>
<tr>
<td>Administrative Training Centre</td>
<td></td>
<td>25,000</td>
<td>20,000</td>
<td></td>
<td></td>
<td>45,000</td>
</tr>
<tr>
<td>Administrative Buildings in Provinces and Districts</td>
<td></td>
<td>13,000</td>
<td>15,000</td>
<td>15,000</td>
<td>20,000</td>
<td>83,000</td>
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<tr>
<td>Other Works</td>
<td>120,000</td>
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<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
<td>520,000</td>
</tr>
<tr>
<td>Contribution for planning and supervision of buildings</td>
<td></td>
<td>100,000</td>
<td>150,000</td>
<td>150,000</td>
<td>150,000</td>
<td>700,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>531,500</td>
<td>711,500</td>
<td>620,000</td>
<td>435,000</td>
<td>385,000</td>
<td>2,743,000</td>
</tr>
</tbody>
</table>
68. A programme of modernization and improvement of the Government Printer's operations will be implemented during the Plan period. A more efficient and up-to-date Government Press will be able to handle the large amount of Government work at present being sent to commercial printers. At the same time, capacity may become available to undertake more work on a repayment basis, thereby reducing overheads and thus the cost of printing and stationery services to Government departments.

69. In order to improve the Government Printer's services, existing out-of-date and worn-out machinery will be replaced and adequate accommodation provided. In addition, existing staffing arrangements will be revised, and the staff will be increased in accordance with the current work load. In order to advance the pace of Africanization, additional training facilities will be provided. New plant will be required for use as training equipment, since much of the equipment to be replaced is either out-of-date or so worn-out as to be useless for training purposes. To accommodate the training section, a modest building will be needed. The project will require a total capital expenditure of £225,000, of which £62,000 will be spent on buildings.

<table>
<thead>
<tr>
<th>TABLE 10—ESTIMATED EXPENDITURE—GOVERNMENT PRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Government Press building</td>
</tr>
<tr>
<td>Press equipment</td>
</tr>
<tr>
<td>Training wing</td>
</tr>
<tr>
<td>Training Equipment</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 10—SOCIAL SERVICES

A—Education

1. Education and national development are so closely related in a developing country that it is almost impossible to speak of one without the other. Schools and colleges are developing the human resources that will shape the pattern of future national life. The increased availability of educational facilities at all levels will also enhance the potential earning power of our citizens. As the development of the nation proceeds not only will incomes grow but our resources will be more effectively used. This, in turn, will also provide more resources for the further expansion of educational opportunities. It has been said that a good educational system is the flower of economic development but it is also the seed.

2. As the Sessional Paper on African Socialism points out, at this stage of Kenya’s development education is much more an economic than a social service and should be regarded as the principal means for relieving the shortage of skilled manpower and equalizing economic opportunities among all citizens. Thus, the long-range objectives for Kenya’s educational programme are—

(1) to provide universal primary education;

(2) to ensure enough places at the secondary and higher levels to educate those with recognized abilities; and

(3) to organize the educational system to meet the manpower needs of the country.

3. The movement towards universal education is designed not only to satisfy the demands of the people of Kenya but also to contribute to the unity and cohesion of the nation. Widespread literacy opens up many avenues of mass communication as an effective means of keeping people well informed on national, African and world problems, as well as on local affairs. An informed citizenry is necessary if a democratic African socialist state is to develop. Extensive education should also contribute to more effective preventive medicine, transformation of the agricultural sector, increased productivity and a rational development of customs and traditions.

4. The contribution of education to the development of skilled and educated manpower is particularly critical in Kenya at this time. There is not only the problem of supplying the additional numbers which normal growth over the next five years will require, but also the necessity of replacing large numbers of expatriates. It is impossible to expand the educational system rapidly enough to supply all these needs immediately from domestic sources. The Government will, however, take steps to expand the output of secondary students as rapidly as capital and teacher limitations permit.
5. Primary Education.—Primary education is largely a local responsibility. The Government, however, does not intend to abandon its responsibility for ensuring that the primary school system conforms to the educational needs of the country. It is the Government's role to draw up the curriculum, set and supervise the Kenya Preliminary Examination, guide the local authorities in accordance with national objectives and co-ordinate the development of primary education. In some less developed areas, the Government will also continue to pay for some capital costs during the Plan period.

6. On purely economic grounds the development of primary education cannot be given as high a priority as secondary, technical and higher education. However, the Government shares the Kenya Education Commission's view that primary education is fast becoming a minimum basic educational requirement. In 1965, 50 per cent of the school-age population were in primary schools. On the basis of certain assumptions concerning costs, revenues and population growth, the Commission feels that it would be possible to enrol as much as 80 per cent of the school-age population in primary schools by 1980. The achievement of universal primary education remains the policy of the Government. Before this goal can be reached, however, certain obstacles must be faced and overcome. In pastoral areas the school-age population is widely scattered and nomadic. The educational problems in these areas are sufficiently different from those in other areas that special study will be required in order to evolve a satisfactory solution. The shortage of qualified teachers is a second serious obstacle to universal primary education. The Development Plan places considerable emphasis on the expansion of teacher-training facilities as is revealed in paragraphs 20 to 27. A third major obstacle to be overcome before the goal of universal primary education can be reached is the substantial capital and recurrent cost which expansion of the physical facilities and teaching staff imply.

7. Quality of education will not be allowed to deteriorate in exchange for more quantity. To use the words of the Kenya Education Commission, "The Commission cannot accept the view . . . that educational standards must give way before the irresistible force of numbers." (Part II, page 3.) An important aspect of the quality of the education being provided is the degree to which primary education conforms to the national culture and traditions. For many years to come a primary education is all that most of our citizens can expect to obtain. That experience must be related to the kind of life they will lead. Since Kenya is now primarily an agricultural country, the schools must equip the majority of students for rural and, in particular, agricultural activities. The primary school curriculum must therefore be studied and revised continuously in order to enhance rural life. An education that places unwarranted emphasis on "urban" and "white-collar" employment can only mislead, disappoint and frustrate the majority of primary school leavers since it is in agriculture that the vast majority of Kenyans will find their employment. Despite the rapid increase in urban employment opportunities contemplated
in the Plan period, there will still be many more opportunities for productive employment in the rural rather than the urban areas.

8. Secondary Education.—Kenya is not alone among the developing countries in finding that the shortage of professional, administrative, technical and other skilled personnel threatens to delay and frustrate its efforts to modernize and expand the economy. This shortage also slows down the Africanization of the social and economic life of the nation. Therefore the highest priority in education is the rapid expansion and diversification of secondary schools. To this end fees for Forms V and VI in low-cost schools have been eliminated and there has been a reduction in fees in high-cost schools. This will provide a growing base for increasing the supply of middle- and high-level manpower.

9. Continuing efforts will be made to speed the racial integration in all our schools. We are determined that during the present Plan period an increasing proportion of our African citizens will be prepared to enter the professional, technical and administrative occupations.

10. The report of the survey on High-Level Manpower Requirements and Resources in Kenya 1964-70 contains estimates that show the total requirements during the six-year period for those occupations which require a Form IV education or better to be about 54,400. The total supply of Form IV leavers during the same period is estimated to be about 55,000, or an amount which is quantitatively adequate. There are serious qualitative problems, however, which are not revealed in reviewing these total figures. Shortages in some occupations, such as teachers, skilled office workers and certain skilled craftsmen, will persist throughout the Plan period despite the intensive efforts to meet the anticipated demand from local sources.

11. The goal for 1965/70 is to open new Forms I in accordance with the schedule shown in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Openings</th>
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<tbody>
<tr>
<td>1965</td>
<td>57</td>
</tr>
<tr>
<td>1966</td>
<td>41</td>
</tr>
<tr>
<td>1967</td>
<td>50</td>
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<td>1968</td>
<td>30</td>
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<td>1969</td>
<td>35</td>
</tr>
<tr>
<td>1970</td>
<td>40</td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>433</td>
</tr>
</tbody>
</table>
Table 2 shows the implication of this policy which will provide a 53 per cent increase in Form I enrolment and a 140 per cent increase in Form IV enrolment between 1965 and 1970.

<table>
<thead>
<tr>
<th>Form</th>
<th>1965 Actual</th>
<th>1970 Planned</th>
<th>Percent increase 1965 to 1970</th>
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<tbody>
<tr>
<td>I</td>
<td>11,500</td>
<td>17,600</td>
<td>53</td>
</tr>
<tr>
<td>II</td>
<td>8,700</td>
<td>15,800</td>
<td>82</td>
</tr>
<tr>
<td>III</td>
<td>6,100</td>
<td>14,300</td>
<td>134</td>
</tr>
<tr>
<td>IV</td>
<td>5,400</td>
<td>13,000</td>
<td>141</td>
</tr>
<tr>
<td>Total I-IV</td>
<td>31,700</td>
<td>60,700</td>
<td>91</td>
</tr>
<tr>
<td>V</td>
<td>1,100</td>
<td>2,500</td>
<td>127</td>
</tr>
<tr>
<td>VI</td>
<td>700</td>
<td>2,300</td>
<td>228</td>
</tr>
<tr>
<td>Total V-VI</td>
<td>1,800</td>
<td>4,800</td>
<td>167</td>
</tr>
<tr>
<td>Total I-VI</td>
<td>33,500</td>
<td>65,500</td>
<td>96</td>
</tr>
</tbody>
</table>

12. In Forms V and VI an even greater expansion is planned. Eight new Forms V will open each year and Form VI output in 1970 will show a 228 per cent increase on 1965. The increased output will, however, only be possible if class size is increased from the present average of eighteen to an average of twenty-five. Further increase in size is not desirable as the quality of education being offered would begin to deteriorate.

13. Table 3 shows the considerable amounts of capital necessary to achieve the enrolment targets: £5.9 million is required for construction and equipment for secondary education in Forms I to VI over the Plan period. Secondary school construction will be directed mainly toward the development of three-stream schools in order to achieve economies in installation and efficiency in operation. As a result of this policy only about half of the new streams will accommodate boarding pupils. This will tend to increase the proportion of day schools to boarding schools. As the number of schools increase, particularly those without Forms V and VI, they should draw their students from smaller areas so that the need to provide expensive boarding facilities will be reduced. This and the planned increase in class size will result in some construction economies. The World Bank will contribute substantially to the financing of the expansion of the secondary school system. Annual recurrent costs for all secondary education are expected to reach a level of approximately £4.25 million by 1969/70.

14. To achieve the expansion in Forms I to VI about 2,950 secondary teachers (including secondary trade schools) will be required in 1970 in maintained and assisted secondary schools. In 1965 there were about 1,700 such
teachers available. Thus there is need for a net increase of about 1,250 secondary school teachers during the Plan period without considering the additional demand imposed by the unaided and Harambee schools. While it is anticipated that about 1,250 teachers will graduate from Kenyatta College and the University during the period, this obviously will not meet the replacement needs and fill the expansion requirements. Therefore, if the planned expansion is to be realized, not only must the number of expatriate teachers now in Kenya be retained, it must be increased. The Government will make a special effort to retain those expatriate teachers and intensify its recruiting programme abroad so that this critical gap will be filled. Many secondary teachers are being offered as part of the technical assistance programmes of several countries.

15. Secondary Technical Education and Vocational Training.—The expansion of academic secondary education will be supplemented by major changes in the field of technical education. In line with the recommendations of the International Labour Office Report on Industrial Vocational Training and the Kenya Education Commission, the existing two-year trade school courses will be converted into three-year courses for craftsmen/artisans and four-year courses for junior technicians. Both the technical and the basic general education components in these courses will be strengthened. A request has been submitted to the United Nations Development Programme for assistance to support an industrial vocational training scheme for the training of instructors, upgrading training for employed workers and supplementary training for apprentices. As part of this scheme a National Industrial Vocational Training Centre is to be established in Nairobi. One new secondary trade school will be built and the six others will be enlarged and reorganized in such a way that each will specialize in subjects related to a particular industry or craft and thus combine efficiency with economy in staffing and equipment.

16. One of the present trade schools will be converted to a secondary technical school and one new secondary technical school will be built. Minor alterations in the existing technical schools at Nairobi and Mombasa will enable them to offer engineering and building subjects, both practical and theoretical, up to General Certificate of Education level.

17. When the trade and technical schools mentioned above are fully developed their enrolment will be 84 per cent higher than in 1965, and this target should be reached by 1970. In order to support the estimated capital cost of £526,000 for this rapid expansion of secondary trade and technical education, help will be sought from various sources. Recurrent costs for secondary trade and technical education will reach a level of about £700,000 by 1969/70.

18. The Kenya Polytechnic.—Provision is made in the Plan to provide additional accommodation at the Polytechnic which will provide for an increase in the enrolment from 1,300 in 1965 to 2,300 in 1970. The extensions will allow the introduction of a wider range of technical and commercial
courses and for the development of existing courses to the advanced level. Under a loan from U.S.A.I.D., construction work began in November 1965, and is scheduled for completion in May 1967. The new tuition accommodation will comprise two blocks of classrooms, engineering workshops and laboratories, a library and an examination/assembly hall. A canteen with common rooms will provide social facilities for the students which the institution lacks at present. Acting as the executive agency for the United Nations Development Programme, U.N.E.S.C.O. is supporting a project of six years’ duration at the Polytechnic which makes financial provision for the purchase of laboratory and workshop equipment and the training of local teaching staff, as well as the services of ten specialists in the various engineering fields.

19. Adult Education.—Adult education programmes in the various ministries will be co-ordinated by a new Board of Adult Education. Under the auspices of U.N.E.S.C.O., a Centre for Literacy and Adult Education has recently been set up in Nairobi to serve Kenya, Tanzania and Uganda. After studying the needs of each country, the staff of this Centre will propose a comprehensive plan for adult education. Detailed proposals for a literacy campaign will include estimates of cost for the reading materials and follow-up books.

20. Primary Teacher Training.—Although the Development Plan places the highest priority on the expansion of secondary schools, the need to improve the quality of primary education is not ignored. The Report of the Kenya Education Commission stresses this need: “We are deeply concerned about the standards in the primary schools. Few tasks are more important to Kenya education than the raising of these standards. In fact, it is not far from the truth to say that the raising of standards in primary schools is one of the best ways of raising standards in secondary schools.” (Part I, page 48.) As a means of improving primary schools the Commission recommended that the number of untrained teachers should be reduced and the capacity of the training colleges be expanded.

21. In 1964, 30 per cent of all primary teachers were untrained, and over 75 per cent were primary school leavers. By 1965 the proportion of unqualified teachers had risen further to 35 per cent. In order to reverse this trend and increase the number of trained teachers, the plan for training colleges, when complete, will provide an output of 2,900 teachers per year compared with 2,250 in 1965. The capital cost for this expanded programme of primary teacher training is estimated at £526,000 for the Plan period. In future years an increasingly large proportion of these teachers will have a full secondary education, and training colleges plan to treble the enrolment of P.1 trainees (School Certificate holders) by 1970.

22. In the interests of more efficient operation the number of training colleges will be reduced from 34 to 25 and the large majority will have a minimum of 250 students. The nine colleges to be closed will become secondary schools.
23. A massive programme of training designed to upgrade serving teachers has been planned by the Kenya Institute of Education. Training colleges will be used for this purpose during vacation periods and requests for assistance have been made to foreign Governments.

24. Secondary Teacher Training.—The training of secondary school teachers takes place in several different institutions some of which provide a general course and some of which are specialized. In addition to creating new or expanded facilities within Kenya designed to meet the long-term demand for secondary teachers, there will also be an accelerated programme, in co-operation with a number of countries, for sending serving teachers abroad for intensive and concentrated training. This will help meet the urgent short-term demand for qualified secondary teachers.

25. The Kenya Science Teachers College.—The Government of Sweden will contribute 90 per cent of the £1,300,000 capital for this new college for the training of secondary school science teachers. The buildings are expected to be completed in 1968 and ninety-six students will then be admitted each year for a three-year course. The Swedish Government will also staff the college and contribute 70 per cent of the recurrent costs during the period of the Development Plan. The college will open in temporary accommodation in 1966 with an enrolment of forty-eight students.

26. Kenyatta College.—On 17th September 1965, the British High Commissioner formally handed over to President Kenyatta the former Templar Barracks of the British Army. This large and well-equipped institution, which now houses a secondary school and a teacher-training college, will have an enrolment of about 2,000 students by 1970.

27. In addition to giving the existing installation, the British Government provided funds for certain conversion projects which will be completed in 1965/66 at a cost of £64,000. An additional £289,000 will be needed to make further renovations and conversions for the increased enrolment at the end of the Plan period.

28. Government’s Support for Post-Secondary Students.—It will continue to be Government’s policy to move increasingly towards loans as a method of financing the studies of students in post-secondary school education. Students who are being helped in this way by the people to obtain their university education must in turn serve the people in positions in which they can best contribute to the growth of the nation. Thus, while continuing with the existing policy of awarding bursaries as at present, a part of the policy of shifting increasingly to student loans is the related aspect of loan forgiveness which will be afforded those individuals who enter appropriate occupations after completing their studies. This policy is in line with our traditions of mutual responsibility between the individual and the society.
29. Government assistance will be made available to students attending the University of East Africa. In cases where the University of East Africa is unable to accommodate more students in a particular faculty, or where there is no appropriate faculty, assistance will be made available for students attending colleges and universities abroad.

30. Scholarships and bursaries offered by foreign Governments will be accepted by the Government of Kenya only if they are relevant to Kenya's development needs. Students chosen for these awards will be treated in the same manner as students at the University of East Africa, and on their return to Kenya will be similarly obliged to engage in work in the national interest in the Public Service, the Teaching Service or other approved occupations.

31. During the Plan period about half the arts students will be supported in courses leading to degrees which qualify the holders as secondary school teachers. A somewhat lower proportion, about one-third, of the science students are expected to follow courses of study which will qualify them as secondary school teachers because of the urgent competing demand for scientifically trained personnel in agriculture, engineering, medicine and natural resources.

32. This policy of obliging holders of both governmental or overseas loans or bursaries to take certain jobs will give the Government a much greater control of its supply of high-level manpower. At the same time, such a policy will allow for the phased expansion of the University of East Africa, University College, Nairobi, in particular, and a gradual decrease of Kenya's dependence on universities overseas for the output of first degrees.

33. By 1970 the recurrent cost of bursaries and loans together with the capitation grant to the University of East Africa will amount to £1.8 million according to present estimates.

34. University College, Nairobi.—The role of a university in promoting economic development is much broader than that of simply producing high-level manpower. A university deals in knowledge, both in discovering it through research and in transmitting it through teaching. Knowledge is the key to social change, to economic development, to technological advance and to all those elements which help to provide the driving force for a nation's progress. The development of the nation's culture through the adaptation of national traditions to changing conditions is also an essential role played by a university. Inasmuch as the University College, Nairobi, is a part of the larger University of East Africa, its growth and development is dependent not only on the needs of Kenya but must evolve within the broader context of the three East African nations together.

35. The University College, Nairobi, has prepared a development plan which sketches the broad outline of the areas in which it can make the most valuable contributions over the next few years in relation to the needs of Kenya and East Africa. It is an ambitious plan which calls for broad support
from many sources. In the short run the financial burden is high. Several new buildings will be necessary to cope with the increased enrolment, both for residence and teaching purposes. New facilities in arts, science and engineering will be needed. Taking a longer view of Kenya’s development, it is essential that efforts be made sooner rather than later to develop the institutional structure which can provide the nation with advisory and consultative services which are based in an East African environment and intimate knowledge of its culture, traditions and problems.

36. In order to meet these objectives, the student enrolment will have to expand rapidly. However, many students will still have to obtain their university education outside East Africa. As a start, several new departments will be created and an undergraduate medical school will be opened in the 1967/68 fiscal year. The new department of education will offer a post-graduate diploma course and options in arts and sciences faculties for first degree candidates. By 1970 the college will be training an output of some 200 secondary school teachers a year.

37. The opening of the undergraduate medical school in 1967/68 has been planned with the full support of the School of Medicine at Makerere University College. The two schools are planning to develop the curriculum in close consultation so that exchange of both students and faculty will be feasible. More details on the school will be found in the section of this chapter dealing with the health programme.

38. The capital requirements for this programme exceed £4.1 million. Much of this is expected to receive support from overseas sources. In addition, much of the recurrent burden for the first few years, which is expected to reach £1.8 million by 1969/70, is expected to be supported by overseas contributions.

Table 3—Estimated Expenditure—Education

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<tr>
<td>Secondary I-IV</td>
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<td>1,328</td>
<td>971</td>
<td>971</td>
<td>1,133</td>
<td>5,127</td>
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<tr>
<td>Secondary V-VI</td>
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<td>151</td>
<td>151</td>
<td>151</td>
<td>151</td>
<td>736</td>
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<tr>
<td>Secondary Tech.</td>
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<td>Kenya Science T.</td>
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<td>325</td>
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<td>Primary T. Train.</td>
<td>326</td>
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<td>Kenyatta College</td>
<td>64</td>
<td>80</td>
<td>105</td>
<td>104</td>
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<td>353</td>
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<td></td>
<td>1,800</td>
<td>2,696</td>
<td>1,672</td>
<td>1,331</td>
<td>1,340</td>
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<td>University College, Nairobi</td>
<td>148</td>
<td>618</td>
<td>882</td>
<td>783</td>
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<tr>
<td>Medical School</td>
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<td>175</td>
<td>250</td>
<td>250</td>
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<td>975</td>
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<tr>
<td>Total higher ed.</td>
<td>1,948</td>
<td>3,491</td>
<td>2,804</td>
<td>2,364</td>
<td>2,377</td>
<td>12,984</td>
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</table>
39. Human health has a major role to play in economic development. That there is a direct relationship between the health of a population and its productivity is self-evident and has been demonstrated in the industrial countries, which are now benefiting from the years of investment in health services. Apart from the economic benefits, it is incumbent on any government devoted to the social welfare of its citizens to provide adequate health facilities.

40. In drawing up the health programme for the period 1965/70, the Government has kept in mind the fact that an improvement in the health of the nation is fundamental to its economic growth and social well-being. It is realized that for purposes of vigorous development, a healthy labour force and manpower is an essential pre-requisite to economic expansion, since the level of productivity is related to the health of the workers. Thus, expenditure on health services must be accepted as an essential investment even though the returns may not be easy to calculate.

41. The increased capital and recurrent outlay included in the present Plan will be directed especially to the improvement of the vitality and physical capacity of the country's labour through curative services but, as an essential part of the policy, high priority will also be given to the intensification of preventive health measures throughout the nation.

42. Following the precepts of African Socialism as set forth in Sessional Paper No. 10, it is the Government's long-term objective to provide an adequate level of free basic social services to all its citizens. The country does not have the financial resources to provide all these free services at once. Therefore, the long-term objective must be reached through a series of steps as resources permit. The introduction of free medical services for out-patients and all children in 1965 was an important first step in this process.

43. The main emphasis will be in the following fields of health during the Plan period:—

(1) A determined attempt will be made to bring health services increasingly within the reach of all people in order to promote a progressive improvement in the level and standard of national health. More health centres will be built, particularly in rural areas, to cater for preventive, curative and promotive needs of the population.

(2) There will be a general expansion of health services throughout the country with the long-term objective of attaining a rate of increased medical services based on the rate of growth of the country's population. It is hoped that this effort will reduce the present disparity in the standard of health services provided in various districts.
(3) Staff training will be intensified and expanded in order to ease the shortage of doctors, nurses, midwives, and other trained medical personnel and also to take account of the expansion in the services. This will entail the development of new training facilities. This increased training will also help towards Africanization of the health services.

(4) Medical research will be intensified with the aim of identifying those diseases that need greater attention. In the field of research, close co-operation will be maintained, through E.A.C.S.O., with the Governments of Tanzania and Uganda in order to pool resources and knowledge, and to make full use of the limited trained personnel available.

(5) To reduce the incidence of disease and to start eliminating many of the preventable diseases, a vital part of public policy on health will be directed towards preventive measures through health centres. Improvements of environmental health, including the protection of water supplies, bush clearing and the eradication of sleeping sickness and control of malaria will continue to be undertaken. Leprosy and T.B. control measures will be intensified and a special effort will continue to be made to educate the public to practise better nutritional and hygiene habits. In this programme the Government will continue to take advantage of the services and technical assistance offered by international agencies such as W.H.O., U.N.I.C.E.F., Nuffield and Rockefeller Foundations and the United Nations Development Programme.

44. Hospitals and Hospital Beds.—The present distribution of both private and Government hospitals in Kenya is rather uneven. As shown in Table 4, the location of the existing 148 general hospitals and 9,700 hospital beds does not reflect the population distribution in Kenya and the demand for medical facilities in different districts. The exceptionally high ratio of beds to population for Nairobi reflects not only the better health services in the capital but also the fact that hospitals in Nairobi provide national reference services for all of the country. It is the intention to narrow the existing disparity as much as possible during the Plan period.

45. This figure of 148 general hospitals and its distribution, serving 9 million people, is inadequate. It would be desirable to increase the number of hospitals sharply within the Plan period. However, the lack of financial resources is not the only constraint preventing a more sharply increasing number of hospital beds within the next five years. The new and expanded hospital facilities already included in the Plan will severely tax the available sources of skilled technical and professional medical manpower. It will take several years before such personnel are available in sufficient numbers to permit a rapid expansion of hospital facilities. In the meantime the principal efforts will be directed toward strengthening the health services in those parts of the country where the present level of services is least adequate.
<table>
<thead>
<tr>
<th>Province</th>
<th>1962 Population</th>
<th>Number of Hospitals 1964</th>
<th>Number of General Beds* 1964</th>
<th>Ratio of Beds per 1,000 Population</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Govt.</td>
<td>Others</td>
<td>Total</td>
</tr>
<tr>
<td>Eastern</td>
<td>1,556,900</td>
<td>10</td>
<td>13</td>
<td>23</td>
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<tr>
<td>Nyanza</td>
<td>1,634,100</td>
<td>2</td>
<td>11</td>
<td>13</td>
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<tr>
<td>Rift Valley</td>
<td>1,750,500</td>
<td>20</td>
<td>16</td>
<td>36</td>
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<tr>
<td>Western</td>
<td>1,014,500</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Central</td>
<td>1,324,200</td>
<td>7</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Coast</td>
<td>741,100</td>
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<td>10</td>
<td>21</td>
</tr>
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<td>North-Eastern</td>
<td>268,900</td>
<td>3</td>
<td>—</td>
<td>3</td>
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<tr>
<td>Nairobi District</td>
<td>343,500</td>
<td>1</td>
<td>16</td>
<td>17</td>
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<tr>
<td>Grand Total</td>
<td>8,633,700</td>
<td>56</td>
<td>92</td>
<td>148</td>
</tr>
</tbody>
</table>

*Note.—(1) Special institutions, e.g. Mental, Infectious Diseases, Leprosarium, Prison Hospitals excluded.
(2) Nairobi provides reference services for all of Kenya.
The Government plans to establish several new district hospitals with a total capital outlay of about £1 million which will provide almost 1,000 new beds. Construction has already begun on the hospitals at Kisumu and Homa Bay. It is also planned, at a later stage, to develop the new 200-bed hospital being built at Kisumu with aid from the U.S.S.R. into a 500-bed National Reference Hospital providing specialist facilities for the highly populated areas of Western Kenya. This will ease pressure on the Kenyatta National Hospital in Nairobi which will then provide reference facilities for Eastern and Central Kenya.

46. Extension of Existing Hospitals.—In addition to the number of new hospital beds to be provided in these new hospitals, the Development Plan attempts to correct the disparity by supplying additional hospital beds in the existing institutions. The target is to add about 500 new beds to existing hospitals by 1970. The recurrent funds required to finance these new beds is estimated to reach £350,000 per annum by 1969/70.

47. Funds required for increasing the number of beds in existing hospitals will amount to £410,000 with the annual level of investment increasing from £15,000 in 1965/66 to £150,000 in 1969/70. In addition to these new beds, the new medical school which will open at the University College, Nairobi, in July 1967 will require an increase in the number of beds at Kenyatta National Hospital. The capital requirement for this expansion is included as a part of the medical school and appears in the section of the Plan dealing with education.

48. Hospital Improvements.—Of the existing hospitals, many of the buildings are old and some are constructed of temporary materials. Many hospitals are of poor design so that with the advancement in modern medicine, such hospitals are increasingly being rendered deficient in diagnostic facilities. A recent survey reveals that the majority of existing hospitals are already in desperate need of various improvements, e.g. laboratories, out-patient departments, operating theatres, X-ray departments, kitchens, laundries, etc. Under the provisions of the Republican Constitution, the Ministry of Health has taken over the maternity wards formerly maintained and operated by county councils and many of these units urgently require structural and other improvements. It is also planned to take over the Lady Grigg Maternity Hospital, Mombasa, to enable the programme for the training of midwives to proceed. £509,000 will be spent on these improvements at Government hospitals during this Plan period, each improvement being decided in strict order of priority.

49. Apart from the Government hospitals, many private hospitals and in particular Mission hospitals, are passing through a most difficult period. To avoid a breakdown in such services, the present policy of providing Government Capital Grants for building improvements and development and of recurrent grants to assist in keeping the hospitals functioning must be continued.
50. Phasing of the capital programme will be:

| TABLE 5 — CENTRAL GOVERNMENT CAPITAL EXPENDITURE ON HOSPITAL IMPROVEMENT (£1,000) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Grants to Non-Government Hospitals .. | 10 | 60 | 110 | 149 | 180 | 509 |
| Total | 10 | 32 | 32 | 33 | 33 | 140 |

51. **Staff Housing.** — Almost all staff employed at hospitals are required to be housed “on the spot” in institutional housing. For the larger units special provision has to be made for certain groups of staff such as Students’ messes, Interns’ and House Officers’ messes. A severe shortage of staff accommodation exists at most Government hospitals while some of the existing accommodation is of a low standard. To alleviate this situation a sum of £236,000 will be spent during the Plan period.

52. Consequent on the increased number of beds to be provided under the Plan, staff housing will also be necessary for the new staff to be recruited to man the additional beds and services. Based on an average minimum staff/bed ratio of 1:2 requiring to be housed, the cost of the necessary additional housing will be £624,000.

| TABLE 6 — EXPENDITURE ON STAFF HOUSING AT GOVERNMENT HOSPITALS (£1,000) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| To alleviate existing shortage .. | 10 | 46 | 50 | 60 | 70 | 236 |
| To house staff required for new hospitals and extensions .. | 25 | 64 | 135 | 180 | 220 | 624 |
| Total .. | 35 | 110 | 185 | 240 | 290 | 860 |

53. **Public Health.** — During the Plan period special emphasis will be given to environmental sanitation and preventive medicine. This will need a well-trained staff in the field. At present there is only one health inspector to 80,000 people. An improvement on this ratio will lead to better health standards which in turn will ease the burden on hospitals and the curative aspects of the medical services. The short-term aim is to achieve a health inspector population ratio of 1:50,000. This will require a total of 350 Health Inspectors by 1970, of whom 233 will have to be trained in the course of the Plan period. The recurrent costs for training will reach a rate of £77,000 per annum in 1967/68.
54. Capital costs associated with the training of health inspectors will total £106,800 during the Plan period. External assistance will be sought for much of the furnishings and teaching equipment which are required.

55. Environmental Sanitation.—During the period 1959/65 U.N.I.C.E.F contributed at a total of £195,000 to programmes for environmental sanitation. Contributions from local authorities were £97,000. The contributions from U.N.I.C.E.F. are expected to fall from £15,000 in 1965/66 to £5,000 in 1969/70, and Central Government grants will be needed to continue this programme. For the period 1965/66 to 1969/70, £445,000 will be spent, of which the Central Government will contribute £200,000, the rest mainly coming from local authorities.

56. These funds will be channelled into provision of rural water supply to provide a nucleus of installations on which the Local Authorities can build. Such supplies are a great step forward in emphasizing and carrying out preventive measures against insanitary conditions in the rural areas caused mainly by lack of clean water. They also go a long way in helping village communities towards better living conditions and the prevention to a large extent of diseases caused by lack of clean water. The programme includes:

1. Provision of roof water catchment and storage together with provision of toilet facilities in schools and markets.

2. Provision of drainage and latrines treatment facilities for waste water and soil in trading centres and markets.

57. Tsetse Fly Eradication.—Apart from holding up the agricultural development of large areas of Nyanza and Western Provinces (see Chapter 6, paragraphs 47-52), the tsetse fly is a serious menace to the health of thousands of people living in and near those areas. During 1960-64 increasing tsetse infestation of populated areas in Central Nyanza resulted in progressively more serious outbreaks of sleeping sickness, culminating in 355 recorded cases in 1964, plus an unknown number of unrecorded cases, especially in children. Intensified spraying operations begun in 1965 have reduced the incidence of the disease, but it has continued to spread into areas which were formerly unaffected or from which the fly was previously eradicated. Cases of sleeping sickness have recently been diagnosed in Nairobi where persons infected in Central Nyanza have come to work, and the danger exists that such individuals could transmit the parasite (trypanosome) to tsetse flies in other areas of Kenya now free of the disease. As noted in Chapter 6, the Government has undertaken to eliminate human and animal sleeping sickness from Western Kenya once and for all, and has requested U.N. Special Fund assistance for a programme with this objective. The Government now spends approximately £150,000 per annum to control the tsetse fly and treat cases of sleeping sickness in Western Kenya. Eradication of the disease would free this money for expenditure on other activities, including operations against other diseases.
58. Health Centres.—The Government accepts the view already expressed by experts that the health centre scheme, as it is developed in this country, is a major contribution to the solution of some exceedingly difficult problems in Kenya's health service. The rural health centre should continue to form the linchpin of public health policy in which curative and preventive medicine will continue to be co-ordinated. The closer the health services can be brought to the population they serve, the more effective will be the Government's health programme. Furthermore, the health centre is the means by which the imbalance between rural and urban health services can be corrected. Hospitals must be located in cities or larger towns and administrative centres, and expenditure on hospital beds alone cannot bring adequate health service to the rural areas.

59. There are now about 160 health centres in Kenya. A number of these are the result of the self-help efforts of communities as the people recognize the need for improved health facilities. It is essential that these Harambee efforts are adequately supported by Government. A critical element in this support is adequate advance planning for additional facilities to ensure that trained staff is available and that satisfactory standards of service can be provided. It would be most unfortunate if the efforts being made by the people resulted in wasteful expenditure of effort and money through building centres which could not be staffed or which provided less than minimum acceptable services.

60. The long-term aim is to provide one health centre for every 20,000 inhabitants. As a step towards this target work on an additional 110 health centres will be started by 1970 with central government assistance. This will be done mainly by improving existing dispensaries and sub-health centres. The financing of the entire programme will be undertaken largely by local authorities with assistance from the central government in the form of capital grants. Full advantage will be taken, however, of self-help measures.

61. It is planned that the Government's contribution should be restricted to half the cost of each project. During the Plan period it is anticipated that the Central Government contributions will total £471,000 increasing from £21,000 in 1965/66 to £170,000 in 1969/70. The balance will be met by local authorities or through self-help. Local authorities will continue to be responsible for the management of all health centres in their areas.

62. Medical Education and Training.—The planned expansion of medical and health services makes increased medical education and the training of auxiliary staff a matter of highest priority. Kenya faces an additional problem in that local personnel must be trained to replace expatriates.

63. Medical School.—At present there is only one doctor to every 10,000 of population. The long-term objective is to develop in Nairobi a postgraduate medical school within the framework of the University of East
Africa. For the period of this Development Plan, however, it has been decided not to pursue the post-graduate programme, but to establish instead undergraduate training at the University College, Nairobi. The Kenyatta National Hospital will be the associated teaching hospital. The first stage of this scheme is confined to clinical training of final year students at Makerere. Teaching is being carried out by a team from the Faculty of Medicine, University of Glasgow, and Kenya Government consultants. The next phase will be the establishment of a full undergraduate medical school in 1967 as a Faculty of the University College, Nairobi. The scheme is proposed to start with an enrolment of thirty undergraduates.

64. The undergraduate Medical School is included in the development plan of the University College, Nairobi. Capital costs are included in the education section of the Development Plan. The capital cost of the whole project is expected to be £3 to £3½ million over a period of ten years. Recurrent expenditure will increase to approximately £750,000 in four years. Assistance for this project is already being sought.

65. Supporting Staff.—To ensure that doctors, whose training represents a considerable investment for the country are effectively utilized it is necessary to increase the number of qualified supporting staff. Facilities for training of such staff already exist, but improvements are required to keep pace with the growing demand. About £447,000 will be required for this purpose (see paragraphs 66 to 71). Efforts will be made to improve the efficiency of training programmes with a view to making better use of training facilities and shortening the period required for such training.

66. Health Centre Staff.—With the proposed expansion in the number of health centres it is essential that the type of training offered to health centre teams be improved. Health services require different skills, but each skill is complementary to the other. Each auxiliary must recognize that team work is the road to success. Training must foster this attitude and make each member of the health centre team aware of his limitations and responsibilities. Moreover, training must distinguish between the needs of auxiliaries who are assistants to, and those who are in some cases “substitutes” for, doctors.

67. During the Plan period a comprehensive course is being organized to accelerate the supply of community nurses who are better fitted for work in a rural setting. The course, lasting three years, will be a condensed one offering training in midwifery, nursing and health visiting and will be conducted at selected hospitals—Kisii, Nyeri, Nakuru, Kisumu, Mombasa, Murang’a and Machakos, where some training facilities that already exist will require extensions. As part of this programme a special grant has been offered by the Government of Norway towards the establishment of a school at Thika. It is planned to start the scheme in 1966 and by 1969 to qualify at least 350 community nurses each year. Development starts during 1966 and capital cost is estimated at £135,000. Capital costs for extensions to the district and provincial schools will be £70,000.
68. Side by side with the training of community nurses, the upgrading of enrolled nurses to medical and then clinical assistants will be intensified. The medical assistant in many ways acts as a doctor by diagnosing disease and prescribing treatment and is a most useful member of the hospital staff. The aim is to train at least seventy medical assistants per year. To enable this to be done, the Ministry of Health will organize a relief service by employing nursing orderlies to do the less specialized routine tasks that normally take up much of the time of enrolled nurses. This will allow a large number of enrolled nurses to be released to attend upgrading courses. This development will also require additional classrooms and laboratory facilities at the Medical Training Centre and provincial hospitals. The capital cost is expected to be £80,000 during the period.

69. Kenya Registered Nurses.—A Central School of Nursing is being established in close proximity to the Medical Training Centre and Kenyatta National Hospital, Nairobi. This will enable registered nurse training to be separated from that of other medical auxiliary staff and will also allow midwifery courses to be offered locally, thus obviating the need to send Kenya registered nurses overseas for post-registration courses. The school will cost £65,000 of which £42,500 has been provided by the British Government. The training of registered nurses is also being conducted at the Aga Khan Platinum Jubilee Hospital in Nairobi and at the Nairobi Hospital. It is also hoped to develop the Coast General Hospital to train registered nurses. These facilities together are expected to turn out more than sixty new registered nurses each year after 1970. For the period before 1970, it will be necessary to expand overseas recruitment of nursing staff because the domestic supply is inadequate for Government Service. This will involve extensions to the Nurses Home, Nairobi, and a new Nurses Home, Mombasa, at a capital cost of £120,000.

70. Kenya Registered Midwives.—Training of registered midwives started at Kenyatta National Hospital on 1st December 1965 and it is intended to train approximately fifty midwives each year. As soon as the Lady Grigg Maternity Hospital, Mombasa, is taken over by the Government it will be possible to train a further fifty midwives each year.

71. Advanced Nursing Studies.—In order that the training of nurses may be accelerated it is intended to introduce a scheme of advanced nursing studies at the University College, Nairobi. The intention is to produce senior supervisors, i.e. teachers, nurse demonstrators and public health nurses for senior nursing supervisory posts in Kenya. Assistance is expected from both the World Health Organization and U.N.I.C.E.F.

72. Research.—The Government will continue to support a limited amount of basic research at a cost of £25,000 annually. Most of the research, however, is under the East African Common Services Organization. Research will also continue in Kenya to establish which foods are most beneficial nutritionally and also the best means to prepare such foods. The knowledge
gained from this research will be passed on to voluntary workers, teachers, nurses and social workers through a training programme being undertaken at Karen House, Nairobi. This building is a gift of the Danish Government, costing £20,000 in capital and £8,000 per annum to run.

73. National Hospital Insurance Scheme.—It is the Government's intention to establish a compulsory non-racial hospital insurance scheme for persons earning over £600 per annum. This scheme, to be known as the Kenya Hospital Insurance Fund, will replace the two present compulsory schemes, the European Hospital Fund Authority which is operated for Europeans and the Kenya Hospital Fund Authority which is operated for Asians and Arabs and those Africans who wish to join it voluntarily. In present-day Kenya it is inappropriate to have schemes catering for the needs of specific communities. In addition to the compulsory participation for those earning over £600, the new authority will operate a voluntary scheme for those with lower incomes. The new scheme will be operated on the insurance principle of spreading the risks and consequent costs of hospitalization among all participants. As shown above, the Government will, of course, continue to provide medical services to lower-income workers through its hospitals, health centres, dispensaries and other supporting facilities.

Table 7—Estimated Expenditure—Health (£1,000)

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<td>680</td>
<td>1,006</td>
<td>1,097</td>
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</table>

Note.—Expenditure of £370,000 on tsetse fly eradication is included in Chapter 6 estimates for agriculture.

C—Family Planning Education

74. At present the population of Kenya increases by about 3 per cent each year, and if the habit of the families to have many children does not change this rate of growth will increase to 4 per cent in a few years time. The reason for this is that with improved health services fewer children will die in infancy and the death rate in general will fall substantially. The economic and social consequences, for the nation as a whole and for the
individual families, are discussed at length in Chapter 3. The population problem has such a serious impact on the future development of the country that the Government has decided to place strong emphasis on measures to promote family planning education.

75. Measures to promote family planning education include the following:

(a) A Family Planning Council will be established to plan and co-ordinate the activities of the Government, the Family Planning Association and other private agencies in the field of family planning. The Family Planning Association will be asked to provide the Chairman and the members will be appointed by those Ministries which have an immediate interest in this programme.

(b) The facilities of Government hospitals and health centres will be made available for the establishment of family planning clinics and the personnel in various Government Ministries will be asked to co-operate fully in the execution of the programme and avail themselves of the training opportunities which will be provided.

(c) The Family Planning Council will prepare as soon as possible an educational programme, arrange for the necessary collection of statistical data and plan the conduct of clinical studies in selected medical centres.

(d) With financial assistance from the Government, the Family Planning Association will be authorized to procure and distribute family planning supplies through the Family Planning Council to all participating organizations.

(e) Technical assistance will be sought to advise the Family Planning Council on establishing this programme, and on demographic, administrative, training and educational problems.

76. It is not possible to estimate exactly the cost to the Government of this programme of family planning education. A programme which would adequately cover the whole country would cost between £100,000 and £160,000 a year. Such levels of expenditure will hardly be reached in the course of the present Plan period. Much of the costs during the next four to five years will probably be covered by foreign assistance to the Family Planning Association and other organizations participating in the programme. The costs to the Government are estimated at approximately £100,000 for the Plan period.

D—Community Development

77. Community development is a process involving the people in planning and working for their own development. Such involvement is at the root of nation-building and economic development, neither of which can move very far or fast without the general and energetic support of the country's citizens. The community development programme presented in the
Plan aims at encouraging people to become involved in development by preparing them for change, helping them to understand their role as citizens, assisting them to acquire the knowledge and skills necessary to carry out their responsibilities, and stimulating and assisting them in taking action to meet their needs through voluntary self-help organizations.

78. **Self-help Schemes.**—Self-help is the basis of community development. Self-help projects were always part of the traditional way of life in Kenya but in recent decades the tradition has tended to wane. It is now being revived in a new form and is giving added impact to the pace of development. Seen in isolation a single self-help project may appear insignificant. But when thousands of self-help projects are added together they make a very important contribution to the development of the nation. More important than the numbers of projects completed is the tangible evidence of the people's support for development. Self-help projects cannot be set out in detail as part of a national Development Plan. However, administrative arrangements ensure that self-help projects contribute to economic development by supporting at the local level the national Plan.

79. The significance of self-help projects can be indicated best by their accomplishments during the past two years. More than 6,000 miles of access roads have been constructed and over 1,000 bridges have been built. Water supplies have been made available to more people through the construction of fifty dams and rock catchment schemes, the construction of over 500 protected springs and the installation of over 9,000 miles of pipeline and water furrows. In addition more than 2,500 community facilities such as school buildings, nursery centres, health centres, dispensaries, and clinics have been constructed. As a result of the feeling of mutual trust and co-operation arising out of self-help activities, land consolidation has been able to proceed smoothly in Nyanza and Western Provinces. Agriculture production has been stepped up as a result of groups of neighbours assisting each other, and there has been a great increase in the planting of cash crops such as cotton, and in the clearing of bush.

80. In order to make the maximum contribution to the nation's efforts for more rapid economic and social development, the growing self-help activities must be planned and directed. In many cases the unaided self-help efforts of a community cannot provide the resources required for both the construction of a project and the continuing burden of its maintenance and operation. Complementary resources such as trained manpower and revenue to cover recurrent costs will often be needed. If these are not forthcoming or are obtained at the expense of other planned developments, self-help efforts can slow the growth rate rather than promote development and welfare. Self-help projects must therefore be planned and co-ordinated so that they are consistent with the national Development Plan. This planning will include appropriate emphasis on the maintenance and improvement of existing facilities in addition to the construction of new ones. Toward this
end the Community Development Committees already established by the Department of Community Development will become sub-committees of the development advisory committees being organized by the Ministry of Economic Planning and Development at district and provincial levels. Community Development Officers will also be members of the District and Provincial Development Committees.

81. At each level a cadre of community development staff is available to stimulate and guide self-help in the field and to serve the self-help committees. The staff is headed by a national Director. However, it is obvious that full participation by provinces, districts and locations is essential to the success of the community development programme. This factor has been taken into account in formulating the committee structure. Provincial and Local Authorities are expected to contribute according to their means towards the cost of the programme. Recurrent expenditure for the national self-help schemes will reach approximately £50,000 by 1969/70 from a level of about £43,000 in 1965/66.

82. Community development has a particularly important role to play in those parts of Kenya which are now tending to lag behind in economic and social development. Today there are some areas with genuine economic potential which remain relatively underdeveloped because the people do not know how best to go about improving their living conditions. There is also resistance to change in some areas. It is in such areas that community development personnel must provide that blend of ingenuity and leadership which will stimulate enthusiasm for development. In order to provide for a minimum required coverage of trained community development personnel to each province, a substantial increase in staff is required—7 senior community development officers, 26 community development officers, 55 assistant community development officers and 137 community development assistants. Many of these will be employed by the local authorities. But the Government will continue to provide assistance to the poorer districts until they are able to shoulder the recurrent costs involved.

83. In order to bring new ideas and concepts to isolated communities and to develop training, it is essential that each District in Kenya has a multi-purpose training centre. These centres will be simple in design and their structure will incorporate features which can be copied in home improvement schemes by the students. The multi-purpose District Training Centres can offer a wide variety of courses concerned with community leadership, citizenship, home economics and would also be available for other Ministries to organize and conduct courses. The Ministry of Health, the Ministry of Agriculture and the Extra-Mural Department of the University College are examples of agencies that would find these centres of invaluable assistance in their work. The staff of Community Development Department will also assist in various training schemes in the field and will, in particular, play an important part in district farmers' training centres.
84. It is proposed that existing Home-Craft Training Centres be converted to multi-purpose training centres and existing District Training Centres taken over by Central Government as and when finance allows. As a first step, an officer and two instructors will be provided for each Training Centre. The capital cost for the thirteen centres planned during this Plan period is about £130,000—approximately £10,000 for each.

85. At the close of the first year of the 1964-70 Development Plan, there were a total of 1,450 major self-help schemes requiring material and technical support. For example, in one province alone the value of the people’s contribution in terms of cash, labour and materials totalled £16,000 and an additional £14,000 was required towards which further voluntary contributions were expected. In the light of this experience it is obvious that the originally planned Central Government assistance of £30,000 per annum is inadequate. This assistance was increased to £60,000 in 1965/66 and it is planned to continue increasing the support annually to a level of £130,000 by 1969/70. The total capital outlay for the Plan period will be £500,000. External assistance for the community development programme is already being sought.

86. Professional training for Community Development staff at senior and junior levels is provided by the Community Development wing of the Kenya Institute of Administration and at the Maseno Training Centre. Training for Social Workers is carried out at the Kenya School of Social Work which was originally initiated as an aid programme by the Israeli Government. At University level training facilities are provided by the Makerere University College, the Oppenheimer College of Social Work in Zambia and scholarships afforded on a bilateral basis to Universities abroad. The increasing emphasis in training is to up-grade all community development workers to full professional standards. The final purpose is to produce multi-purpose workers who can be employed in the urban as well as rural areas within the Community Development Division of the Ministry of Housing and Social Services.

87. A training programme instituted in 1961 has produced a qualified group of local community development staff and is capable of rapidly expanding the number of trained staff required. Provincial and district centres will be encouraged to train subordinate staff. The recurrent expenditure required to support training is expected to reach £8,000 by 1969/70.

E—National Sports Programme

88. Sports serve several functions in the life of the nation. First, active participation in various sports is an important means of improving the health and physical fitness of the people. This is partly why schools and other institutions should include physical training and sports in their programmes. Secondly, the performance of the nation’s leading athletes has a tremendous impact both within and outside the country. The victories of our athletes
in international meetings is not only boosting the Kenya image abroad, but is also a clear demonstration that there are no barriers to what Kenyans can achieve given ambition and determination.

89. The national sports programme is largely a voluntary effort which is co-ordinated by a small national staff. In order to assist in the planning of the programme and to allocate the available financial resources a Kenya National Sports Council has been established. Each national sporting body, Provincial Association, the Ministry of Education, the military organization and the police will be represented on the Council with the Ministry of Housing and Social Services acting as the co-ordinating ministry.

90. Each province, with the exception of Nairobi and the North-Eastern Province, now has a sports officer. Co-ordinating their activities is the Kenya Sports Officer in the Ministry of Housing and Social Services. The Kenya Sports Officer works closely with the Ministry of Education in its physical education programme in the schools. In order to improve the quality of all these activities it is planned to augment the services provided by attaching a coach to the national office and to each of the provincial offices. When this level of staffing is reached the annual recurrent cost will be about £25,000.

91. The major means by which the central government supports the provincial sports programme is through grants to associations. These grants will total approximately £6,000 in 1965/66 and will reach £10,000 in 1969/70. In addition, support is given for international sporting events such as the Commonwealth Games to be held in Jamaica in 1966/67, the Olympic Games to be held in Mexico in 1968/69 and the All Africa Games to be held in Mali in 1969/70. Support for international events is expected to total about £9,000 during the Plan period. The Central Government makes no direct grants-in-aid to local authorities. Such support comes through the Kenya National Sports Council. Nor does Government pay affiliation fees to international associations.

92. Plans exist to build a National Stadium which would also house the offices of the various organizations dealing with sport. The cost is estimated to be approximately £1 million. The Government has no funds for this project but it will give full support to voluntary organizations trying to build the Stadium.

F—National Youth Service

93. The objectives of the National Youth Service are—

(a) to put unemployed young people into an environment that will inculcate good citizenship and provide an opportunity to contribute to the social and economic development of the country;

(b) to promote national unity by bringing together young persons from all areas of Kenya for training and work in projects of national importance;
(c) to help alleviate unemployment and hardship among young persons
by providing employment, education and training to prepare them
for future productive employment after completion of their service;
and
(d) to contribute to the economy of the country by helping to conserve,
rehabilitate and develop Kenya's natural resources.

94. The National Youth Service has now become a major force in
Kenya's development. Over 3,000 young men who for various reasons would
otherwise be unemployed are now engaged in projects of national importance.
The work projects so far have included road, bridge and dam building;
tree planting; bush-clearing; tsetse fly control; building of demonstration
houses; land clearing and demarcation for settlement schemes; irrigation
works; and development of National Parks.

95. The work projects planned for the National Youth Service are based
on the Development Plan. Many of these projects, especially road building,
will require heavy equipment most of which is expected to be received as a
grant. The cost of operating such equipment and maintaining work camps
will normally be covered by appropriations-in-aid from the ministries,
parastatal bodies, or local authorities sponsoring the project. The Government
will, however, continue to provide assistance for the maintenance of
work camps to supplement fees paid for the services rendered by the National
Youth Service. A sum of £10,000 per year is allocated for this purpose.

96. Training.—Basic training of volunteers is done in Nairobi after which
the volunteers are sent to the field units where two-thirds of their time is
spent on work projects and one-third on educational and vocational training
in subjects in which they show special aptitude. The period of service has
now been increased from one to two years. This longer period of service
will allow more intensive training of volunteers to enable them to get good
employment after completion of their service.

97. Field units have already been established in the Coast, Rift Valley,
and Eastern Provinces; and plans are advanced to establish one field unit
in the Western Province which, for the time being, will serve Nyanza Province
as well. The training unit in Nairobi will also serve the Central Province.
In 1964/65 a sum of £35,000 was spent to establish and equip field units,
and in 1965/66 a further sum of £20,000 will be spent for this purpose.
Additional field units will be established in step with the build-up of work
projects in the provinces.

98. Technical assistance in the form of engineers, masons, mechanics,
farm instructors, teachers, etc., is being sought from various sources. The
number of instructors required during the Plan period is shown in the table
below. Wherever possible, each foreign instructor will have a local counter-
part to understudy him so that eventually all training can be conducted by
Kenyans.
TABLE 8.—NATIONAL YOUTH SERVICE INSTRUCTOR REQUIREMENTS

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<td>5</td>
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<td>62</td>
<td>48</td>
<td>27</td>
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</table>

99. It is planned to increase enlistment in the Service to 5,500 by July 1966, and then to 7,000 by 1970. The success achieved in harnessing the energies of young men for development projects and in training them for future employment has led the Government to start a women’s wing in the Service. The initial enrolment to this unit is expected to be 200 young women.

100. Kenya Government contribution in capital expenditure for field units and project camps is estimated to amount to a total of £70,000; while annual recurrent expenditure to be provided by the Government is estimated to be £455,000.

TABLE 9.—ESTIMATED CAPITAL EXPENDITURE—NATIONAL YOUTH SERVICE (£1,000)

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<td>10</td>
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<td>70</td>
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</table>

G—Information and Broadcasting

101. Kenya’s broadcasting service, the Voice of Kenya, is an essential instrument in Government’s programme of building a prosperous and united nation. Sound and television broadcasting are very important instruments in achieving this objective. To have a strong impact, however, both sound and television services must operate efficiently. Transmission facilities must provide strong, reliable signals over the greater part of the country, and programme production facilities must cope with an increasing number of locally produced programmes. Existing transmission and studio facilities are limited, and to ensure increased efficiency, greater coverage and improved reliability, improvements and extensions will be undertaken during the period of the Development Plan. Parallel with technical improvements and extensions of transmission and production facilities, further development and improvement of the quality of programme contents as well as presentation in sound broadcasting and television will continue.
102. **Sound Broadcasting.**—Over much of the country, reception of sound services still relies on short waves which are unreliable, and subject to interference. In order to improve reception, first priority among the main projects is given to the erection of a National Medium Wave Transmission Station, consisting of one 100 kW and two 50 kW transmitters, at Ngong. This will extend substantially the coverage on medium wave, particularly in densely populated areas. It will also permit the use of cheaper receivers. This station will be supplemented by small relay stations which will provide a further extension of the national coverage as economically as possible. By the end of the Plan period sound broadcasting will, therefore, reach a considerably larger audience, bring in more revenue from radio licences, and make sound broadcasting more attractive as an advertising medium. The project is already in progress. It will cost a total of £460,000—£350,000 for the station and £110,000 for the relay stations. Recurrent costs will reach about £32,000 per annum by 1969/70.

103. **Television.**—Television coverage is at present limited to a comparatively small area around Nairobi and Kisumu. The coverage will be widened by increasing the transmitter power of the present stations, and constructing a new station at Mombasa. The production of programmes for the Mombasa area is planned on an austerity basis, since a separate studio centre would mean high capital and recurrent cost in relation to the small number of television sets likely to be bought in the Mombasa area. However, television facilities at Mombasa may be extended in case a need for this becomes apparent. Further proposals for extension of television facilities concern the transmitters at Timbora and Nairobi. To improve reception levels and provide standby facilities, it is planned to replace the present transmitter at Timbora with a 5 kW unit, and separate transmission and reception functions by erecting a transmitter hall. This will result in a more efficient reception of the main transmitter at Hillcrest, which serves the West Kenya area. The present transmitter will remain as a standby service. The programme also includes the provision of another single television transmitter at Nairobi in order to extend the coverage and provide fault standby facilities. The capital costs of the television projects are shown in Table 10.

104. **Somali Language Broadcasting.**—Facilities are being installed in order to improve the Somali language programmes and ensure improved reception. A sum of £140,000 is provided for this purpose.

105. **Educational Programmes.**—Kenya has yet to make full use of its broadcasting service for the general education of all its people. Education through television and sound broadcasting is becoming a common and effective medium of mass instruction in many parts of the world. In Kenya, it is estimated that approximately 1,000 primary and secondary schools are taking advantage of instruction given through the V.O.K.'s Schools Broadcasting programmes. A section of the Ministry of Education is responsible
for the schools broadcasting. A capital expenditure of £24,000 will be undertaken to provide increased studio facilities exclusively for educational purposes.

106. Staff Training School.—A very high priority is also attached to the setting up of a staff training school to provide training facilities for the present and future staff of the Information Department and the Voice of Kenya on engineering as well as programme aspects of broadcasting and information services. Structure and function of the school have been defined in consultation and agreement with all the institutions of technical education in Kenya. Its curriculum has been designed as an integrated programme with Diploma and Technician's Certificate courses given at the Kenya Polytechnic. Present or future staff will receive a theoretical education by attending at the Polytechnic, and the V.O.K. Training School will function as an operational school, providing additional practical training in various aspects of broadcasting and information. The establishment of the training school is under way, and the finance for it has been secured. During 1965/66 and 1966/67, a total capital of £150,000 will be invested in the training school, and the annual recurrent cost will be in the order of £36,000.

107. External Broadcasting.—A major project under consideration concerns the setting up of an external broadcasting service, to broadcast sound programmes to other countries of the world. Very provisional plans envisage two 250 kW. short wave transmitters, sufficiently powerful to be heard in this very competitive field, with suitable studios and programming facilities. Capital and recurrent expenditures involved are very high, and the project still requires more detailed planning, scrutiny and evaluation.

108. Other projects under review but which may be undertaken in this Plan period include the building of a television audience studio in Nairobi and an administrative block in the grounds of Broadcasting House to accommodate all the offices of the Ministry of Information and Broadcasting which at present are in rented accommodation in various parts of Nairobi.

109. During the present Plan period, the development plan for the Voice of Kenya will require a total capital investment of £1.3 million. The present total recurrent expenditure incurred for the operation of sound broadcasting and television amounts to about £620,000 a year. These recurrent costs may be expected to increase to about £800,000 per annum by 1970. Although the present number of radio sets in the country is estimated at around 300,000, the actual number of licences issued is less than 100,000. This difference is caused by a considerable amount of evasion, which is now being eliminated, and by the fact that more than 30 per cent of the sets are exempted from the payment of licence fees. It is estimated that the number of radio sets is increasing by approximately 15 per cent each year. The number of television sets is at present about 9,000. Introduction of television services in the Mombasa area is expected to result in 3,000 television sets in that area by the end of 1967/68, in addition to an expected
annual increase of 10 per cent in the number of sets in other areas of the country. Better coverage and reception, and improved programme contents and presentation should lead to a substantial increase in Voice of Kenya's audience and thus lead to more revenue from licence fees and advertising.

110. Information Services.—Continued development of Kenya's information services is important for the promotion of Government policies, for the education of the citizens and for the promotion of Kenya's interests abroad. Potential developments include regular production of films on Kenya and the extension of the Kenya News Agency to disseminate news of Kenya overseas. In the Information Department of the Ministry there has been an expansion of the Press, Publications and Photographic Sections of the Kenya News Agency, which receives news by teleprinters from all over the world. More recently the Presidential Press Unit has been established. The provision of library services at various Provincial Headquarters is envisaged during the Plan period.

<table>
<thead>
<tr>
<th>TABLE 10—Estimated Expenditure—Information and Broadcasting</th>
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<tbody>
<tr>
<td><strong>TRANSMISSION</strong></td>
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<tr>
<td>Microwave Links</td>
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<td>National Medium Wave Transmission Station</td>
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<td>Relay Stations</td>
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<tr>
<td>Regional Medium Wave Transmission Station, Kisumu</td>
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<tr>
<td>Mombasa Television Transmitter</td>
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<tr>
<td>Timbora Television Transmitter</td>
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<tr>
<td>Nairobi Television Transmitter</td>
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<tr>
<td><strong>PRODUCTION</strong></td>
</tr>
<tr>
<td>Schools Broadcasting</td>
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<tr>
<td>Sound Mobiles</td>
</tr>
<tr>
<td>Film Unit</td>
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<tr>
<td>Television Mobiles</td>
</tr>
<tr>
<td>Nairobi Sound and Television Studios</td>
</tr>
<tr>
<td>Mombasa Television Studios</td>
</tr>
<tr>
<td>Kisumu Sound Studios</td>
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<tr>
<td>Somali Language Broadcasting</td>
</tr>
<tr>
<td><strong>GENERAL</strong></td>
</tr>
<tr>
<td>Staff Training School</td>
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<tr>
<td>Outside Broadcasting Section</td>
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<tr>
<td><strong>Total</strong></td>
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</tbody>
</table>

111. Housing

H—Housing

Housing conditions are among the most essential aspects of the standard of living. A sound programme for the provision of adequate housing facilities is therefore an essential part of social and economic development planning. Residential buildings constructed in 1956 were worth £10 million compared with buildings worth only £2 million in 1964. A recovery in house building would have beneficial effects on the economy as a whole. Therefore in order to meet housing needs and to stimulate the growth of the economy, an expanded programme for house building has been given high priority, and in 1966/67 Central Government financial contribution through the
Ministry of Housing and Social Services will be raised to £1.7 million compared with £453,000 in 1965/66. Material resources needed to accelerate house building are ample in Kenya, notably building raw materials and labour, although some shortage of skilled labour, especially of finishing craftsmen, may be expected to occur if there were a rapid recovery in this industry. The main limiting factor is, however, finance to pay for the construction of houses which will only be repaid over a long period of time. The financial resources which can be mobilized internally or borrowed externally for housing are likely to fall very short of the needs, and this state of affairs which is common to many countries of Africa, is likely to persist far beyond the present Plan period. It is necessary, therefore, to make a determined effort to increase the internal and external sources of finance for investment in housing. Further, in order to meet the needs of the largest possible number of people, the housing programme must be as economical as possible, i.e. emphasis must be placed on low-cost housing and to the largest possible extent assisted by self-help efforts. Similarly, the scarce Government funds which will be available for housing must be so employed that they will stimulate private and foreign capital and self-help efforts as effectively as possible. As a first step in planning a realistic housing programme, the Government in 1964 obtained the services of two United Nations housing experts to assess the size of the housing problem in Kenya, and to recommend a housing policy which would be consistent with the country’s financial resources. The programme outlined below takes account of their report.

112. In addition to the shortage of finance, the other main aspects of Kenya’s housing problem include—

(i) the rapid increase of the country’s population;

(ii) the migration from the rural to the urban areas which has given rise to an estimated annual increase of population in urban centres of approximately 5-6 per cent;

(iii) existing overcrowding and housing shortage in urban areas; and

(iv) the inability of a large proportion of the urban population at existing income levels to afford the cost of buying or renting a satisfactory family house.

113. Overcrowding is extremely serious among urban African households. Even at the high ratio of three persons per room, approximately 49 per cent of all urban African households are overcrowded. Overcrowding is even higher in one-room housing units. Another element affecting the housing needs in urban areas is the expected increase in household size due to the migration of wage earners’ families from rural areas. It is estimated that the average urban family size will increase from 4.3 persons in 1962 to 4.8 persons in 1970, and that if overcrowding is to get no worse the number of rooms constructed in the towns of Kenya must be about twice as many as the number of housing units.
114. Although housing needs can be stated in fairly definite terms, it is more difficult to estimate the effective demand for new housing because this depends on the prices at which houses can be built, and on the ability and willingness of people to pay those prices or the corresponding rents. A family that is overcrowded in one room may not be able to afford the rent of two rooms, while a family wishing to purchase a house big enough for its needs may not be able to pay the monthly charges without letting out one or more rooms. Therefore effective demand for housing is likely to be smaller than the estimated housing needs. The long-term aim of the Government's housing policy is to provide to the maximum number of people adequate shelter and a healthy environment at the lowest possible cost.

115. A National Housing Authority will be set up in 1966 under the control of the Ministry of Housing and Social Services. It will take over the functions of the Central Housing Board, including the management of the Housing Fund, and will be the Government's instrument for developing and executing housing policy both in urban and rural areas. It will also develop close links with non-Government organizations in order to foster and promote housing development in the private sector. The Authority will take a close interest in the development of the building industry, promotion of training and education in the technical and managerial skills needed for a housing programme, and in housing research. The building and management of housing estates is one of the responsibilities of municipalities and other local authorities. The National Housing Authority will continue the Central Housing Board's function of giving loans to local authorities and other organizations for approved housing projects, but will also build and manage estates itself in areas where local authorities are unable to do so, or to demonstrate new techniques. The Authority will also have power to set up subsidiary organizations to invest in housing enterprises, and develop, for instance, new townships or to deal with local or special problems in consultation with local authorities. In view of the low level of private house-building activities and in order to stimulate employment and meet the most pressing housing needs, the Government will make a special effort to increase its financial contribution in 1966/67. A sum of £1.7 million has been allocated for the National Housing Authority for that year.

116. The categories of housing which will be included in the programme of the National Housing Authority are listed below. Determination of priorities among these categories will require careful judgment if the best use is to be made of the limited funds likely to be available.

(i) *Industrial Housing.*—For the future development of the economy, it is essential that a high priority be given to housing needed for industrial expansion. Lack of housing for the workers can be a serious impediment in setting up new industries, or expanding existing ones. It is hoped that employers will continue to co-operate by setting aside sufficient capital to provide housing for the workers.
(ii) **Institutional Housing.**—Staff housing needed for hospitals, training colleges, and other Government development projects must also play an important part in the housing programme.

(iii) **Low-income Rural Housing in Settlement, Land Consolidation and Irrigation Schemes.**—Housing is an important part of these schemes. The Government will continue to give support and encouragement to this category of housing, largely through technical assistance and direction to the people in their effort to raise their housing standards.

(iv) **Other Rural Low-income Housing.**—The major part of rural housing must continue to be built, as in the past, by the efforts of rural communities themselves and mainly with local materials. Programmes for encouraging the construction of better houses in rural areas will be continued and strengthened, while co-operatives and similar organizations may also assist rural groups in financing improved rural housing. In order to meet the urgent need for considerable improvements in the quality of traditional rural housing, demonstration in the use of building techniques and materials, and the provision of brick-making and other equipment for local production of more durable building materials will be extended to all rural areas. Emphasis will continue to be placed on self-help and co-operative effort of the people in solving the rural housing problem.

(v) **Low-income Urban Housing and Slum Clearance.**—In order to prevent towns from turning into slums, and centres of ill-health and evil social conditions, low-income urban housing and slum-clearance programmes must continue to form an important part of the Government's housing programme. Both rental and home-ownership housing projects will be required, but emphasis will be given to the latter in order to achieve a high proportion of owner-occupied houses in the towns. The cost of building even a modest two-roomed family house on a commercial basis is too high for low-income earners, while the severe shortage of funds prevents the Government and local authorities from meeting all needs for low-cost housing through building of subsidized houses for sale or rent. In these circumstances, site-and-service projects must be a significant part of the housing programme in urban areas. In such projects, suitable areas are provided with roads, piped water and sewerage, and sites are thereupon let to tenants to build their own houses in permanent or semi-permanent materials. In order to ensure that such projects do not degenerate into slums, they will be closely supervised and controlled, and assistance and encouragement will be given to the participants to build houses of the highest possible standard. To this end, demonstration in the use of building techniques and materials, and equipment for the production of bricks will be provided. In addition to site-and-service schemes the Government will increase its efforts to develop housing estates in permanent materials wherever there is evidence of the people's ability to rent or purchase such houses.
(vi) Improvement of Existing Low-income Housing.—In order to avoid a reduction in the nation’s stock of housing supply through the inability of owners to undertake repairs, attention will be given to programmes for encouraging the owners to undertake repairs and improvements. Loans may be advanced by the National Housing Authority for this programme.

(vii) Middle- and High-income Housing.—Housing in this category will be financed mainly by the private sector at commercial rates of interest. It would not be appropriate to give priority to the use of Government funds for housing in this category other than for essential institutional housing. The policy is to encourage and stimulate internal and external investment in this field.

117. Home ownership housing projects will be given increasing prominence in the Government’s housing programme, in order to raise the proportion of the owner-occupied houses, especially in towns and suburban areas. Moreover, since the housing programme will depend largely on internal sources of finance, home ownership schemes are an important means of raising additional finance for housing through personal savings. Extension of tenant-purchase and site-and-service schemes, like the projects at Langata and at Kariobangi (both in Nairobi), will lead to more home ownership and contribute to the channelling of more personal savings into housing.

118. Between 1956 and 1964, the total investment in residential building in Kenya declined from £9,880,000 to £2,060,000. This level of investment, when seen against pressing needs, is totally inadequate and must be raised. For instance, the additional housing required per year in urban areas merely to keep up with the growth of households is a minimum of 7,600 units. To meet this need by constructing permanent housing of a minimum standard at, say £525 each, would cost about £4 million per year. If half this increase were built by site-and-service projects at an approximate outlay of £100 per plot for services, the total cost to the public revenues would be reduced to £2.4 million. Although part of the additional housing required will be built by the private sector, it is clear that the investment by the National Housing Authority will have to be built up considerably above the current level of about £400,000 a year. It is planned to raise this investment to at least £1.2 million by 1968, but even that level of expenditure will still only be sufficient for a very inadequate programme. The Authority’s sources of finance will consist of annual votes and external borrowing. External finance by itself cannot satisfy more than a minor part of the country’s needs for housing. Consequently, the housing programme will have to depend largely on internal sources of finance. Under these circumstances, home-ownership housing schemes are accepted as one means whereby additional money through personal savings can be channelled into housing.

119. Finance for middle- and high-income housing in the past came largely from building societies. During the last five years, however, three main building societies in Kenya have been unable to issue mortgages for housing due to shortage of long-term finance resulting from withdrawals of deposits.
To make mortgage facilities once more available, the Government has entered into an agreement with the Commonwealth Development Corporation for the establishment of the Housing Finance Company of Kenya Limited. The company, financed by long-term loans, will have as its main objective the financing of new houses.

120. Many of the programmes included in the Development Plan contain expenditure on housing which totals £7.8 million. The distribution of this expenditure among sectors and over time is shown below:

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<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
</tr>
<tr>
<td>Government and other public and semi-public</td>
<td>627,000</td>
<td>1,323,000</td>
<td>1,266,000</td>
<td>1,333,000</td>
<td>1,457,000</td>
<td>6,006,000</td>
</tr>
<tr>
<td>E.A.C.S.O. self-contained Services</td>
<td>252,000</td>
<td>232,000</td>
<td>190,000</td>
<td>145,000</td>
<td>142,000</td>
<td>961,000</td>
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<tr>
<td>Private</td>
<td>77,000</td>
<td>188,000</td>
<td>94,000</td>
<td>114,000</td>
<td>311,000</td>
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</table>

**Total**  
956,000  
1,743,000  
1,550,000  
1,592,000  
1,910,000  
7,751,000

This expenditure has been included in Table 11 below in order to show the total investment in housing.

**TABLE II—ESTIMATED EXPENDITURE—HOUSING**

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<td></td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
<td>£</td>
</tr>
<tr>
<td>Government and other public and semi-public included elsewhere</td>
<td>627,000</td>
<td>1,323,000</td>
<td>1,266,000</td>
<td>1,333,000</td>
<td>1,457,000</td>
<td>6,006,000</td>
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<tr>
<td>Central Government National Housing Authority*</td>
<td>453,000</td>
<td>1,700,000</td>
<td>1,225,000</td>
<td>1,250,000</td>
<td>1,500,000</td>
<td>6,128,000</td>
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<td>Local Government E.A.C.S.O. self-contained Services</td>
<td>400,000</td>
<td>1,450,000</td>
<td>800,000</td>
<td>850,000</td>
<td>1,000,000</td>
<td>4,500,000</td>
</tr>
<tr>
<td>Private</td>
<td>252,000</td>
<td>232,000</td>
<td>190,000</td>
<td>145,000</td>
<td>142,000</td>
<td>961,000</td>
</tr>
<tr>
<td>Less National Housing Authority double counted†</td>
<td>1,200,000</td>
<td>1,500,000</td>
<td>2,200,000</td>
<td>3,000,000</td>
<td>4,000,000</td>
<td>11,900,000</td>
</tr>
<tr>
<td>Overall Total</td>
<td>(400,000)</td>
<td>(1,600,000)</td>
<td>(900,000)</td>
<td>(900,000)</td>
<td>(1,000,000)</td>
<td>(4,800,000)</td>
</tr>
<tr>
<td>Of which included elsewhere in the Development Plan Expenditure on housing not included elsewhere</td>
<td>2,532,000</td>
<td>4,605,000</td>
<td>4,781,000</td>
<td>5,678,000</td>
<td>7,099,000</td>
<td>24,695,000</td>
</tr>
<tr>
<td>956,000</td>
<td>1,743,000</td>
<td>1,550,000</td>
<td>1,592,000</td>
<td>1,910,000</td>
<td>7,751,000</td>
<td></td>
</tr>
<tr>
<td>1,576,000</td>
<td>2,862,000</td>
<td>3,231,000</td>
<td>4,086,000</td>
<td>5,189,000</td>
<td>16,944,000</td>
<td></td>
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</table>

*Until the National Housing Authority is established, this item includes Government expenditure on housing under the Ministry of Housing and Social Services.

†Funds from the National Authority used to finance housing included under other headings (notably Local Authorities).

I—Local Authorities

121. The complementary nature of the services performed by the Central Government and local authorities cannot be exaggerated. The functions of local authorities are varied and range from those of a purely parochial character (e.g. sanitary services, street lighting, markets) to those of considerable national importance such as education, health, housing, roads and water
supplies, for which local authorities share responsibility with the Government. As the Central Government expenditures will have repercussions on local budgets, in order to achieve balanced development over the next five years it will be essential to ensure that the services for which local authorities are responsible keep pace with those of the Government. Urban growth, too, is expected to put a heavy burden on many local authority services. These will have to develop, not only to accommodate the rapidly rising populations of urban areas, many of which are expanding at about 6 per cent per annum, but also to serve the needs of new industries and expansion of the existing ones.

122. The upper tiers of urban and rural local authorities in Kenya are municipalities and county councils respectively. There is a great deal of diversity both within and between each type of authority in terms of wealth, population, area and structure of the budget. It is estimated that in 1965 the local authorities were responsible for recurrent and capital outlays of approximately £18 million. Local expenditures are normally financed through tax and non-tax revenues, Government grants and loans and, in the case of Nairobi, external borrowing. The major sources of tax revenue are the graduated personal tax, land rates and cesses. School fees in county councils and rents and charges for services in municipalities make a substantial contribution to the budgets of relevant authorities. The 1965/66 Estimates provide for block grants to local authorities in the region of £2.7 million. In addition, a sum of £0.5 million will be provided to local authorities to finance the running of a number of schools which were previously financed by the Ministry of Education and the Regional Education Boards.

123. Given the high rate of growth in recurrent costs and the insensitivity of the yield from local taxes to income changes, there is little likelihood of local authorities being able to undertake substantial capital expenditure from internal resources. In any event, the normal method of financing development of local government projects has been by loans. To ensure the provision of improved services at the local level in support of national economic development, it will be necessary for the Government to provide a measure of finance for local authority development projects. The main vehicle for doing this in the past has been the Local Government Loans Authority and it is planned to continue using this body to finance local projects other than housing, which will be handled by the National Housing Authority. In the current year, the Estimates provide for a transfer of £0.4 million to each of these Authorities.

124. There have been many far-reaching changes in the structure of local government in the last few years. At the end of the colonial period, racial dichotomy in the country was still reflected in the structure of local government. Under the Independence Constitution, all distinctions based on race disappeared and municipalities and county councils which covered what were known as the Scheduled Areas and the African district councils which catered
primarily for the needs of the African population were replaced by municipalities and county councils. Second, the new Constitution carried the application of the democratic principle at the local level a step further by making all local councils fully elective bodies. Previously, the councils were partly nominated and included Government officers as members. Finally, the newly-constituted local authorities were placed under the control of the regions which, together with the former, took over some of the functions exercised by the Central Government in the field of education, health, agriculture and animal husbandry. To enable the regions and local authorities to carry out their responsibilities, the former were allocated certain revenue sources, and the graduated personal tax, after having been made more effective as a means of raising revenue, was transferred to the latter. Even with the Republican Constitution under which the regional structure of Government was dismantled and many of the services transferred to the regions and local authorities reverted to the Government, the local authorities were left with greater responsibilities than ever before. In the sphere of education, for instance, where no local authority was formally an educational authority before Independence, full responsibility for providing primary education now rests in the hands of local authorities.

125. Greater responsibilities and lack of trained staff, combined with a loosening in the Central Government reins over the local government finances resulting from the democratization of councils, have pushed many local authorities into great financial difficulties. These factors have also given rise to financial mismanagement, instances of which have been difficult to detect and rectify promptly because the accounts of many local authorities have not been audited for the last three years due to an acute shortage of accountants. Financial difficulties have forced many local authorities to curtail services, including dismissing teachers in some cases. For these reasons and because the local government structure has been in a state of flux in recent years, it is not easy to assess either the local needs or the probable performance of local authorities in executing development projects. Nevertheless, it is clear from the plans submitted by municipalities that capital formation to be undertaken at the local level will be greater over the Plan period than in the preceding five years, when it averaged £3 million per year. It is expected that over the Plan period, the local authorities would be responsible for capital formation of £19-£20 million. Mindful of the importance of “development from below”, the Government has decided to appoint a Commission of Inquiry to investigate and report on the reforms necessary to make the local government system a more effective instrument for the provision of local services and local development within the framework of the Development Plan. More specifically, the Commission will examine and make recommendations on, inter alia—

(i) the composition and constitution of local government bodies;
(ii) the mandatory and permissive functions of local government bodies;
(iii) whether certain services at present the responsibility of local authorities should be provided by other bodies:
(iv) the extent and nature of Central Government control over local authorities;

(v) the general financial position of local authorities, including their taxation potential and the manner in which revenue to meet the cost of local services should be raised;

(vi) the extent of and a formula for allocating the Government contribution towards the cost of local services;

(vii) the means of improving the capacity of the local government bodies to contribute towards the implementation of the Development Plan;

(viii) the quality, appointment, security and discipline of local authority staff; and

(ix) allowances payable (if any) to members of local councils.

Once the needs of local authorities have been more precisely determined, the Government will co-operate with them in providing or securing finance to ensure a reasonable expansion in local services. Clearly, the level of Government grants and loans to local authorities over the next few years cannot be fixed in advance of the findings of the proposed Commission. Meanwhile, in order to enable local authorities to tap more fully the revenue potential of the graduated personal tax, the task of assessment and collection of this tax in county councils has been transferred to the Provincial Administration. There is little doubt that if under-assessments and evasion are reduced, the yield from the graduated personal tax, which stood at £4.5 million in 1964, can be greatly increased. As mentioned in Sessional Paper No. 10, one of the ways in which the Government intends to effect a more equitable distribution of income and wealth is by exempting from the graduated personal tax people making extremely low incomes and recouping the revenue lost by broadening the base of property taxes. The feasibility of implementing this policy objective in the near future will be examined by the Commission.

126. The Nairobi City Council presents a special case in that its needs for capital finance are nearly as great as those of all other local authorities put together. Despite this, the problem of finding development funds for the City Council is less serious because of its considerable experience in raising funds and in executing major projects in collaboration with external aid agencies. The City Council is planning to incur capital expenditure of at least £6.5 million over the next five years.

127. The Government dependence upon local authorities for implementation of the Development Plan goes beyond the provision of loans for capital works. It is essential that local authorities are adequately staffed with competent people to carry out both their own programme and those of the Government for which they have executive responsibility. They will also be primarily responsible for stimulating local desire for development. To create an effective and efficient administrative cadre at the local level for the implementation of Government programmes, the Plan provides for the training of local authority officers and councillors.
J—Miscellaneous Programmes

Workers' Investment Trust

128. Recognizing the importance of stimulating a savings habit among low- and middle-income groups, the Government is examining various savings instruments that might prove attractive to these income groups. In the past, few attempts were made to encourage persons in small- and middle-income ranges to save because it was believed that the administrative costs, in relation to additional savings that could be tapped, would be rather high. The Government, however, believes that the inculcation of a savings habit on the mass of the population would in itself represent an investment in the future growth of the economy. Consequently, the Government will ensure that in future persons in low- and middle-income groups are adequately catered for with regard to investment opportunities.

129. One of the measures that the Government has in mind in this connexion is the establishment of a unit trust, which will enable savers to invest in a wide range of Government and equity stocks and thus provide them with an opportunity to participate in the benefits of economic growth. While details still remain to be worked out, it is envisaged that initially units may be purchased by members of private provident schemes who do not wish to continue contributing to these schemes when the National Social Security Fund is established. The contributors' share of assets of those provident funds that are wound up would be transferred to the proposed Workers' Investment Trust, which would issue units in return. As many private provident funds hold a proportion of their investments overseas, the establishment of a unit trust would provide considerable scope for utilizing foreign investments for domestic economic development.

National Social Security Fund

130. In the 1964-70 Development Plan, it was stated that the Government intended to set up a National Provident Fund. The name of the proposed Fund has now been changed in consonance with the Government's objective to use the initial scheme solely as a first step towards a more comprehensive social security scheme in Kenya.

131. The National Social Security Fund, which will be introduced in stages, will cover all adult male employees of firms employing more than ten persons in the first year of its operation. Eventually, however, it will apply to all persons over sixteen in paid employment, except those whose old age is already provided for (e.g. civil servants in pensionable employment) and the self-employed. The scheme will be a contributory one, with equal payments to be made by employers and employees. The monthly joint rate of contribution will be 10 per cent of a worker's wage, but no contribution will be payable on income in excess of Sh. 800. The scheme will provide benefits for old age, inability to follow gainful employment due to disablement, and for the assistance of dependants of a deceased worker.
132. All contributions to the Fund will be invested in Treasury bills, Government stock or securities of the East African Common Services Organization and its administrations, on the advice of an investment committee. An advisory council of the National Social Security Fund, comprising representatives of the Government, employers and contributing employees, will also be established. Its main function will be to act as a sounding-board for public opinion, particularly on problems arising from the practical application of the scheme.

133. Apart from providing for workers in their old age, the Fund will become an important source of internal capital for Kenya’s development. It is estimated that within a year or two from the date of its commencement, the Fund will have at its disposal about £2½-£3 million each year for lending to the Government. Registration of employers and employees has already started and it is expected that contributions will be payable from June 1966. Recurrent cost to the Government as a contributing employer will be approximately £140,000 per annum.

**Government Staff Training**

134. The pre-service and in-service training of Government employees is an essential ingredient of the national development effort. Only with the existence of a sound staff training scheme can the Government achieve its objective of building as quickly as possible an efficient national public service, of providing the means of generating the skills required by its citizens within national institutions, of ensuring that all staff are given the requisite training for the jobs they are to perform and of ensuring that those who have the will and determination to advance their careers will have opportunities to train for advancement to positions of greater responsibility.

135. Kenya has four institutions for training: the Kenya Institute of Administration, the Maseno Training Centre, the Kenya Government Secretarial College, Nairobi, and the Mombasa Coast Secretarial Training Centre. The first two cater for the training of administrative officers, executive staff, co-operative staff, local government and community development staff. The latter two cater for staff destined for the secretarial and copy-typist grades though it is planned that this area of specialization will be broadened to include the training of specialized clerical staff in the fields of office management, personnel and accounts.

136. The capital requirements for the planned minimal expansion of these four institutions total £209,000 during the Plan period. The major part of this total, £165,000, is for the further development of the Kenya Institute of Administration. Facilities will be added to provide for an increase in the maximum student population from 400 to 540. An additional £35,000 is for the expansion of facilities at the Maseno Training Centre, most of which will take place in 1965/66. External financial assistance will be sought for all the governmental staff training institutions.
CHAPTER 11—INTERNAL SECURITY AND DEFENCE

A—Police

The maintenance of law and order within the country is an essential function of the Government, in order to, among other reasons, provide the security and stability which are absolutely necessary for Kenya's economic and social development. Although the contribution of the service rendered by the police force to development is difficult, if not impossible, to evaluate in terms of cost-revenue comparisons, there is no doubt that it is of utmost importance. The experience of developing nations all over the world has shown that, regardless of other policies adopted, failure to maintain order within the country is sufficient to bring about economic stagnation or decline. For this reason, it is imperative that a strong, efficiently operating police force be maintained in the country and that the necessary capital expenditure for this purpose be provided in the Development Plan. Apart from occasional gifts of equipment from abroad, little in the development programme for the police force seems to be eligible for foreign aid, so that ultimately the size of this programme and the speed of its implementation will depend on the availability of local resources.

2. Although it is Government policy to provide less housing for its employees than in the past, this policy will not in general be extended to the Police. Like the Armed Forces, Police is a disciplined force whose members must be concentrated in such a manner that they can be easily and efficiently deployed at short notice. Because policemen are denied the choice of living quarters and are compelled by the nature of their work to live wherever they are needed, it is the Government's policy to provide housing for the subordinate ranks. To a large extent police in Kenya still live in and operate from inadequate buildings. To ensure that the Police can work to maximum efficiency, living and working conditions will be improved wherever possible during the Plan period. The total capital expenditure planned for this programme amounts to £1,222,000, of which £1,067,000 will be required to carry out the most urgent building projects which range from the construction of police stations and lines to divisional headquarters, police training institutions, border control posts and a motor transport workshop. The housing component of this aggregate capital expenditure over the Plan period is estimated to be £520,000. The programme includes the acquisition of seven aircraft for the Police Air Wing in 1965/66 and 1966/67, a gift of the United States Government.

B—Prisons

3. The prison population has been increasing at such a high rate during recent years that overcrowding in the country's prisons has reached serious proportions. Although the prisons were designed to accommodate a population of not more than 11,000, the daily average prison population in the period July/September 1965 was over 17,500, and reached 19,160 in March 1966.
As a result of this overcrowding, many prisoners requiring maximum security measures cannot be kept under the necessary precaution. Because the country’s resources should be used as much as possible for more constructive purposes, the present rate of increase in prison population must be halted and reversed by every possible means. The present overcrowding could be reduced by using to a greater extent modern methods of dealing with offenders provided for in the penal legislation—in the form of borstals, youth corrective training centres and in particular by means of extra-mural penal employment—to keep youths and petty offenders out of prisons. Imprisonment must, of course, retain its penal character, in order to avoid the danger of prisons becoming institutions providing a relatively easy existence to inmates.

4. Despite measures to reduce the prison population, there will certainly remain a need for new prisons to be built or completed during the present Plan period. Prisons at Eldoret and Nakuru and a reception centre at Kamiti are under way and nearing completion. A maximum security prison requiring a capital expenditure of £285,000 will be built at Kericho, and a new prison is required at Kisumu to replace inadequate facilities and free valuable land for other uses. The building of a medium security prison will also be considered. Emphasis has been given to staff housing to maintain the morale and efficiency of prisons staff. The total capital expenditure needed for the prisons development programme, including probation, amounts to £788,000, almost 45 per cent of which will be spent on staff housing. The recurrent expenditure required for prisons and probation services during the Plan period is estimated to be in the order of £1.7-£1.9 million per annum. The only capital requirement for the probation services is the renovation of the hostel at Likoni. The cost is estimated to be £5,000 and the work will be undertaken in 1967/68.

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<tr>
<td>£</td>
</tr>
<tr>
<td>Eldoret Divisional Headquarters, Police Station and Lines . . .</td>
</tr>
<tr>
<td>Kiambu Divisional Headquarters, Police Station and Lines . . .</td>
</tr>
<tr>
<td>Nyandarua Divisional Headquarters and Repeater Station . . .</td>
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<tr>
<td>Homa Bay Police Station and Divisional Headquarters . . .</td>
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<td>Embu Provincial Headquarters . . .</td>
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<tr>
<td>Nairobi, Langata Road Lines . . .</td>
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<tr>
<td>Wajir Lines . . .</td>
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<td>Kisumu Lines . . .</td>
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<td>Other police stations, lines and engine houses . . .</td>
</tr>
<tr>
<td>Border control posts . . .</td>
</tr>
<tr>
<td>Motor transport workshop . . .</td>
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<tr>
<td>Police Training School, Kiganjo . . .</td>
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<td>Mathari Training Centre . . .</td>
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<td><strong>Total, including gifts in kind</strong> . . .</td>
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*Gifts in kind from the United States.
5. Approved schools for young offenders have the effect of reducing the need for prisons by rehabilitating juvenile delinquents before they become criminals. To perform this beneficial and necessary function on as broad a scale as possible, new approved schools for juvenile offenders will be established within the limits of available finance and staff. It is considered essential to build two additional schools during the period 1965-1970, one to serve Western and Nyanza Provinces and another to serve the Coast Province. Neither of these areas has an approved school and at present delinquent children cannot be rehabilitated in their own environment, as is desirable. Furthermore, considerable expenditure is incurred in transferring delinquent children of these areas elsewhere. The approved schools will require a capital expenditure of £42,500 each, including staff housing. In addition, provision is made in the Plan for five remand homes, which are required in many areas of Kenya. The planned total capital investment for approved schools and remand homes amounts to £136,500 over five years, and the recurrent expenditure needed for these institutions can be estimated in the order of £130,000 per annum.

C—Approved Schools

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D—Armed Forces

6. Building up of highly trained, effective and efficient Army, Air and Naval Forces must be considered one of the major tasks of the Government, in order to provide instruments for safeguarding the country's independence and territorial integrity. Each of the three Services has a programme of expansion, re-equipment, modernization and Africanization. At the same time, close co-operation between the Services is being developed and maintained. Only the costs of buildings, airfields, etc., are included in the Plan development estimates: expenditure on military equipment is not capital formation, and is treated as recurrent expenditure.

7. The Kenya Army.—The Government is carrying out an expansion of the Army which will be continued in stages. The first stage, which was completed in 1965, included the modernization of the existing infantry battalions and an increase in strength by about 25 per cent, the formation of a well-trained parachute company, and the addition of an ordnance depot. In the second stage, which is already well under way, a Field Engineer Company capable of providing major constructional services wherever required is being established. The third phase of expansion will include the formation of an artillery regiment, completing the Army's planned strength. Capital expenditure to implement this expansion is estimated at £0.8 million over the Plan period. The Army's recurrent cost is expected to amount to £4 million per annum by 1970.

8. The Kenya Air Force.—The Kenya Air Force was established in 1964, and before it was one year old, the Force had its own qualified African pilots and ground crew. The first operational squadron was formed in 1965 and consisted of Beaver reconnaissance and communications aircraft. The latest addition to the Kenya Air Force, and the last stage in its initial building-up programme, was the delivery of four Caribou twin-engined, medium-range transport aircraft and spares to form a second operational squadron. These aircraft were donated by the United Kingdom. The total capital expenditure required for further expansion of the Kenya Air Force, including the extension and improvement of some aerodromes, amounts to about £0.4 million during the Plan period. The recurrent expenditure will probably amount to £1.5 million per annum by 1970.

9. The Kenya Navy.—The youngest of the three Armed Forces is the Kenya Navy, established in 1964 and still officially under training, although it has already carried out some operational tasks. Most personnel under training abroad are due to complete their courses in the latter part of 1966 when three Vosper patrol craft are expected to be ready for delivery. Stationed in Kenya's territorial waters, the Vosper flotilla will carry out any task required of the Navy in the maintenance of the integrity of Kenya's coastal waters. During the Plan period total capital expenditure for the development of the Navy will amount to £200,000. Annual recurrent expenditure is expected to be £300,000 by 1970.
10. The construction of a Combined Headquarters for the Armed Forces will be required during the Plan period. A provisional amount of £150,000 is included in the total estimated capital expenditure for this purpose.

11. The overall capital expenditure to be borne by the Kenya Government for the Armed Forces development programme will amount to about £1.5 million over the Plan period. The total recurrent costs of operating the three Services are expected to rise from £4 million in 1965/66 to £5.8 million in 1969/70.

### Table 4—Estimated Expenditure—Armed Forces

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### Appendix Table 1: Land Use Categories by Provinces and Districts

(All figures except bottom line, next page, are in '000 acres)

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(All figures except bottom line are in '000 acres)

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<td>—</td>
<td>16</td>
<td>15,000</td>
<td>797</td>
<td>15,827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uasin Gishu</td>
<td>807</td>
<td>—</td>
<td>1</td>
<td>808</td>
<td>—</td>
<td>127</td>
<td>13</td>
<td>140</td>
<td>935</td>
<td>—</td>
<td></td>
<td>935</td>
</tr>
<tr>
<td>West Pokot</td>
<td>255</td>
<td>—</td>
<td>902</td>
<td>1,158</td>
<td>97</td>
<td>1</td>
<td>97</td>
<td>1,245</td>
<td>42,408</td>
<td>916</td>
<td>42,964</td>
<td></td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td><strong>7,463</strong></td>
<td><strong>305</strong></td>
<td><strong>30,523</strong></td>
<td><strong>38,291</strong></td>
<td><strong>1,191</strong></td>
<td><strong>2,565</strong></td>
<td><strong>171</strong></td>
<td><strong>3,927</strong></td>
<td><strong>42,048</strong></td>
<td><strong>916</strong></td>
<td><strong>42,964</strong></td>
<td></td>
</tr>
<tr>
<td><strong>WESTERN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bungoma</td>
<td>624</td>
<td>—</td>
<td>624</td>
<td>624</td>
<td>—</td>
<td>136</td>
<td>1</td>
<td>137</td>
<td>760</td>
<td>—</td>
<td></td>
<td>760</td>
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<tr>
<td>Busia</td>
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<td>—</td>
<td>403</td>
<td>403</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
<td>403</td>
<td>34</td>
<td>436</td>
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</tr>
<tr>
<td>Kakamega</td>
<td>804</td>
<td>—</td>
<td>804</td>
<td>804</td>
<td>—</td>
<td>65</td>
<td>3</td>
<td>68</td>
<td>870</td>
<td>—</td>
<td></td>
<td>870</td>
</tr>
<tr>
<td><strong>Total Western</strong></td>
<td><strong>1,831</strong></td>
<td><strong>7,801</strong></td>
<td><strong>104,363</strong></td>
<td><strong>122,214</strong></td>
<td><strong>7,555</strong></td>
<td><strong>4,185</strong></td>
<td><strong>676</strong></td>
<td><strong>12,416</strong></td>
<td><strong>140,664</strong></td>
<td><strong>3,310</strong></td>
<td><strong>143,974</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Kenya</strong></td>
<td><strong>16,761</strong></td>
<td><strong>5,81</strong></td>
<td><strong>74,2</strong></td>
<td><strong>91,7</strong></td>
<td><strong>5,4</strong></td>
<td><strong>3,0</strong></td>
<td><strong>0,5</strong></td>
<td><strong>8</strong></td>
<td><strong>100</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

*Excluding all reservations except “other” (column 7), which have not been allocated by land classes. The three land classes are defined as follows:

I: Land of high potential for agriculture or forestry with not less than 35" annual rainfall (40" in Coast Province).
II: Land of medium potential for agriculture, suited to stock raising and limited cultivation (though some areas are densely populated). Annual rainfall as follows:

- **Coast Province** 30°—40°
- **Eastern Province** Nyanya and Rift Valley Provinces 25°—35°
- **Nyanya and Rift Valley Provinces** 30°—35°

III: Land with less than 25°—30° annual rainfall, suited exclusively to stock raising and/or wildlife with exception that sisal does well in areas near upper rainfall limit.

**Sources:** Department of Lands, East African Meteorological Department, Ministry of Agriculture, and Lawrence Mission on Land Consolidation and Registration.
## APPENDIX TABLE 2—PROGRESS OF LAND REGISTRATION IN THE FORMER AFRICAN AREAS

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Acreage Registered During Indicated Year</th>
<th>Total acreage registered as at 31.12.1965(a)</th>
<th>Total No. of plots registered up to 31.12.1965(b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTRAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall (a)</td>
<td>(8,065)</td>
<td>(24,834)</td>
<td>(85,676)</td>
</tr>
<tr>
<td>Kiambu</td>
<td>31,854</td>
<td>205,672</td>
<td>687</td>
</tr>
<tr>
<td>Kirinyaga</td>
<td>—</td>
<td>6,996</td>
<td>58,793</td>
</tr>
<tr>
<td>Nyeri</td>
<td>—</td>
<td>1,570</td>
<td>47,691</td>
</tr>
<tr>
<td>Total Central</td>
<td>(39,919)</td>
<td>(239,072)</td>
<td>(192,847)</td>
</tr>
<tr>
<td>EASTER</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Meru</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total Eastern</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total Central and Eastern</td>
<td>(39,919)</td>
<td>(239,072)</td>
<td>(192,847)</td>
</tr>
<tr>
<td>NYANZA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kisii</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>South Nyanza</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total Nyanza</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Rift Valley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baringo</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Elgeyo Marakwet</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kajiado</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Nandi</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total Rift Valley</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Western</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bungoma</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kakamega</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total Western</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>TOTAL KENYA (a)</td>
<td>(39,919)</td>
<td>(239,072)</td>
<td>(192,847)</td>
</tr>
</tbody>
</table>

### NOTES:

- **GENERAL**—Since it applies only to the former African areas the table excludes land purchased for smallholder settlement in the former Scheduled Areas. This land, of which over one million acres had been purchased by 31.12.1965 (see Appendix Table 6), is automatically registered as part of the settlement process.

- (a) The entire results of the first four years of land consolidation and registration in Fort Hall were thrown out and a fresh beginning made in 1960/61. The acreage figures for these years are given in parentheses and included in the column subtotals and totals for individual years (also in parentheses). However, they are not included in the row totals (next-to-last column).

- (b) Refers to number of plots at the time of registration (second round only in the case of Fort Hall). Some plots have subsequently been subdivided or combined.

- (c) The figure of 43,302 plots registered in Kirinyaga applies to the old Embu District, comprising the present Kirinyaga and Embu Districts of Central and Eastern Provinces respectively. No breakdown is available on the basis of the new boundaries.

**SOURCE**—Lawrence Mission on Land Consolidation and Registration.
## APPENDIX

### TABLE 3.

**DIRECT GOVERNMENT LOANS TO INDIVIDUAL SMALLHOLDERS, REPAYMENT POSITION AT 30TH JUNE 1964**

(7 selected districts and Kenya as a whole)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>No. of loans</th>
<th>Amount</th>
<th>Total Loans 1.1.1948—30.6.1964</th>
<th>Principal and interest payments billed up to 30.6.1964</th>
<th>Principal and interest paid as at 30.6.1964</th>
<th>Principal and interest payments overdue as at 30.6.1964</th>
<th>More than 1 year</th>
<th>Total overdue (3)–(4)</th>
<th>Principal value of outstanding loans at 30.6.1964</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall</td>
<td>730</td>
<td>61,641</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiambu</td>
<td>460</td>
<td>46,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nyeri</td>
<td>1,171</td>
<td>72,697</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machakos</td>
<td>628</td>
<td>28,710</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza</td>
<td>13</td>
<td>1,300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RIFT VALLEY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baringo</td>
<td>319</td>
<td>21,080</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elgeyo-Marakwet</td>
<td>1,041</td>
<td>75,030</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total 7 Districts</strong></td>
<td>4,362</td>
<td>307,043</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL KENYA 1.1.1948—30.6.1965</strong></td>
<td>7,850</td>
<td>623,482*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Of the total loaned, £77,506 (11.5%) was advanced during 1948–59 and the remainder after 1959. As shown in column 3, by 30.6.1964 the bulk of the loans had not matured.

**SOURCE:** Agricultural Finance Corporation.
APPENDIX TABLE 4.—DISTRIBUTION OF RANCHING PROJECTS IN RANGE DEVELOPMENT PROGRAMME

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Govt/Private</th>
<th>Co-operatives</th>
<th>Group &amp; Individual</th>
<th>Grazing Schemes</th>
<th>All Schemes(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. '000 Acres</td>
<td>No. '000 Acres</td>
<td>No. '000 Acres</td>
<td>No. '000 Acres</td>
<td>No. '000 Acres</td>
</tr>
<tr>
<td>CENTRAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiambu</td>
<td></td>
<td>1</td>
<td>37</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Kirinyaga</td>
<td></td>
<td>1</td>
<td>9</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total Central</td>
<td></td>
<td>2</td>
<td>46</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>COAST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi</td>
<td>(b)</td>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwale</td>
<td>1</td>
<td>240</td>
<td></td>
<td></td>
<td>12(b)</td>
</tr>
<tr>
<td>Lamu</td>
<td>3</td>
<td>120</td>
<td></td>
<td></td>
<td>3</td>
</tr>
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<td>Taita</td>
<td></td>
<td>10</td>
<td>500</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Tana River</td>
<td>1(b)</td>
<td>240(b)</td>
<td></td>
<td></td>
<td>1(b)</td>
</tr>
<tr>
<td>Total Coast</td>
<td>5</td>
<td>600</td>
<td>10</td>
<td>500</td>
<td>51</td>
</tr>
<tr>
<td>EASTERN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu</td>
<td></td>
<td>1</td>
<td>50</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Isiolo</td>
<td></td>
<td>2</td>
<td>100</td>
<td></td>
<td>7</td>
</tr>
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<td>Kitui</td>
<td></td>
<td>5</td>
<td>160</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>Machakos</td>
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<td>3</td>
<td>140</td>
<td></td>
<td>5</td>
</tr>
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<td>Marsabit</td>
<td></td>
<td>3</td>
<td>360</td>
<td></td>
<td>9</td>
</tr>
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<td>Meru</td>
<td></td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Eastern</td>
<td></td>
<td>17</td>
<td>810</td>
<td>20</td>
<td>85</td>
</tr>
<tr>
<td>RIP VALLEY</td>
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<td></td>
</tr>
<tr>
<td>Baringo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elgeyo-Marakwet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kajiado</td>
<td></td>
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</tr>
<tr>
<td>Laikipia</td>
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<td></td>
</tr>
<tr>
<td>Narok</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Samburu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Pokot</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total Rift Valley</td>
<td></td>
<td>163</td>
<td>4,546</td>
<td>32</td>
<td>195</td>
</tr>
<tr>
<td>TOTAL KENYA</td>
<td>5</td>
<td>600</td>
<td>29</td>
<td>1,356</td>
<td>333</td>
</tr>
</tbody>
</table>

Notes: (a) Not including commercial ranches in former Scheduled Areas. (b) Approximately one-half of the area of the Government/Private ranch listed for Tana River District is located in Kilifi District.
### APPENDIX TABLE 5.—NATIONAL IRRIGATION SCHEMES

<table>
<thead>
<tr>
<th>SCHEME</th>
<th>Mwea</th>
<th>Perkerra</th>
<th>Tana</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRST YEAR CROPPED</strong></td>
<td>1956</td>
<td>1954</td>
<td>1957</td>
<td></td>
</tr>
<tr>
<td><strong>DEVELOPMENT COST (up to 30.6.1965)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of permanent facilities(a)</td>
<td>£781,008</td>
<td>£250,826</td>
<td>£316,085</td>
<td>£1,347,919</td>
</tr>
<tr>
<td>Net cumulative operating deficit(b)</td>
<td>£220,648</td>
<td>£234,666</td>
<td>£394,673</td>
<td>£849,987</td>
</tr>
<tr>
<td>Total Government investment(b)</td>
<td>£1,001,656</td>
<td>£483,492</td>
<td>£710,758</td>
<td>£2,197,096</td>
</tr>
<tr>
<td><strong>ACREAGE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total now irrigated (acres)</td>
<td>5,541</td>
<td>1,381</td>
<td>1,427</td>
<td>8,349</td>
</tr>
<tr>
<td>Currently being developed (acres)</td>
<td>2,000</td>
<td>—</td>
<td>—</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>EMPLOYMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current No. tenants now settled</td>
<td>1,340</td>
<td>362</td>
<td>255</td>
<td>1,957</td>
</tr>
<tr>
<td>Labour employed by tenants(c)</td>
<td>1,702</td>
<td>724</td>
<td>255</td>
<td>2,681</td>
</tr>
<tr>
<td>Government employees</td>
<td>135</td>
<td>130</td>
<td>110</td>
<td>375</td>
</tr>
<tr>
<td>Total</td>
<td>3,177</td>
<td>1,216</td>
<td>620</td>
<td>5,013</td>
</tr>
<tr>
<td><strong>ANTICIPATED FROM CURRENT DEVELOPMENT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenants</td>
<td>500</td>
<td>—</td>
<td>—</td>
<td>500</td>
</tr>
<tr>
<td>Labour(b)</td>
<td>635</td>
<td>—</td>
<td>—</td>
<td>635</td>
</tr>
<tr>
<td>Government</td>
<td>30</td>
<td>—</td>
<td>—</td>
<td>30</td>
</tr>
<tr>
<td>Total</td>
<td>1,165</td>
<td>1,165</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRODUCTION 1964</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of gross output</td>
<td>£297,283</td>
<td>(d)</td>
<td>£30,595</td>
<td>£355,707(e)</td>
</tr>
<tr>
<td>Value of output marketed via authorized channels</td>
<td>£273,283</td>
<td>£27,829</td>
<td>£30,595</td>
<td>£310,707</td>
</tr>
<tr>
<td><strong>TENANT INCOME 1964(f)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>£176,975</td>
<td>£14,940(g)</td>
<td>£18,629</td>
<td>£210,544</td>
</tr>
<tr>
<td>Average</td>
<td>£132</td>
<td>£44(g)</td>
<td>£64</td>
<td>£108</td>
</tr>
<tr>
<td><strong>FINANCES 1964/65</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross operating costs(b)</td>
<td>£107,888</td>
<td>£40,597</td>
<td>£61,228</td>
<td>£209,713</td>
</tr>
<tr>
<td>Gross operating receipts</td>
<td>£127,368</td>
<td>£7,114</td>
<td>£16,377</td>
<td>£151,059</td>
</tr>
<tr>
<td>Operating surplus (+) or deficit (-)(b)</td>
<td>+£19,480</td>
<td>— £33,483</td>
<td>— £44,851</td>
<td>— £58,654</td>
</tr>
<tr>
<td>Local authority cess</td>
<td>£12,147</td>
<td>—</td>
<td>—</td>
<td>£12,147</td>
</tr>
<tr>
<td>Basic scheme charge per acre</td>
<td>£10(h)</td>
<td>£7/10(i)</td>
<td>£10(j)</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

(a) Equal to total Non-recurrent Expenditure since inception of schemes, including permanent facilities such as headworks and canals, and items of replacement capital expenditure such as tractors and implements.

(b) Including depreciation of permanent facilities at 2% of original cost, but excluding interest on invested capital.

(c) Based on following estimates of full-time hired labour per tenant family: Mwea—1-27; Perkerra—2; Tana—1.

(d) The Perkerra tenant cultivates half of his holding to maize, which he either consumes or sells privately. No figures are yet available for this portion of his income, but they will be collected in future.

(e) Not including Perkerra maize crop.

(f) Net of scheme charges and local authority cess (applies to Mwea alone) but gross of wage payments to hired labour.

(g) Artificially low due to absence of data on Perkerra maize production.

(h) Water rate only. The tenant pays an average of £6 per acre additional for cultivation services and stores.

(i) Covers water rate and services, tenant pays additional for stores.

(j) Covers water rate plus all services and stores supplied by the scheme.

**SOURCE:** Interim Irrigation Board.
## Appendix Table 6.—Land Purchase in the Former Scheduled Areas, 1961/65, for Private African or Government Use, by or with the Assistance of Public Agencies

<table>
<thead>
<tr>
<th>Year(s) of purchase</th>
<th>Public agency involved</th>
<th>Scheme</th>
<th>Disposition of land</th>
<th>No. of holdings</th>
<th>Acreage (acres)</th>
<th>Cost to public agency (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961-65</td>
<td>Central Land Board</td>
<td>Million Acre Settlement (a)</td>
<td>High density settlement schemes</td>
<td>3</td>
<td>893,162</td>
<td>7,939,169</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Co-operative farms and ranches</td>
<td>21</td>
<td>174,838</td>
<td>1,917,312</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low density settlement schemes</td>
<td></td>
<td>1,068,000</td>
<td>9,856,481</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transferred to Nandi Land Unit</td>
<td></td>
<td>16,980</td>
<td>179,563</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total Million Acre Settlement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1963-65</td>
<td></td>
<td>Nandi Salient</td>
<td>Transferred to A.D.C. as National Farm.</td>
<td>1</td>
<td>1,444</td>
<td>35,000</td>
</tr>
<tr>
<td>1964-65</td>
<td></td>
<td>Turbo Afforestation</td>
<td>Undetermined (proposed for afforestation).</td>
<td>17</td>
<td>19,008</td>
<td>141,134</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total Turbo (excluding 2 Compassionate Case Farms):</td>
<td></td>
<td>20,452</td>
<td>176,134</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Compassionate Case Farms</td>
<td>Settlement schemes</td>
<td>20</td>
<td>15,841</td>
<td>181,781</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transit camps for squatters, etc.</td>
<td>3</td>
<td>4,009</td>
<td>57,511</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Turbo afforestation</td>
<td>2</td>
<td>1,520</td>
<td>17,735</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sold or leased intact to individuals, partnerships, co-operatives or companies.</td>
<td>136</td>
<td>106,316</td>
<td>1,145,656</td>
</tr>
<tr>
<td>1962-64</td>
<td></td>
<td>Ol Kalou Salient</td>
<td>Total Compassionate Case Farms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Co-operative farms under Dept. of Settlement.</td>
<td>84</td>
<td>119,916</td>
<td>887,967</td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td>Assisted Owners</td>
<td>Miscellaneous</td>
<td>2</td>
<td>2,386</td>
<td>40,548</td>
</tr>
<tr>
<td>1961-62</td>
<td></td>
<td></td>
<td>2 leased—remainder sold intact to individuals, etc., on loans for 90% of purchase price.</td>
<td>90</td>
<td>52,175</td>
<td>286,960</td>
</tr>
<tr>
<td>1963</td>
<td>Land Bank</td>
<td>Willing buyer—willing seller</td>
<td>Sold intact to individuals, etc., on loans for part of purchase price.</td>
<td>92</td>
<td>50,590</td>
<td>284,025</td>
</tr>
<tr>
<td>1964</td>
<td></td>
<td></td>
<td>(Ditto-average loan = 65% of purchase price.)</td>
<td>221</td>
<td>155,714</td>
<td>888,595</td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td></td>
<td>(Ditto average loan = 57% of purchase price.)</td>
<td>175</td>
<td>186,854</td>
<td>878,030</td>
</tr>
<tr>
<td>1965</td>
<td>Agric. Devel. Corp.</td>
<td>National Farms</td>
<td>Total Land Bank</td>
<td></td>
<td>488</td>
<td>393,158(b)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Grand Totals</td>
<td></td>
<td>488</td>
<td>393,158(b)</td>
</tr>
</tbody>
</table>

Notes:
(a) Includes 185,670 acres (cost: £1,094,465) purchased for so-called "New" settlement schemes in 1961-62 which were technically predecessors of the Million Acre Scheme.
(b) Does not include loans of £1.4 million made to finance transfer of 577,000 acres to non-Africans, including some Kenya citizens, during 1963-65. The share of non-Africans in Land Bank Loans fell from 79% in 1963 to 5% in 1965.
Sources: Department of Settlement and Land Bank.
### APPENDIX TABLE 7—SUMMARY DATA ON MILLION-ACRE SETTLEMENT SCHEME

<table>
<thead>
<tr>
<th></th>
<th>Low Density Schemes</th>
<th>High Density Schemes</th>
<th>Co-operative Farms and Ranches</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUMBER OF SCHEMES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On which settlement had started as at 30.6.1965</td>
<td>28</td>
<td>58</td>
<td>6</td>
<td>92</td>
</tr>
<tr>
<td>Total projected</td>
<td>36</td>
<td>76</td>
<td>12</td>
<td>124</td>
</tr>
<tr>
<td><strong>AREA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On which settlement had started as at 30.6.1965</td>
<td>141,344 acres</td>
<td>595,091 acres</td>
<td>141,132 acres</td>
<td>877,567 acres</td>
</tr>
<tr>
<td>Total projected</td>
<td>184,469 acres</td>
<td>736,646 acres</td>
<td>163,644 acres</td>
<td>1,087,059 acres</td>
</tr>
<tr>
<td>Planned average plot size</td>
<td>34·5 acres</td>
<td>28·1 acres</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NO. OF SETTLERS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settled as at 30.6.1965</td>
<td>3,311</td>
<td>20,606</td>
<td>626(a)</td>
<td>24,969</td>
</tr>
<tr>
<td>Total projected</td>
<td>5,347</td>
<td>25,896(b)</td>
<td>1,052(a, c)</td>
<td>32,295</td>
</tr>
<tr>
<td><strong>LIVESTOCK INVENTORY AS AT 30.6.1965</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mature dairy cattle</td>
<td>9,895</td>
<td>30,701</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other dairy cattle</td>
<td>5,774</td>
<td>16,346</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Beef cattle and oxen</td>
<td>848</td>
<td>18,615</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Wool sheep</td>
<td>8,163</td>
<td>44,512</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>GROSS PRODUCTION, £ PER ACRE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Landscale farms, pre-settlement</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large-scale farms, pre-settlement</td>
<td>£3·5</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Settlement Schemes, 1964/65</td>
<td>£5·4</td>
<td>£2·3</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>COST AND SOURCES OF FINANCE (£'000)</strong>(c)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loans</td>
<td>1,258</td>
<td>627</td>
<td>1,885</td>
<td></td>
</tr>
<tr>
<td>Grants</td>
<td>6,359</td>
<td>3,180</td>
<td>9,539</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7,617</td>
<td>3,807</td>
<td>11,424</td>
<td></td>
</tr>
<tr>
<td>Development loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) U.K. Government</td>
<td>824</td>
<td>2,497</td>
<td>2,497</td>
<td>2,497</td>
</tr>
<tr>
<td>(ii) Commonwealth Development Corp.</td>
<td>824</td>
<td>2,497</td>
<td>2,497</td>
<td>2,497</td>
</tr>
<tr>
<td>(iii) World Bank</td>
<td>1,647</td>
<td>1,218</td>
<td>1,218</td>
<td>1,218</td>
</tr>
<tr>
<td>(iv) West German Government</td>
<td>1,647</td>
<td>1,218</td>
<td>1,218</td>
<td>1,218</td>
</tr>
<tr>
<td>(v) Premature loan repayments out of land purchase</td>
<td>£2·3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total development loans</td>
<td>2,471</td>
<td>5,137</td>
<td>5,577</td>
<td></td>
</tr>
<tr>
<td>Other costs (administration, etc.)—U.K. Government</td>
<td>—</td>
<td>4,286</td>
<td>10,074</td>
<td>17,540</td>
</tr>
<tr>
<td>Grand total cost (excluding (v) above)(f)</td>
<td>3,729</td>
<td>1,848</td>
<td>5,577</td>
<td>13,803</td>
</tr>
</tbody>
</table>

**Notes**

- (a) Denotes number of co-operative society members.
- (b) Excludes a 10,000-acre scheme in Sotik for which no estimate is yet available.
- (c) Excludes two ranching schemes in Sotik, totalling 10,000 acres, for which no estimate is yet available.
- (d) Figures for settlement production are preliminary results for 11 low density schemes and 21 high density schemes covered by the Farm Economic Survey Unit's 50-scheme sample survey. The 32 schemes were 95% settled as at 30th June 1964, and comprise 58% of the total acreage on which settlement was 60% or more complete on that date. The figure for pre-settlement output on low density schemes is derived from returns for European farms formerly occupying the area of the 11 schemes in question.
- (e) Total allocations, including amounts not yet spent and (to a small extent) not likely to be spent.
- (f) Not including cost to Kenya Government of "extended supervision" (see text).

**Sources:** Department of Settlement and Farm Economics Survey Unit.
### Appendix Table 8.—Department of Settlement Loans to Settlers, Repayment Position as at 31st December 1965

| Settlement administrative areas | Type of Scheme | Districts in which schemes are located (No. of schemes) | (1) Number settlers billed up to and including 30.9.1965 | (2) Number settlers having paid 100% or more | (3) No. of settlers in default | (4) No. having made nil payments | (5) Principal and interest payments billed up to and including 30.9.1965 | (6) Amount | % of (5) | (7) Amount | % of (5) | (8) Amount | % of (5) | (9) Amount | % of (5) | (10) Amount | % of (5) | (11) 1 year or longer | % of (5) | 3 months or longer | % of (5) |
|---------------------------------|----------------|-----------------------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------|---------------------------------|-----------------------------------|--------|---------|--------|---------|--------|---------|--------|---------|--------|--------|---------|---------|--------|---------|--------|---------|---------|--------|
| **Kenya**                       |                |                                                     |                                               |                                               |                                 |                                 |                                    |        |         |        |         |        |         |        |         |        |        |         |         |        |         |        |         |        |         |        |
| Nzoia                           | H.D.(a)        | Bungoma (4), Trans                                           | 1,363                                         | 155                                           | 492                             | 1,208                           | £34,113                           | £8,792 | 25-8    | £8,594 | 25-2    | £25,544 | 74-9    | £28,342 | 36-2    | 55,158 | 70-5    |        |         |        |         |        |         |        |         |        |         |        |         |        |
| Turbo                           | H.D.           | Kakamega (4), Nandi (1), Usain Gishu (1)                  | 2,279                                         | 129                                           | 683                             | 2,150                           | £78,292                           | £24,049 | 30-7    | £23,283 | 52-4    |          |         |        |         |        |         |        |         |        |         |        |         |        |         |        |         |
| Nakuru                          | L.D.(a)        | Nandi (3), Usain Gishu (3), Baringo (3), Usain Gishu (2)  | 577                                           | 105                                           | 115                             | 1,028                           | £59,903                           | £44,444 | 71-8    | £5,402  | 12-2    | £17,809 | 29-7    | £6,273  | 10-5    | £23,283 | 52-4    |          |         |        |         |        |         |        |         |        |         |        |
| Sokik                           | H.D.           | Kericho (2), Nandi (3), Usain Gishu (3), Nandi (1) (1)    | 1,108                                         | 80                                            | 315                             | 1,028                           | £59,903                           | £44,444 | 71-8    | £5,402  | 12-2    | £17,809 | 29-7    | £6,273  | 10-5    | £23,283 | 52-4    |          |         |        |         |        |         |        |         |        |         |        |         |        |
| Central Nyanza                  | L.D.           | Central Nyanza (3), Uasin Gishu (3)                      | 981                                           | 262                                           | 76                              | 719                             | £36,098                           | £24,254 | 67-2    | £1,199  | 3-3     | £12,041 | 33-4    | £7,728  | 76-4    | £2,736  | 27-0    |          |         |        |         |        |         |        |         |        |         |        |         |        |
| Nyanza                          | L.D.           | Nyandarua (5), Nandi (1), Uasin Gishu (3), Nandi (1)     | 1,198                                         | 49                                            | 50                              | 1,208                           | £16,566                           | £8,594  | 58-4    | £5,475  | 19-3    | £11,814 | 41-7    | £28,358 | 58-4    | £11,814 | 41-7    |          |         |        |         |        |         |        |         |        |         |        |         |        |
| Thomson’s Falls                 | L.D.           | Nyandarua (5), Nandi (1), Uasin Gishu (3), Nandi (1)     | 509                                           | 116                                           | 84                              | 393                             | £39,154                           | £25,556 | 65-3    | £13,917 | 35-5    |          |         | £30,026 | 84-3    |          |         |        |         |        |         |        |         |        |         |        |         |        |
| Nairobi                         | L.D.           | Nyandarua (5), Nandi (1), Uasin Gishu (3), Nandi (1)     | 595                                           | 116                                           | 84                              | 393                             | £39,154                           | £25,556 | 65-3    | £13,917 | 35-5    |          |         | £30,026 | 84-3    |          |         |        |         |        |         |        |         |        |         |        |         |        |
| TOTAL                           | L.D.           | Nyandarua (5), Nandi (1), Uasin Gishu (3), Nandi (1)     | 1,804                                         | 325                                           | 100                             | 1,479                           | £143,987                          | £98,032 | 68-1    | £11,844 | 8-2     | £47,634 | 33-1    | £11,844 | 8-2     | £47,634 | 33-1    |          |         |        |         |        |         |        |         |        |         |        |         |        |

**NOTES**

n.a. Not available.

(a) H.D. represents high density, L.D. low density.

(b) Includes premature repayments, which amount to 0.44% of billing (col. 5) over all schemes. For this reason cols. 7 and 11 add up to 100-4 rather than 100%.

(c) By 31st December 1965 settlement had commenced on about 100 schemes, but only 72 had been on the ground long enough for payments to fall due on settlers’ loans.

(d) No. settlers billed up to and including 31-3-1965.

(e) No. settlers billed up to and including 30-9-1964.

**SOURCE:** Department of Settlement.
**APPENDIX TABLE 9.—PUBLICLY ASSISTED AGRICULTURAL RESEARCH IN KENYA**

<table>
<thead>
<tr>
<th>Sponsoring organization</th>
<th>Commodity</th>
<th>Location of main centre(s)</th>
<th>Present approx. annual recurrent expenditure on research</th>
<th>Principal research objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dept. of Agriculture</td>
<td>General</td>
<td>FIELD INVESTIGATION CENTRES (8).—Kitale (Trans Nzoia Dist.); Eldoret (Uasin Gishu); Kisii; Kakamega; Katumani (Machakos); Ol Joro Orok (Nyandarua); Embu; Mtwapa (Kilifi).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dept. of Agriculture</td>
<td>Irrigated crops</td>
<td>IRRIGATION SCHEMES (3).—Mwea Galole Perkerra Maize Research Section.—Maize Research Units at Kitale, Katumani, Kakamega and Embu.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sponsoring organization</td>
<td>Commodity</td>
<td>Location of main centre(s)</td>
<td>Present approx. annual recurrent expenditure on research</td>
<td>Principal research objectives</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Dept. of Agriculture</td>
<td>Horticultural crops</td>
<td>Horticultural Research Section.— Horticultural Research Stations at Thika and Molo.</td>
<td>Agronomic research on all aspects of vegetable and fruit production. Horticultural produce inspection. Advisory service.</td>
<td></td>
</tr>
<tr>
<td><strong>Total 1965/66 recurrent expenditure on above activities, excluding U.N. Special Fund project at Galolé</strong></td>
<td></td>
<td></td>
<td><strong>£430,000</strong></td>
<td></td>
</tr>
<tr>
<td>Coffee Research Foundation</td>
<td>Coffee</td>
<td>Coffee Research Station, Ruiru (Thika); sub-stations at Meru, Kisii, Kitale and Koru (Central Nyanza).</td>
<td><strong>£120,000</strong></td>
<td>No. 1 objective: find economic means of combating Coffee Berry Disease, which is making increasingly serious inroads into coffee industry and for which no economic control methods are yet in sight. Station also concerned with other coffee pests, such as rust, and is conducting fertilizer trials.</td>
</tr>
<tr>
<td>Tea Research Institute</td>
<td>Tea</td>
<td>Tea Research Station, Kericho.</td>
<td><strong>£31,000(b)</strong></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 9.—PUBLICLY ASSISTED AGRICULTURAL RESEARCH IN KENYA—(Contd.)

<table>
<thead>
<tr>
<th>Sponsoring organization</th>
<th>Commodity</th>
<th>Location of main centre(s)</th>
<th>Present approx. annual recurrent expenditure on research</th>
<th>Principal research objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kenya Tea Development Authority</strong> (assisted by Tea Board of Kenya and T.R.I.)</td>
<td>Tea</td>
<td>Kagochi Experimental Station, Nyeri.</td>
<td><strong>£40,000</strong></td>
<td>(c) Establish vegetative propagation as standard technique in expansion of smallholder tea. V.P. will enable K.T.D.A. to improve substantially yielding quality of planting material issued to smallholders.</td>
</tr>
<tr>
<td><strong>Cotton Lint and Seed Marketing Board</strong></td>
<td>Cotton</td>
<td>Cotton Research Stations at Kibos (C. Nyanza), Busia, and Msababa (Kilifi).</td>
<td>£12,000</td>
<td>Devise inexpensive techniques of land improvement and pest control, especially cultivation in blocks; test and adapt varieties with higher lint out-turn.</td>
</tr>
<tr>
<td><strong>Kenya Sisal Board</strong></td>
<td>Sisal</td>
<td>High-level Sisal Research Station, Thika.</td>
<td>£12,000</td>
<td>Increase yields; find new uses for sisal, especially use of sisal waste as cattle feed; investigate other aspects of combining sisal with ranching.</td>
</tr>
<tr>
<td><strong>Department of Veterinary Services</strong></td>
<td>General livestock</td>
<td>Veterinary Research Laboratory, Kabete (Nairobi).</td>
<td><strong>£96,000</strong>(e)</td>
<td>Improve techniques of diagnosis, analysis, and treatment of animal diseases prevalent in Kenya; develop low-cost vaccines. Work on improvement of livestock yields through investigations in nutrition, breeding, and other aspects of animal husbandry is currently limited due to lack of staff; however, it is scheduled to be expanded during the Plan period.</td>
</tr>
<tr>
<td><strong>Department of Veterinary Services</strong></td>
<td>General livestock</td>
<td>Veterinary Research Station, Naivasha (Nakuru).</td>
<td>£37,000</td>
<td></td>
</tr>
<tr>
<td><strong>Department of Veterinary Services</strong></td>
<td>Dairy cattle</td>
<td>Central Artificial Insemination Service, Kabete.</td>
<td><strong>£10,000</strong>(f)</td>
<td>Improve conception rates, perfect use of room-temperature semen as most economic technique of insemination.</td>
</tr>
<tr>
<td><strong>Department of Veterinary Services</strong></td>
<td>General livestock</td>
<td>LIVESTOCK IMPROVEMENT AND ANIMAL INDUSTRY CENTRES (9).—Baraton (Nandi), Chebororwa (Uasin Gishu), Machakos, Mariakani (Kwale), Marimba (Meru), Maseno (Central Nyanza), Ndomba (Kirinyaga), Ngong (Kajiado), Sangalo (Bungoma).</td>
<td><strong>£10,000</strong>(f)</td>
<td>Improve yields and calving rates of various breeds and crosses under differing systems of management and climatic conditions.</td>
</tr>
</tbody>
</table>
## APPENDIX TABLE 9.—PUBLICLY ASSISTED AGRICULTURAL RESEARCH IN KENYA—(Contd.)

<table>
<thead>
<tr>
<th>Sponsoring organization</th>
<th>Commodity</th>
<th>Location of main centre(s)</th>
<th>Present approx. annual recurrent expenditure on research</th>
<th>Principal research objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of Range Management</td>
<td>Beef cattle</td>
<td>Katumani; Mackinnon Road (Kwale); Baringo.</td>
<td>£14,000</td>
<td>Investigate bush control, pasture improvement, livestock performance, game stock relationships, and other aspects of range ecology to improve technology of pastoral areas development schemes.</td>
</tr>
<tr>
<td>E.A. Veterinary Research Organization E.A. Agricultural and Forestry Research Org. Wellcome Foundation</td>
<td>General livestock</td>
<td>Muguga (Kiambu)</td>
<td>nil</td>
<td>Develop and test vaccines against Foot-and-Mouth virus strains occurring in Kenya.</td>
</tr>
<tr>
<td></td>
<td>General crops</td>
<td>Muguga</td>
<td>£15,000(d)</td>
<td>Part-time projects in fundamental and applied research according to particular interests of faculty and students.</td>
</tr>
<tr>
<td></td>
<td>Cattle</td>
<td>Wellcome Institute for Research on Foot-and-Mouth Disease, Kabete. Clinical School and Faculty Farm, Kabete.</td>
<td>nil</td>
<td></td>
</tr>
<tr>
<td>University College Nairobi, Faculty of Veterinary Science</td>
<td>Maize</td>
<td>Embu</td>
<td>nil</td>
<td>Breed high-yielding varieties suited to medium-rainfall conditions.</td>
</tr>
<tr>
<td>Dept. of Agriculture</td>
<td>Sugar cane</td>
<td>Sugar Research Station, Central Nyanza.</td>
<td>nil</td>
<td>Improve cane yields and resistance to disease under marginal rainfall conditions of Central Nyanza sugar belt.</td>
</tr>
<tr>
<td>Dept. of Agric. and national sugar authority</td>
<td>Beef cattle</td>
<td>Major Range Research Station and two substations, locations undetermined.</td>
<td>nil</td>
<td>(See above objectives for range research.)</td>
</tr>
<tr>
<td>Division of Range Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total annual recurrent expenditure on above activities, excluding U.N. Special Fund project at Galole, EAVRO, EAAFRO, Wellcome Foundation Contribution, and University College Nairobi, is £805,000.

**Notes:**
(a) The Department of Agriculture already spends several thousand pounds per annum (included above) on sugar cane research conducted out of the Nyanza Provincial Agricultural Office, Kisumu.
(b) Tea Board of Kenya's contribution to T.R.I. Tanzania and Uganda are also supporting T.R.I., which has sub-stations in those countries.
(c) Expenditure on V.P. research is not given separately from training activities at Kagochi; the centre's total 1964/65 expenditures were £13,843, of which the Tea Board contributed £1,500 for V.P. research.
(d) Contribution from Kenya Government recurrent budget.
(e) Calculated on assumption that 20% of activity at Veterinary Research Lab. is devoted to research and the remainder to diagnosis and vaccine production. Calculated on assumption that 20% of activity at Livestock Centres is devoted to research.
### APPENDIX TABLE 10.—PRODUCTION TARGETS, 1970: CASHEW NUTS

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Production of raw cashew nuts</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 lb. bags</td>
<td>Tons equivalent</td>
<td>150 lb. bags</td>
</tr>
<tr>
<td>COAST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi</td>
<td>95,343</td>
<td>6,385</td>
<td>119,500</td>
</tr>
<tr>
<td>Malindi</td>
<td>55,721</td>
<td>3,731</td>
<td>52,300</td>
</tr>
<tr>
<td>Other Kilifi</td>
<td>39,622</td>
<td>2,653</td>
<td>2,700</td>
</tr>
<tr>
<td>Kwale</td>
<td>24,858</td>
<td>1,665</td>
<td>3,000</td>
</tr>
<tr>
<td>Lamu</td>
<td>1,336</td>
<td>89</td>
<td>150</td>
</tr>
<tr>
<td>Mombasa</td>
<td>2,250</td>
<td>151</td>
<td>300</td>
</tr>
<tr>
<td>Tana River</td>
<td>150</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total Coast</td>
<td>123,937*</td>
<td>8,300</td>
<td>177,800</td>
</tr>
<tr>
<td>TOTAL KENYA</td>
<td>123,937*</td>
<td>8,300</td>
<td>177,800</td>
</tr>
</tbody>
</table>

*Total subsequently revised to 123,271 bags—details not available.

**Sources:** Kenya Agricultural Produce Marketing Board; Department of Agriculture.
### APPENDIX TABLE 11.—PRODUCTION TARGETS, 1970: COFFEE

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of clean coffee equivalents:</td>
<td>Total acreage planted as at 30.11.1965:</td>
</tr>
<tr>
<td></td>
<td>1963/64</td>
<td>1964/65</td>
</tr>
<tr>
<td></td>
<td>tons</td>
<td>%</td>
</tr>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall—Smallholders</td>
<td>1,683</td>
<td>48-0</td>
</tr>
<tr>
<td>Kiambug—Total Smallholders</td>
<td>7,235</td>
<td>27-6</td>
</tr>
<tr>
<td>Smallholders Estates</td>
<td>1,740</td>
<td>22-6</td>
</tr>
<tr>
<td>Kirinyaga—Smallholders Estates</td>
<td>5,495</td>
<td>36-4</td>
</tr>
<tr>
<td>Nyeri—Total Smallholders Estates</td>
<td>1,846</td>
<td>37-9</td>
</tr>
<tr>
<td>Smallholders Estates</td>
<td>2,078</td>
<td>36-5</td>
</tr>
<tr>
<td>Thika—Estates</td>
<td>1,183</td>
<td>10-4</td>
</tr>
<tr>
<td><strong>Total Central—Smallholders</strong></td>
<td>6,452</td>
<td>54-3</td>
</tr>
<tr>
<td><strong>Total Central—Estates</strong></td>
<td>16,604</td>
<td>20-3</td>
</tr>
<tr>
<td><strong>Grand Total, Central</strong></td>
<td>23,056</td>
<td>27-4</td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taita—Smallholders</td>
<td>97</td>
<td>50-9</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu—Smallholders</td>
<td>292</td>
<td>57-2</td>
</tr>
<tr>
<td>Kitui—Smallholders</td>
<td>(e)</td>
<td>(e)</td>
</tr>
<tr>
<td>Machakos—Estates</td>
<td>1,698</td>
<td>18-1</td>
</tr>
<tr>
<td>Smallholders Estates</td>
<td>782</td>
<td>42-8</td>
</tr>
<tr>
<td>Meru—Smallholders Estates</td>
<td>916</td>
<td>47-1</td>
</tr>
<tr>
<td><strong>Total Eastern—Smallholders</strong></td>
<td>5,696</td>
<td>48-8</td>
</tr>
<tr>
<td><strong>Total Eastern—Estates</strong></td>
<td>916</td>
<td>9-5</td>
</tr>
<tr>
<td><strong>Grand Total, Eastern</strong></td>
<td>6,612</td>
<td>39-8</td>
</tr>
<tr>
<td><strong>NAIROBI—Estates</strong></td>
<td>552</td>
<td>28-6</td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 11.—PRODUCTION TARGETS, 1970: COFFEE—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Production of clean coffee equivalents:</th>
<th>Percentage of production falling into top three classes</th>
<th>Authorized acreage:</th>
<th>Total acreage planted as at 30.11.1965: (a)</th>
<th>Production of clean coffee equivalents:</th>
<th>Total acreage planted: (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>tons</td>
<td>1963/64</td>
<td>1964/65</td>
<td>%</td>
<td>1963/64</td>
<td>1964/65</td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza—Total Smallholders</td>
<td>300</td>
<td>18-0</td>
<td>8-9</td>
<td>0</td>
<td>0</td>
<td>1,011</td>
</tr>
<tr>
<td>Estates</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td>217</td>
</tr>
<tr>
<td>Kisii—Smallholders</td>
<td>1,722</td>
<td>127</td>
<td>122</td>
<td>2</td>
<td>0</td>
<td>2304</td>
</tr>
<tr>
<td>South Nyanza—Smallholders</td>
<td>82</td>
<td>9-6</td>
<td>9-0</td>
<td>0</td>
<td>0</td>
<td>3321</td>
</tr>
<tr>
<td>Total Nyanza—Smallholders</td>
<td>1,806</td>
<td>9-8</td>
<td>2-1</td>
<td>0</td>
<td>0</td>
<td>2304</td>
</tr>
<tr>
<td>Total Nyanza—Estates</td>
<td>298</td>
<td>12-6</td>
<td>9-0</td>
<td>0</td>
<td>0</td>
<td>2304</td>
</tr>
<tr>
<td>Grand Total, Nyanza</td>
<td>2,104</td>
<td>11-4</td>
<td>3-1</td>
<td>0</td>
<td>0</td>
<td>19819</td>
</tr>
<tr>
<td><strong>RIFT VALLEY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kericho—Total Smallholders</td>
<td>158</td>
<td>27-7</td>
<td>2-9</td>
<td>0</td>
<td>0</td>
<td>2083</td>
</tr>
<tr>
<td>Estates</td>
<td>8</td>
<td>25-4</td>
<td>0</td>
<td></td>
<td></td>
<td>468</td>
</tr>
<tr>
<td>Nakuru—Estates</td>
<td>150</td>
<td>27-8</td>
<td>3-1</td>
<td>0</td>
<td>0</td>
<td>1,615</td>
</tr>
<tr>
<td>Nandi—Total Smallholders</td>
<td>1,929</td>
<td>27-2</td>
<td>14-2</td>
<td>0</td>
<td>0</td>
<td>7,550</td>
</tr>
<tr>
<td>Estates</td>
<td>1,239</td>
<td>27-2</td>
<td>14-2</td>
<td>0</td>
<td>0</td>
<td>420</td>
</tr>
<tr>
<td>Trans Nzoia—Estates</td>
<td>1,463</td>
<td>19-8</td>
<td>6-1</td>
<td>0</td>
<td>0</td>
<td>8,089</td>
</tr>
<tr>
<td>Uasin Gishu—Estates</td>
<td>91</td>
<td>26-4</td>
<td>5-7</td>
<td>0</td>
<td>0</td>
<td>1,051</td>
</tr>
<tr>
<td>Other Rift Valley—Smallholders</td>
<td>24</td>
<td>12-5</td>
<td>0</td>
<td></td>
<td></td>
<td>684</td>
</tr>
<tr>
<td>Baringo</td>
<td>450</td>
<td>339</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>329</td>
</tr>
<tr>
<td>Elgeyo-Marakwet</td>
<td>358</td>
<td>148</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>148</td>
</tr>
<tr>
<td>Kajiado</td>
<td>720</td>
<td>201</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>201</td>
</tr>
<tr>
<td>Narok</td>
<td>37</td>
<td>17-2</td>
<td>0</td>
<td></td>
<td></td>
<td>2,760</td>
</tr>
<tr>
<td>West Pokot</td>
<td>3,668</td>
<td>25-7</td>
<td>10-2</td>
<td>0</td>
<td>0</td>
<td>19,137</td>
</tr>
<tr>
<td>Total Rift Valley—Smallholders</td>
<td>3,668</td>
<td>19-7</td>
<td>10-2</td>
<td>0</td>
<td>0</td>
<td>19,137</td>
</tr>
<tr>
<td>Total Rift Valley—Estates</td>
<td>3,705</td>
<td>25-7</td>
<td>10-1</td>
<td>0</td>
<td>0</td>
<td>21,897</td>
</tr>
<tr>
<td>Grand Total, Rift Valley</td>
<td>6,373</td>
<td>25-7</td>
<td>10-1</td>
<td>0</td>
<td>0</td>
<td>43,794</td>
</tr>
</tbody>
</table>
## APPENDIX TABLE 11.—PRODUCTION TARGETS, 1970: COFFEE—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Production of clean coffee equivalents:</th>
<th>Percentage of production falling into top three classes</th>
<th>Authorized acreage:</th>
<th>Total acreage planted as at 30.11.1965: (a)</th>
<th>Production of clean coffee equivalents:</th>
<th>Total acreage planted: (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1964/65 Actual</td>
<td>1963/64 %</td>
<td>1964/65 %</td>
<td>acres</td>
<td>1963/64 acres</td>
<td>1964/65 acres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1964/65 %</td>
<td></td>
<td>acres</td>
<td>1963/64 acres</td>
<td>1964/65 acres</td>
</tr>
<tr>
<td><strong>1964/65 Actual</strong></td>
<td>366</td>
<td>33.6</td>
<td>21.5</td>
<td>5,631</td>
<td>2,378</td>
<td>5,214(d)</td>
</tr>
<tr>
<td><strong>1969/70 Targets</strong></td>
<td>455</td>
<td>31.6</td>
<td>18.9</td>
<td>8,009</td>
<td>6,522</td>
<td>2,300</td>
</tr>
<tr>
<td><strong>Total, Western—Smallholders</strong></td>
<td>14,543</td>
<td>44.6</td>
<td>34.8</td>
<td>135,100</td>
<td>129,557</td>
<td>43,630</td>
</tr>
<tr>
<td><strong>Total, Kenya—Smallholders</strong></td>
<td>22,038</td>
<td>20.2</td>
<td>9.6</td>
<td>80,118</td>
<td>80,118</td>
<td>26,350</td>
</tr>
<tr>
<td><strong>Total, Kenya—Estates</strong></td>
<td>144</td>
<td></td>
<td></td>
<td>1,237</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unallocated by District</strong></td>
<td>2,093</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total, Kenya</strong></td>
<td>38,818</td>
<td>28.8</td>
<td>19.6</td>
<td>215,218</td>
<td>209,675</td>
<td>70,000</td>
</tr>
<tr>
<td><strong>Notes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>General—1969/70 production targets are calculated on the assumption of an average yield of approximately 6.5 hundredweights per acre in each area and category, less an allowance for smallholder acreage not yet planted.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Figures include a small proportion of gaps within individual holdings which are covered by authorizations for those holdings and may be infilled by the owners at any time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Where one or more Districts in a Province have already planted more than their authorized acreages, it is assumed that these Districts will not undertake net additional planting by 1970, and that other Districts in the Province will plant less than their current authorizations so as to keep Province totals close to authorized levels. Where an entire Province has already overplanted, smallholder acreage in 1964/65 is rounded off to the nearest thousand to give a notional estimate of 1969/70 acreage. Government policy in these matters has not yet been finally determined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Smallholder acreages in Central Province represent latest data available to Department of Agriculture as at 15th December 1965, but are still believed to be slightly below actual totals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Denotes figures based on outdated counts. Actual totals are believed to be up to 10% higher.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Kitui production is very small; figures are included in Machakos totals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) 1964/65 smallholder production in Nandi was very small and is included in &quot;Other Rift Valley&quot; totals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sources:</strong> 1964/65 production data from Coffee Marketing Board, acreage data from Coffee Board and Department of Agriculture.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 12.—PRODUCTION TARGETS, 1970: COTTON

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1963/64 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Av. yield seed cotton lb. per acre</td>
</tr>
<tr>
<td></td>
<td>Seed cotton: '000 lb.</td>
<td>Cotton Lint: 400 lb. bales</td>
</tr>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall</td>
<td>40</td>
<td>6,530</td>
</tr>
<tr>
<td>Kirinyaga</td>
<td>40</td>
<td>6,530</td>
</tr>
<tr>
<td>Kiambar</td>
<td>0</td>
<td>6,530</td>
</tr>
<tr>
<td>Total Central</td>
<td>40</td>
<td>6,530</td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi</td>
<td>6,237</td>
<td>650</td>
</tr>
<tr>
<td>Kwale</td>
<td>176</td>
<td>2,610</td>
</tr>
<tr>
<td>Lamu and Tana River</td>
<td>1,556</td>
<td>6,530</td>
</tr>
<tr>
<td>Galole Irrigation Scheme</td>
<td>1,239</td>
<td>1,051(b)</td>
</tr>
<tr>
<td>Other Tana River</td>
<td>317</td>
<td>650</td>
</tr>
<tr>
<td>Lamu</td>
<td>60</td>
<td>650</td>
</tr>
<tr>
<td>Total Coast</td>
<td>8,029</td>
<td>2,610</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu</td>
<td>13</td>
<td>6,530</td>
</tr>
<tr>
<td>Meru</td>
<td>1,078</td>
<td>1,051</td>
</tr>
<tr>
<td>Kitui</td>
<td>802</td>
<td>13,070</td>
</tr>
<tr>
<td>Machakos</td>
<td>802</td>
<td>13,070</td>
</tr>
<tr>
<td>Total Eastern</td>
<td>1,893</td>
<td>13,070</td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
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<tr>
<td>Central Nyanza</td>
<td>2,533</td>
<td>11,760</td>
</tr>
<tr>
<td>South Nyanza</td>
<td>1,388</td>
<td>14,380</td>
</tr>
<tr>
<td>Total Nyanza</td>
<td>3,921</td>
<td>26,140</td>
</tr>
<tr>
<td><strong>Total Nyanza, 1964/65</strong></td>
<td>(6,524)</td>
<td>(6,524)</td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 12.—PRODUCTION TARGETS, 1970: COTTON—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1963/64 Actual</th>
<th></th>
<th></th>
<th>1969/70 Targets</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Acreage</td>
<td>Av. yield</td>
<td>Production(a)</td>
<td>Acreage</td>
<td>Av. yield</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seed cotton:</td>
<td>Cotton lint:</td>
<td>Cotton seed:</td>
<td>Seed cotton:</td>
<td>Cotton lint:</td>
<td>Cotton seed:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>'000 lb.</td>
<td>400 lb. bales</td>
<td>tons</td>
<td>'000 acres</td>
<td>'000 lb.</td>
<td>400 lb. bales</td>
<td>tons</td>
</tr>
<tr>
<td>WESTERN</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bungoma</td>
<td>900</td>
<td>684</td>
<td>259</td>
<td>n.a.</td>
<td>1,960</td>
<td>1,500</td>
<td>560</td>
</tr>
<tr>
<td>Busia</td>
<td>7,817</td>
<td>5,940</td>
<td>2,253</td>
<td>n.a.</td>
<td>29,400</td>
<td>22,500</td>
<td>8,440</td>
</tr>
<tr>
<td>Kakamega</td>
<td>34</td>
<td>25</td>
<td>9</td>
<td>n.a.</td>
<td>1,310</td>
<td>1,000</td>
<td>375</td>
</tr>
<tr>
<td>Total Western</td>
<td>8,751</td>
<td>6,649</td>
<td>2,522</td>
<td>n.a.</td>
<td>32,670</td>
<td>25,000</td>
<td>9,375</td>
</tr>
<tr>
<td>Total Western, 1964/65</td>
<td>(8,467)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL KENYA</td>
<td>22,715(c)</td>
<td>17,342</td>
<td>6,529</td>
<td>n.a.</td>
<td>124,000</td>
<td>95,000</td>
<td>35,625</td>
</tr>
<tr>
<td>Total KENYA, 1964/65</td>
<td>(22,879)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

* Negligible.

n.a. No reasonable estimate available.

(a) Target is conceived initially in terms of bales of lint, from which seed cotton and cotton seed targets are derived by multiplying factors of 1.307 and 0.375 respectively and rounding off.

(b) 1964/65 average yield was 1,470.

(c) Exceeds by 81 (an error of 36%) the total of District figures, which were obtained from different sources.

**Sources:** Cotton Lint and Seed Marketing Board; Department of Agriculture.
<table>
<thead>
<tr>
<th>Province/District</th>
<th>1965 Actual</th>
<th></th>
<th>1970 Target</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Acreage: Acres</td>
<td>Production</td>
<td>Acreage: Acres</td>
</tr>
<tr>
<td></td>
<td>Fresh fruit delivered to factories: '000 lb.</td>
<td>Canned juice equivalent: '000 gallons(a)</td>
<td>Fresh fruit delivered to factories: '000 lb.</td>
<td>Canned juice equivalent: '000 gallons(a)</td>
</tr>
<tr>
<td>CENTRAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall - Maragua Ridge Settlement</td>
<td>0</td>
<td>0</td>
<td>250</td>
<td>7(d)</td>
</tr>
<tr>
<td>EASTERN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machakos—Total</td>
<td>250</td>
<td>6</td>
<td>750</td>
<td>19</td>
</tr>
<tr>
<td>Mua Hills Settlement</td>
<td>0</td>
<td>0</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>250</td>
<td>6(b)</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>NYANZA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kisii—Total</td>
<td>700*</td>
<td>19</td>
<td>6,000(e)</td>
<td>170(d)</td>
</tr>
<tr>
<td>Settlement</td>
<td>2,050*</td>
<td>56</td>
<td>(f)</td>
<td>(f)</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>50*</td>
<td>1-4</td>
<td>53</td>
<td>(f)</td>
</tr>
<tr>
<td>RIFT VALLEY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kericho—Settlement</td>
<td>3,050</td>
<td>82</td>
<td>n.a.</td>
<td>7,000</td>
</tr>
<tr>
<td>TOTAL KENYA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** * approximate. n.a. No reasonable estimate available.

**General:**—Kisii and Kericho fruit is currently processed at Sotik factory, Machakos fruit at Nairobi factory.

(a) 1 gallon = 10.7 lb.
(b) Extraction rate of 25%
(c) Extraction rate of 29%
(d) Extraction rate of 30%
(e) Total includes Kericho.
(f) Allocation of 1970 factory purchases among Settlement and other smallholders in Kisii and Kericho Districts has not yet been determined.

**Sources:** Kenya Fruit Processors, Ltd.; Trufoods, Ltd.; Panafprod, Ltd.; Department of Settlement; Canning Crops Board.
### APPENDIX TABLE 14.—PRODUCTION TARGETS, 1970: CANNING PINEAPPLE

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1965 Actual</th>
<th>1970 Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Total acreage planted</td>
</tr>
<tr>
<td></td>
<td>Deliveries of fresh pineapple to canneries: '000 tons</td>
<td>Canned pineapple equivalent: '000 cases(a)</td>
</tr>
<tr>
<td>CENTRAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall—Smallholders</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Kiambu</td>
<td>15·4</td>
<td>430</td>
</tr>
<tr>
<td>Nyeri—Estates</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Thika—Estates</td>
<td>4·7</td>
<td>130</td>
</tr>
<tr>
<td>Total Central</td>
<td>20·1</td>
<td>560</td>
</tr>
<tr>
<td>TOTAL KENYA, SMALLHOLDERS</td>
<td>15·4</td>
<td>430</td>
</tr>
<tr>
<td>TOTAL KENYA, ESTATES</td>
<td>4·7</td>
<td>130</td>
</tr>
<tr>
<td>GRAND TOTAL, KENYA</td>
<td>20·1(e)</td>
<td>560</td>
</tr>
<tr>
<td>GRAND TOTAL, KENYA, 1964</td>
<td>(25·8)(e)</td>
<td>(722)</td>
</tr>
</tbody>
</table>

**Notes**
- Negligible. n.a. No reasonable estimate available.

**General:** In addition to 20,000–25,000 tons of pineapple canned each year an estimated 10,000 tons is produced, primarily but not exclusively in the Central Province, and sold fresh or consumed by growers. A further 200 tons or more of prime quality pineapple are exported fresh by air, mainly to Europe. Panafoods, Ltd., at Naivasha, has recently started dehydrating Grade III pineapple produced by smallholders in the Central Province—approximately 1,000 tons were processed in 1965, and the annual rate is expected to rise shortly to 1,500 tons.

(a) Assuming 28 cases of mixed product per ton of fresh fruit.

(b) Includes acreage producing for fresh fruit market.

(c) Acreage required to produce target tonnage on assumption of 7½-ton average annual yield per acre over 4-year cycle.

(d) In 1962 growers belonging to South Tetu Pineapple Growers Co-operative Society delivered 47 tons to Kenya Orchards factory, Machakos. However, the growers appear to have found more lucrative outlets on the fresh fruit market, and are not now producing for the factory.

(e) Drought is responsible for the fall in deliveries between 1964 and 1965.

**Sources:** Kenya Canners, Ltd.; Kenya Orchards, Ltd.; Department of Agriculture.
<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets(a)</th>
<th>1969/70 Targets(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of dried flowers: tons</td>
<td>Acreage: acres</td>
<td>Average yield:(a) lb. per acre</td>
</tr>
<tr>
<td>CENTRAL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall—Smallholders</td>
<td>5</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Kiambu—Total</td>
<td>6</td>
<td>289</td>
<td>n.a.</td>
</tr>
<tr>
<td>Settlement</td>
<td>6</td>
<td>132</td>
<td>102</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>272</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>11</td>
<td>111</td>
<td>222</td>
</tr>
<tr>
<td>Nyandarua—Total</td>
<td>603</td>
<td>7,504</td>
<td>180</td>
</tr>
<tr>
<td>Settlement</td>
<td>65</td>
<td>513</td>
<td>284</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>93</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>131</td>
<td>1,446</td>
<td>205</td>
</tr>
<tr>
<td>Nyeri—Total</td>
<td>6</td>
<td>164</td>
<td>n.a.</td>
</tr>
<tr>
<td>Settlement</td>
<td>65</td>
<td>513</td>
<td>284</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>93</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>131</td>
<td>1,446</td>
<td>205</td>
</tr>
<tr>
<td>Total Central</td>
<td>1,192</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>COAST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taita—Smallholders</td>
<td>*</td>
<td>*</td>
<td>n.a.</td>
</tr>
<tr>
<td>EASTERN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu—Smallholders</td>
<td>4</td>
<td>39</td>
<td>n.a.</td>
</tr>
<tr>
<td>Meru—Total</td>
<td>7</td>
<td>78</td>
<td>200</td>
</tr>
<tr>
<td>Settlement</td>
<td>7</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>7</td>
<td>39</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>25</td>
<td>145</td>
<td>386</td>
</tr>
<tr>
<td>Total Eastern</td>
<td>1,192</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>NYANZA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kisii—Total</td>
<td>1,902</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Settlement</td>
<td>*</td>
<td>*</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>1,902</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>*</td>
<td>*</td>
<td>n.a.</td>
</tr>
<tr>
<td>Total Nyanza</td>
<td>1,902</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
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</table>
## APPENDIX TABLE 15.—PRODUCTION TARGETS—1970: PYRETHRUM—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of dried flowers: tons</td>
<td>1969/70</td>
</tr>
<tr>
<td></td>
<td>Acreage: acres</td>
<td>Average yield: lb. per acre</td>
</tr>
<tr>
<td>RIFT VALLEY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baringo—Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement</td>
<td>12</td>
<td>134</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>2</td>
<td>n.a.</td>
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<tr>
<td>Large Farms</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Egeyo-Marakwet—Smallholders</td>
<td>98</td>
<td>n.a.</td>
</tr>
<tr>
<td>Kajiado—Smallholders</td>
<td>4</td>
<td>n.a.</td>
</tr>
<tr>
<td>Kericho—Total</td>
<td>*</td>
<td>47</td>
</tr>
<tr>
<td>Settlement</td>
<td>3</td>
<td>n.a.</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Large Farms</td>
<td>44</td>
<td>938</td>
</tr>
<tr>
<td>Laikipia—Large Farms</td>
<td>34</td>
<td>18</td>
</tr>
<tr>
<td>Nakuru—Total</td>
<td>834</td>
<td>n.a.</td>
</tr>
<tr>
<td>Settlement</td>
<td>22</td>
<td>156</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>14</td>
<td>n.a.</td>
</tr>
<tr>
<td>Large Farms</td>
<td>798</td>
<td>6,216</td>
</tr>
<tr>
<td>Nandi—Total</td>
<td>18</td>
<td>*</td>
</tr>
<tr>
<td>Settlement</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Other Smallholders</td>
<td>18</td>
<td>*</td>
</tr>
<tr>
<td>Large Farms</td>
<td>18</td>
<td>233</td>
</tr>
<tr>
<td>Narok—Smallholders</td>
<td>7</td>
<td>n.a.</td>
</tr>
<tr>
<td>Trans Nzoia—Large Farms</td>
<td>31</td>
<td>293</td>
</tr>
<tr>
<td>Uasin Gishu—Total</td>
<td>213</td>
<td>1,758</td>
</tr>
<tr>
<td>Settlement</td>
<td>*</td>
<td>274</td>
</tr>
<tr>
<td>Large Farms</td>
<td>34</td>
<td>1,484</td>
</tr>
<tr>
<td>West Pokot—Smallholders</td>
<td>1</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Total** | 1,303 | n.a. | n.a. | 4,860 | 27,220 |
APPENDIX TABLE 15.—PRODUCTION TARGETS—1970: PYRETHRUM—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Target (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of dried flowers: tons</td>
<td>Acreage: acres</td>
</tr>
<tr>
<td><strong>WESTERN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bungoma—Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Settlement</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Large Farms</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total Western</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL KENYA—SETTLEMENT</strong></td>
<td>748</td>
<td>8,791</td>
</tr>
<tr>
<td><strong>TOTAL KENYA—OTHER SMALLHOLDERS</strong></td>
<td>2,412</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>TOTAL KENYA—SETTLEMENT AND OTHER SMALLHOLDERS</strong></td>
<td>3,160</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>TOTAL KENYA—LARGE FARMS</strong></td>
<td>1,280</td>
<td>11,535</td>
</tr>
<tr>
<td><strong>GRAND TOTAL, KENYA</strong></td>
<td>4,440</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Notes

* Negligible.

n.a. No reasonable estimate available.

(a) 1970 targets assume an average yield, in all areas and categories, of 400 lb. per acre. This is, of course, substantially greater than observed yields in 1964/65; however 1964/65 yields were abnormally low due to unfavourable weather conditions and substantial replanting attendant upon transfer of pyrethrum-growing land to Settlement. The following table shows production, acreage, and yields in the large farm areas as a whole over the past six years.

(b) 1969/70 production targets were obtained by multiplying 1965/66 quota allocations for each category and area times 12,500/10,051, the denominator being the total national quota for 1965/66. Target production in Nyeri and Nyandarua Districts is attributed entirely to Settlement, since all or most of the large farms now producing pyrethrum in those Districts will be under Settlement by 1969/70.
<table>
<thead>
<tr>
<th>Year</th>
<th>Production (tons)</th>
<th>Acreage (acres)</th>
<th>Yield (lb. per acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959/60</td>
<td>5,118</td>
<td>39,700</td>
<td>289</td>
</tr>
<tr>
<td>1960/61</td>
<td>6,625</td>
<td>48,500</td>
<td>306</td>
</tr>
<tr>
<td>1961/62</td>
<td>8,086</td>
<td>42,800</td>
<td>423</td>
</tr>
<tr>
<td>1962/63</td>
<td>6,188</td>
<td>28,900</td>
<td>480</td>
</tr>
<tr>
<td>1963/64</td>
<td>3,187</td>
<td>14,100</td>
<td>506</td>
</tr>
<tr>
<td>1964/65</td>
<td>1,280</td>
<td>11,500</td>
<td>249</td>
</tr>
</tbody>
</table>

Weighted average yield over six years: 368 lb.

**Sources:** Production data provided by Pyrethrum Marketing Board. Acreage data for large farms obtained from 1965 Agricultural Census—Large Farm Areas (Statistics Division, Ministry of Economic Planning); acreage data for Settlement obtained by dividing production figures by yield estimates derived in 1964/65 sample survey of Settlement carried out by Farm Economic Survey Unit, Ministry of Economic Planning.
## Appendix Table 16.—Production Targets, 1970: Rice

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production</td>
<td>Production</td>
</tr>
<tr>
<td></td>
<td>Paddy: 160 lb.</td>
<td>Paddy: '000 bags</td>
</tr>
<tr>
<td></td>
<td>Rice equivalents</td>
<td>Rice equivalents</td>
</tr>
<tr>
<td></td>
<td>acres</td>
<td>bags of paddy per acre</td>
</tr>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirinyaga (Mwea Irrigation Scheme)</td>
<td>176,962</td>
<td>7,960(b)</td>
</tr>
<tr>
<td>1964/65</td>
<td>(185,802)</td>
<td>(8,350)</td>
</tr>
<tr>
<td>(same—1963/64)</td>
<td></td>
<td>5,541</td>
</tr>
<tr>
<td></td>
<td>(34-0)</td>
<td></td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lamu and Tana River</td>
<td>15,000</td>
<td>675</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza</td>
<td>8,800</td>
<td>400</td>
</tr>
<tr>
<td>South Nyanza</td>
<td>33,600</td>
<td>1,510</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL Nyanza</strong></td>
<td>42,400</td>
<td>1,910</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>WESTERN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bungoma</td>
<td>9,800</td>
<td>440</td>
</tr>
<tr>
<td>Busia</td>
<td>12,600</td>
<td>570</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,300</td>
</tr>
<tr>
<td><strong>TOTAL Western</strong></td>
<td>22,400</td>
<td>1,010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,300</td>
</tr>
<tr>
<td><strong>TOTAL KENYA (approx.)</strong></td>
<td>255,000</td>
<td>11,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n.a.</td>
</tr>
</tbody>
</table>

**Notes:**

(a) Computed from paddy figures on assumption of a 63% extraction rate.

(b) The 1964/65 and previous crops at Mwea were processed at 5 mills receiving percentage allocations as follows: Thika (25%), Nairobi (25%), and Mombasa (3 mills receiving one-sixth each). By 1969/70 the entire crop will be processed at a new mill to be constructed on the scheme and owned jointly by the National Irrigation Board and the growers.

**Sources:** Paddy production and acreage figures on the Mwea Irrigation Scheme provided by the Scheme management and the (former) Kenya Agricultural Produce Marketing Board are known precisely with the exception that an unrecorded amount of paddy is processed at two small mills on the Scheme and consumed by the growers or sold independently outside the Scheme. This amount is estimated roughly at 3 bags per acre; thus, an arbitrary 15,000 bags has been added to the K.A.P.M.B.'s audited totals of 170,802 and 161,962 for 1963/64 and 1964/65 respectively. 1970 target acreage for Mwea is based on scheme extensions already in hand or definitely planned. Actual and target production and acreage figures for all other Districts are rough estimates provided by District Agricultural Officers and vary in reliability.
### APPENDIX TABLE 17.—PRODUCTION TARGETS, 1970: SISAL

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964 Actual Production of fibre, tow and flume: '000 tons</th>
<th>1970 Targets Production of fibre, tow and flume: '000 tons</th>
<th>Acreage: '000 acres</th>
<th>Acreage: '000 acres</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall—Estates</td>
<td>1.8</td>
<td>1</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Nyeri—Estates</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Thika—Estates</td>
<td>13.6</td>
<td>16</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Total Central</strong></td>
<td>15.4</td>
<td>17</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi—Estates</td>
<td>5.1</td>
<td>4</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Kwale—Estates</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Taita—Estates</td>
<td>11.7</td>
<td>15</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td><strong>Total Coast</strong></td>
<td>16.8</td>
<td>19</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu—Smallholders</td>
<td>1.2</td>
<td>10</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Machakos—Total Smallholders</td>
<td>9-7</td>
<td>10</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Estates</td>
<td>6.4</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Eastern</strong></td>
<td>10.9</td>
<td>10</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>NAIROBI—Estates</td>
<td>1.3</td>
<td>2</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza—Total Smallholders</td>
<td>5.1</td>
<td>1</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Estates</td>
<td>3.1</td>
<td>1</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>South Nyanza—Smallholders</td>
<td>2.0</td>
<td>1</td>
<td>5</td>
<td>(a)</td>
</tr>
<tr>
<td><strong>Total Nyanza</strong></td>
<td>6.5</td>
<td>1</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td><strong>RIFT VALLEY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nakuru—Estates</td>
<td>13.0</td>
<td>12</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Trans Nzoia—Estates</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Uasin Gishu—Estates</td>
<td>3.0</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td>16.0</td>
<td>16</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL KENYA, SMALLHOLDERS</strong></td>
<td>9.1</td>
<td>*</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL KENYA, ESTATES</strong></td>
<td>57.9</td>
<td>65</td>
<td>265</td>
<td>265</td>
</tr>
<tr>
<td><strong>GRAND TOTAL, KENYA</strong></td>
<td>67.0</td>
<td>65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

*General:* The table assumes that total production will remain static due to weak prices and other difficulties on the world market. The more efficient areas are expected to increase their acreage at the expense of less efficient areas. Smallholder production is expected to be nil or minimal due to low prices.

*Denotes figure less than ½ thousand.

(a) The bulk of smallholder sisal is produced from hedgerows, for which no acreage data are available.

**Sources:** Kenya Sisal Board; Ministry of Agriculture.
<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964 Actual</th>
<th>1970 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factory cane sugar intake: '000 tons</td>
<td>Production</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cane deliveries to factories: '000 tons</td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kwale-Total</td>
<td>100*</td>
<td>100*</td>
</tr>
<tr>
<td>Ramisi Factory</td>
<td>100*</td>
<td></td>
</tr>
<tr>
<td>Smallholders</td>
<td>n.a.</td>
<td>100</td>
</tr>
<tr>
<td>Factory Estate</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Coast</strong></td>
<td>100*</td>
<td>100*</td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza—</td>
<td>311*</td>
<td>304</td>
</tr>
<tr>
<td>Total Nyanza</td>
<td>311*</td>
<td>304</td>
</tr>
<tr>
<td>Chemeli Factory</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miwani Factory</td>
<td>0</td>
<td>27,675</td>
</tr>
<tr>
<td>Muhoroni Factory</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kericho—</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Smallholders</td>
<td>7</td>
<td>900</td>
</tr>
<tr>
<td>Nandi—Total</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Large farms</td>
<td>7</td>
<td>800</td>
</tr>
<tr>
<td>Smallholders</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 18.—PRODUCTION TARGETS, 1970: WHITE SUGAR—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964 Actual</th>
<th>1970 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1644 Actual</td>
<td>1970 Targets</td>
</tr>
<tr>
<td></td>
<td>1970 Targets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1970 Targets</td>
<td></td>
</tr>
<tr>
<td>Province/District</td>
<td>Production</td>
<td>Production</td>
</tr>
<tr>
<td></td>
<td>Factory sugar cane intake: '000 tons</td>
<td>Cane deliveries to factories: '000 tons</td>
</tr>
<tr>
<td>TOTAL SMALLHOLDERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL LARGE AND MEDIUM FARMS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL FACTORY ESTATES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL KENYA 1965</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL KENYA 1970</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes**
- * Approximate.
- n.a. No reasonable estimate available.
- (a) Up to the end of 1965 a substantial amount of the cane grown on the indicated 1964 acreage in Central Nyanza was processed into jaggery in some 60 small factories in the area. Annual throughput of cane in these factories was estimated at nearly 200,000 tons in 1964. The Government has now ordered these factories to cease production, so that the cane will be available for the new sugar-manufacturing facilities. Cane for jaggery, spirits, and other uses apart from sugar is grown on an undetermined but substantial acreage in several districts apart from those covered here.
- (b) Cycle is 5–6 years in Nyanza, 3–4 years at the Coast. Yield figures may be greater or less than the quotient of total cane deliveries divided by total acreage planted, depending on the timing of planting (the plant crop takes 18–22 months to mature, and yields drop successively between the plant crop and first ratoon, and the first and second ratoons, after which the crop is normally replanted).
- (c) All production listed in Rift Valley is or will be delivered to factories in Central Nyanza.

**Sources:** The various sugar companies, Ministry of Agriculture, Development Finance Company of Kenya, and Henckell du Buisson (E.A.) Ltd.
## APPENDIX TABLE 19.—PRODUCTION TARGETS, 1970: Tea

<table>
<thead>
<tr>
<th>Province/District</th>
<th>Production of made tea(a) equivalents: '000 lb.</th>
<th>Acreage as at 31.12.1964 (Estates, etc.) or 30.6.1965 (KTDA)</th>
<th>Estimated av. yield of made tea from &quot;mature&quot;(b) acreage lb. per acre</th>
<th>Production of made tea equivalents: '000 lb.</th>
<th>Acreage as at 30.6.1970</th>
<th>Expected av. yield of made tea from &quot;mature&quot;(b) acreage lb. per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hall—KTDA</td>
<td>75</td>
<td>1,357</td>
<td>12</td>
<td>700</td>
<td>956</td>
<td>2,400</td>
</tr>
<tr>
<td>Kiambu—Total</td>
<td>3,409</td>
<td>5,609</td>
<td>2,419</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KIAMBU—KTDA</td>
<td>259</td>
<td>1,575</td>
<td>179</td>
<td>667</td>
<td>1,270</td>
<td>4,500</td>
</tr>
<tr>
<td>Estates</td>
<td>2,790</td>
<td>4,034</td>
<td>2,240</td>
<td>971</td>
<td>4,000</td>
<td>5,100</td>
</tr>
<tr>
<td>Kirinyaga—KTDA</td>
<td>431</td>
<td>967</td>
<td>352</td>
<td>1,000</td>
<td>3,250</td>
<td>1,143</td>
</tr>
<tr>
<td>Nyeri—KTDA</td>
<td>929</td>
<td>2,225</td>
<td>646</td>
<td></td>
<td></td>
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<tr>
<td>Smallholders</td>
<td>877</td>
<td>2,206</td>
<td>608</td>
<td>980</td>
<td>2,398</td>
<td>3,150</td>
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<tr>
<td>Thika—Large Farms</td>
<td>52</td>
<td>52</td>
<td>38</td>
<td>n.a.</td>
<td>67</td>
<td>102</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Central</td>
<td>4,484</td>
<td>10,165</td>
<td>3,429</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Nyanza</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu—KTDA</td>
<td>11</td>
<td>426</td>
<td>2</td>
<td>700</td>
<td>412</td>
<td>900</td>
</tr>
<tr>
<td>Meru—Total</td>
<td>296</td>
<td>1,593</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>KISII—KTDA</td>
<td>103</td>
<td>1,151</td>
<td>1</td>
<td>1,200</td>
<td>1,453</td>
<td>2,500</td>
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<tr>
<td>Nyeri—KTDA</td>
<td>193</td>
<td>442</td>
<td>0</td>
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<td></td>
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<tr>
<td>Smallholders</td>
<td>307</td>
<td>2,019</td>
<td>3</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Eastern</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rift Valley</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elgeyo-Marakwet—KTDA</td>
<td>33,280</td>
<td>30,527</td>
<td>24,850</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kericho—Total</td>
<td>0</td>
<td>15</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kericho—KTDA—Chepsir Settlement</td>
<td>0</td>
<td>60</td>
<td>112</td>
<td>25</td>
<td></td>
<td></td>
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<tr>
<td>Smallholders</td>
<td>3,044</td>
<td>3,322</td>
<td>2,390</td>
<td>1,706</td>
<td>3,800</td>
<td>4,000</td>
</tr>
<tr>
<td>Estates: Kericho</td>
<td>29,857</td>
<td>25,382</td>
<td>22,316</td>
<td>1,244</td>
<td>32,000</td>
<td>26,750</td>
</tr>
<tr>
<td>Estates: Sotik</td>
<td>3,044</td>
<td>3,322</td>
<td>2,390</td>
<td>1,706</td>
<td>3,800</td>
<td>4,000</td>
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</tbody>
</table>
## APPENDIX TABLE 19.—PRODUCTION TARGETS, 1970: TEA—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets</th>
<th>Expected av. yield of made tea from &quot;mature&quot;(b) acreage: lb. per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of made tea(a) equivalents: '000 lb.</td>
<td>Acreage as at 31.12.1964 (Estates, etc.) or 30.6.1965 (KTDA)</td>
<td>Total planted: acres</td>
</tr>
<tr>
<td></td>
<td>Total planted: acres</td>
<td>&quot;mature&quot;:(b) acres</td>
<td>Estimated av. yield of made tea from &quot;mature&quot;(b) acreage: lb. per acre</td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td>60</td>
<td>366</td>
<td>130</td>
</tr>
<tr>
<td><strong>Total Western</strong></td>
<td>28</td>
<td>560</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total KTDA</strong></td>
<td>2,705</td>
<td>13,352</td>
<td>1,607</td>
</tr>
<tr>
<td><strong>Total Estates &amp; Large Farms</strong></td>
<td>43,245</td>
<td>45,930</td>
<td>34,310</td>
</tr>
<tr>
<td><strong>Total Kenya</strong></td>
<td>45,951</td>
<td>59,282</td>
<td>35,917</td>
</tr>
</tbody>
</table>

**Notes**

- Not applicable.
- **n.a.** No reasonable estimate available as Plan went to press.
- (a) KTDA data apply to financial year 1st July 1964—30th June 1965, estate and large farm data to calendar 1964. KTDA data are calculated from green leaf deliveries by multiplying the latter by 2357, the average outturn of made tea from bought weight at the Rongati Tea Factory in 1963/64 and 1964/65. Estate and large farm data are collected by the Tea Board as made tea.
- (b) KTDA data assume tea is "mature" 6 years or more after planting; estate and large farm data supplied by the Tea Board assume maturity at 5 years plus. In fact yields normally increase by small increments to the 9th or 10th year.
- (c) Farmers have stated their intentions to plant larger acreage but in view of poor yields to date these are considered doubtful.
- (d) Planting programme has been suspended pending resolution of doubts concerning suitability of area for tea.
- (e) KTDA acreage targets take into account only 1st and 2nd Plan planting programmes. It is anticipated that the 3rd Plan, scheduled to be launched in 1967, will result in planting by 30.6.1970 of additional 13,600 acres, none of which will yet be mature. This amount will be allocated by Districts only after Government has considered the survey report described in the text.

**Sources:** Kenya Tea Development Authority, based on KTDA 1st and 2nd Plan planting programmes; estate and large-farm data provided by the Tea Board of Kenya, based on a recent survey of growers’ intentions.
# Appendix Table 20.—Production Targets, 1970: Wheat

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1964/65 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production of wheat: Bags of 200 lb.</td>
<td>Acreage: acres</td>
</tr>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nyandarua—Total</td>
<td>2,879</td>
<td>23,844</td>
</tr>
<tr>
<td>Settlement</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Co-operative Schemes (Ol Kalou Salient)</td>
<td>84,378</td>
<td>72,200</td>
</tr>
<tr>
<td>Large Farms</td>
<td>11,268</td>
<td>15,445</td>
</tr>
<tr>
<td>Nyeri—Total</td>
<td>60,932</td>
<td>8</td>
</tr>
<tr>
<td>Settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Farms</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Central</strong></td>
<td>159,457</td>
<td>39,289</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td>50,768</td>
<td>5,879</td>
</tr>
<tr>
<td>Meru—Total</td>
<td>365</td>
<td></td>
</tr>
<tr>
<td>Settlement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Farms</td>
<td>50,403</td>
<td></td>
</tr>
<tr>
<td><strong>Total Eastern</strong></td>
<td>50,768</td>
<td>5,879</td>
</tr>
<tr>
<td><strong>RIFT VALLEY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laikipia—Large Farms</td>
<td>96,474</td>
<td>15,651</td>
</tr>
<tr>
<td>Nakuru—Large Farms</td>
<td>478,258</td>
<td>80,087</td>
</tr>
<tr>
<td>Narok—Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operative schemes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Large Farms</td>
<td>(a) 0</td>
<td>(a) 0</td>
</tr>
<tr>
<td>Trans Nzoia—Large Farms</td>
<td>133,736</td>
<td>23,250</td>
</tr>
<tr>
<td>Uasin Gishu—Total</td>
<td>670,046</td>
<td>135,145</td>
</tr>
<tr>
<td>Settlement</td>
<td>5,878</td>
<td></td>
</tr>
<tr>
<td>Large Farms</td>
<td>664,168</td>
<td></td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td>1,378,514</td>
<td>254,133</td>
</tr>
<tr>
<td><strong>TOTAL KENYA, SETTLEMENT</strong></td>
<td>20,390</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>TOTAL KENYA, CO-OPERATIVE SCHEMES</strong></td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL KENYA, LARGE FARMS</strong></td>
<td>1,568,349</td>
<td>n.a.</td>
</tr>
<tr>
<td><strong>GRAND TOTAL, KENYA</strong></td>
<td>1,588,739</td>
<td>299,301</td>
</tr>
</tbody>
</table>

**Notes:**
- * Nil or negligible.
- n.a. not available.
- (a) In 1964/65 large-scale farmers in Nakuru District produced about 15,000 bags from 2,300 acres in Narok District cultivated on the basis of contracts with Masai landholders. These data are included in the Nakuru totals, as precise details are not available separately.

**Sources:** Wheat Board, Department of Agriculture, Department of Settlement. Large farm production figures for 1964/65 obtained as a residual from total District production (supplied by Wheat Board) less settlement production (from Department of Settlement). Large farm data include 6,781 bags harvested by Department of Settlement before settlers were on the ground.
## APPENDIX TABLE 21.—PRODUCTION TARGETS—1970: BEEF (MARKETED ONLY)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1963/64 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cattle slaughtered: '000 head</td>
<td>Cattle slaughtered: '000 head</td>
</tr>
<tr>
<td><strong>CENTRAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiambu—Large Farms</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Nyandarua—Total</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Smallholders</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Large Farms</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Nyeri—Large Farms</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Thika—Large Farms</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total Central</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td><strong>COAST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilifi—Total</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Smallholders</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Large Farms</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Kwale—Total</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Smallholders</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Large Farms</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lamu—Total</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Smallholders</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Large Farms</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Taita—Smallholders</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tana River—Total</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Smallholders</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Large Farms</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Coast</td>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td><strong>EASTERN</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Embu—Smallholders</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Isiolo—Smallholders</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Kitui—Smallholders</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Machakos—Total</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Smallholders</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Large Farms</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Marsabit—Smallholders</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Meru—Total</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Smallholders</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Large Farms</td>
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<td>2</td>
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<tr>
<td>Total Eastern</td>
<td>27</td>
<td>57</td>
</tr>
<tr>
<td><strong>NYANZA</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Nyanza—Total</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Smallholders</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Large Farms</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>South Nyanza—Smallholders</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Total Nyanza</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>
### APPENDIX TABLE 21.—PRODUCTION TARGETS—1970: BEEF (MARKETED ONLY)—(Contd.)

<table>
<thead>
<tr>
<th>Province/District</th>
<th>1963/64 Actual</th>
<th>1969/70 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cattle slaughtered: '000 head</td>
<td>Cattle slaughtered: '000 head</td>
</tr>
<tr>
<td><strong>RIFT VALLEY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baringo—Smallholders</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Kajiado—Smallholders</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td>Kericho—Large Farms</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Laikipia—Large Farms</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>Nakuru—Large Farms</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>Nandi—Large Farms</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Narok—Smallholders</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>Samburu—Smallholders</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Trans-Nzoia—Large Farms</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Turkana—Smallholders</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Uasin Gishu—Large Farms</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>West Pokot—Smallholders</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Rift Valley</strong></td>
<td>133</td>
<td>171</td>
</tr>
<tr>
<td><strong>TOTAL KENYA—SMALLHOLDERS</strong></td>
<td>88</td>
<td>183</td>
</tr>
<tr>
<td><strong>TOTAL KENYA—LARGE FARMS</strong></td>
<td>94</td>
<td>105</td>
</tr>
<tr>
<td><strong>GRAND TOTAL KENYA</strong></td>
<td>182</td>
<td>288</td>
</tr>
</tbody>
</table>

**Notes—**

*General—Co-operative ranches are included above under smallholders.*

*The proposed Government/private commercial ranches in the Coast Province are included under large farms.*

†The complete shift in production from large farms to smallholders is due to the fact that the large farms which formerly comprised all of Nyandarua District are being purchased for settlement by smallholders, individually and in co-operatives.