

Document 3

Lagos Plan of Action

1980

The Lagos Plan of Action was established in Lagos, Nigeria, in 1980, following the passage of the Monrovia Declaration, demonstrating the commitment of OAU Heads of States and Government to tackle the continent's economic challenges with decisive actions. The LPA outlines three primary objectives to vigorously combat widespread poverty and significantly improve the living conditions of African citizens twenty years after independence, to actively foster collective self-reliance and sustainable growth by achieving food self-sufficiency and enhancing access to essential goods and services, and to promote the integration of African economies to effectively address the disparities created by the global economic system. To drive the implementation of this ambitious African Development Strategy, the Final Act of Lagos was introduced to support the LPA, with a focus on overcoming fragmentation across the continent and establishing an African Economic Community by the early twenty-first century. The LPA's framework encompasses a wide range of developmental sectors including agriculture, industry, energy, transportation, communication, human and natural resources, environmental sustainability, women's empowerment, and advancements in science and technology.

Questions for consideration: How do African leaders evaluate the state of Africa two decades after gaining independence? What challenges do they face in the 1980s, and why are addressing these challenges now critically important? According to the OAU Heads of State and Government, what measures are essential for achieving collective self-reliance and sustainable development? In what ways has the global economic system influenced African leaders' perceptions of their relationships with the international community and their own citizens? What constitutes the new concept of collective self-reliance that underpins the current development strategy, and why is this approach deemed necessary by the OAU Heads of State and Government? What does it signify for a group of nations to be collectively self-reliant? If African leaders committed to realizing collective self-reliance but ultimately fell short, what implications does this hold for Africa and its future generations?

In Lagos, Nigeria, 1980

Preamble

1. The effect of unfulfilled promises of global development strategies has been more sharply felt in Africa than in the other continents of the world. Indeed, rather than result in an improvement in the economic situation of the continent, successive strategies have made it stagnate and become more susceptible than other regions to the economic and social crises suffered by the industrialized countries. Thus, Africa is unable to point to any significant growth rate, or satisfactory index of general well-being, in the past 20 years. Faced with this situation and determined to undertake measures for the basic restructuring of the economic base of our continent, we resolved to adopt a far-reaching regional approach based primarily on collective self-reliance.
2. Thus, following a series of in-depth considerations of the economic problems of the continent by our Ministers and by groups of experts, we adopted at our 16th Ordinary Session, held in Monrovia, Liberia, in July 1979 the "Monrovia Declaration of Commitment of the Heads of State and Government of the OAU on the guidelines and measures for national and collective self-reliance in economic and social development for the establishment of a new international economic order."

3. In adopting the Declaration, we recognized "the need to take urgent action to provide the political support necessary for the success of the measures to achieve the goals of rapid self-reliance and self-sustaining development and economic growth", and declared as follows:
 - a. That we commit ourselves, individually and collectively, on behalf of our governments and peoples, to promote the economic and social development and integration of our economies with a view to achieving an increasing measure of self-sufficiency and self-sustainment.
 - b. That we commit ourselves, individually and collectively, on behalf of our governments and peoples, to promote the economic integration of the African region in order to facilitate and reinforce social and economic intercourse.
 - c. That we commit ourselves, individually and collectively, on behalf of our governments and peoples, to establish national, sub-regional and regional institutions which will facilitate the attainment of objectives of self-reliance and self-sustainment.
 - d. That more specifically, we commit ourselves, individually and collectively, on behalf of our governments and peoples, to:
 - give an important place to the field of human resource development by starting to eliminate illiteracy;
 - put science and technology in the service of development by reinforcing the autonomous capacity of our countries in this field;
 - achieve self-sufficiency in food production and supply;
 - implement completely the programs for the United Nations Transport and Communications Decade for Africa;
 - realize the sub-regional and regional internally located industrial development;
 - co-operate in the field of natural resource control, exploration, extraction and use for the development of our economies for the benefit of our peoples and to set up the appropriate institutions to achieve these purposes;
 - develop indigenous entrepreneurship, technical manpower and technological abilities to enable our peoples to assume greater responsibility for the achievement of our individual and collective development goals;
 - co-operate in the preservation, protection, and improvement of the natural environment;
 - ensure that our development policies reflect adequately our socio-cultural values to reinforce our cultural identity; and
 - take into account the dimension of the future in the elaboration of our development plans including studies and measures aimed at achieving a rapid socio-economic transformation of our States.
1. We hold firmly to the view that these commitments will lead to the creation, at the national, sub-regional and regional levels, of a dynamic and interdependent African economy and will thereby pave the way for the eventual establishment of an African Common Market leading to an African Economic Community.
2. Resolving to give special attention to the discussion of economic issues at each annual Session of our Assembly, we hereby call on the Secretary General, in collaboration with the Executive Secretary of the United Nations Economic Commission for Africa, to draw up annually specific programmes and measures for economic co-operation on sub-regional, regional and continental bases in Africa."
3. In order to consider concrete measures for the implementation of the Monrovia Declaration, we resolve to hold this Extraordinary Session in Lagos, Nigeria, to be devoted to the economic problems of our continent.
4. In assessing those problems, we are convinced that Africa's underdevelopment is not inevitable. Indeed, it is a paradox when one bears in mind the immense human and natural resources of the continent. In addition to its reservoir of human resources, our continent has 97 per cent of world reserves of chrome, 85 per cent of world reserves of platinum, 64 per cent of world reserves of

manganese, 25 per cent of world reserves of uranium and 13 per cent of world reserves of copper, without mentioning bauxite, nickel and lead; 20 per cent of world hydro-electrical potential, 20 per cent of traded oil in the world (if we exclude the United States and the USSR); 70 per cent of world cocoa production; one-third of world coffee production, 50 per cent of palm produce, to mention just a few.

5. Thus Africa, despite all efforts made by its leaders, remains the least developed continent. It has 20 of the 31 least developed countries of the world. Africa is susceptible to the disastrous effects of natural and endemic diseases of the cruelest type and is victim of settler exploitation arising from colonialism, racism and apartheid. Indeed, Africa was directly exploited during the colonial period and for the past two decades; this exploitation has been carried out through neo-colonialist external forces which seek to influence the economic policies and directions of African States.
6. The structural weaknesses of African agriculture in agricultural globality are well known: low production and productivity, and rudimentary agricultural techniques. This situation obviously gives rise to insufficient agricultural growth, especially of food production, in the face of the rapid population growth and has resulted in serious food shortages and malnutrition in the continent.
7. We view, with distress, that our continent remains the least developed of all the continents: the total Gross Domestic Production of our countries being only 2.7 per cent of the world's per capita income and averaging US\$ 166.
8. We view, with disquiet, the over-dependence of the economy of our continent of the export of basic raw materials and minerals. This phenomenon had made African economies highly susceptible to external developments and with detrimental effects on the interests of the continent.
9. Thus, in the 20 years from 1960 to 1980 the average annual rate of growth continent-wide has been no more than 4.8 per cent, a figure which hides divergent realities ranging from 7 per cent growth rate for the oil exporting countries down to 2.9 per cent for the least developed countries. Yet, if the world economic forecast for the next decade is to be believed, the over-all poor performance of the African economy over the past 20 years may even be a golden age compared with future growth rate.
10. This situation has led us at this Extraordinary Session devoted to the economic problems of Africa to an agonizing but frank reappraisal of the present situation and of the prospects of African economic conditions. In so doing, as we look back at the political constraints on the development of our continent caused by colonial and racist domination and exploitation, we also look forward with hope that Africa, which has survived the brutalities of imperialism, racism, and apartheid, has the resilience to pull itself out of the economic malaise in which it finds itself.
11. The independence of Zimbabwe, after years of armed struggle waged by the Zimbabwe people under the leadership of the Patriotic Front and with the active support of the Organization of African Unity, marks the final turn in the total political liberation of the continent. This event has ushered in renewed and desperate attempts by the Pretoria regime to arrest the tide of history and to perpetuate the *status quo* in Namibia and South Africa itself. South Africa's envisaged "constellation" of Southern States is part of this diabolic design - a scheme which would bring independent States under the same political, economic, and military domination by the apartheid regime as the Bantustans. We shall continue to pursue, with vigour, the liberation of the last remaining outposts of exploitation, racism, and apartheid.
12. The same determination that has virtually rid our continent of political domination is required for our economic liberation. Our success in exploiting our political unity should encourage us to exploit the strength inherent in our economic unity. We therefore resolve, in the context of our Organization, to unite our efforts in the economic field. To this end, certain basic guidelines must be borne in mind:
13. Africa's huge resources must be applied principally to meet the needs and purposes of its people;
 - Africa's almost total reliance on the export of raw materials must change. Rather, Africa's development and growth must be based on a combination of Africa's considerable natural resources,

her entrepreneurial, managerial, and technical resources, and her markets (restructured and expanded), to serve her people. Africa, therefore, must map out its own strategy for development and must vigorously pursue its implementation;

- Africa must cultivate the virtue of self-reliance. This is not to say that the continent should totally cut itself off from outside contributions. However, these outside contributions should only supplement our own effort: they should not be the mainstay of our development;
 - as a consequence of the need for increased self-reliance, Africa must mobilize her entire human and material resources for her development;
 - each of our States must pursue all-embracing economic, social, and cultural activities which will mobilize the strength of the country as a whole and ensure that both the efforts put into and the benefits derived from development are equitably shared;
 - efforts towards African economic integration must be pursued with renewed determination in order to create a continent-wide framework for the much-needed economic co-operation for development based on collective self-reliance.
14. On the basis of these guidelines, we, the Heads of' State and Government, meeting in Lagos at the 2nd Extraordinary Session devoted to Africa's economic problems, decided to adopt the following Plan of Action as well as the Final Act of Lagos. In so doing, we are conscious of the tremendous effort which will be required of us, individually and collectively, to attain the goals we have set for ourselves in these documents. We are confident that we have the determination to overcome the obstacles that may lie in our path and that our Organization and its General Secretariat will be able to enlist the active support of the international community as well as of the relevant international organizations.

CHAPTER I

Food and agriculture

Over the past two decades, and at a time the African continent was facing rapid growth in population and urbanization, the food and agriculture situation in Africa has undergone a drastic deterioration; the food production and consumption per person has fallen below nutritional requirements.

The shortfall in food production, coupled with high levels of post-harvest losses and periodic and severe shortages, has led to rapidly increasing dependence on food imports, resulting in a drain on foreign exchange resources and creating serious major constraints in financing the development of African economies. At the root of the food problem in Africa is the fact that Member States have not usually accorded the necessary priority to agriculture, both in the allocation of resources and in giving sufficient attention to policies for the promotion of productivity and improvement of rural life.

For an improvement in the food situation in Africa, the fundamental requisite is a strong political will to channel a greatly increased volume of resources to agriculture, to carry through essential reorientations of social systems, to apply policies that will induce reorientations of social systems, to apply policies that will induce small farmers and members of agricultural co-operatives to achieve higher levels of productivity, and to set up effective machineries for the formulation of relevant programmes and for their execution. The development of agriculture, however, should not be considered in isolation, but integrated within the economic and social development processes. Emphasis should also be put on the latter aspect, particularly on the problem of improving the conditions of rural life.

For an effective agricultural revolution in Africa, it is essential to involve the youth and to arrest the rural-to-urban drift. Policies must emphasize consistently the need not only to improve the living

conditions on the farms but also to increase farm real incomes as a means of making agriculture more attractive and remunerative. New dimensions of inter-country co-operation are called for, but the primary responsibility for a breakthrough in food and agriculture lies with individual Member States operating in their respective national contexts.

Over the period 1980 to 1985 the objective should be to bring about immediate improvement in the food situation and to lay the foundations for the achievement of self-sufficiency in cereals and in livestock and fish products. Priority action should be directed to securing a substantial reduction in food wastage, attaining a markedly higher degree of food security, and bringing about a large and sustained increase in the production of food, especially of tropical cereals, with due emphasis on the diversification of agricultural production. Urgent measures are recommended in each of these areas.

Food losses

The objective should be to make significant progress towards the achievement of a 50 per cent reduction in post-harvest food losses.

Recommended actions include

- careful assessment of the extent of food losses;
- formulation of national policies for food loss reduction;
- mass-media campaigns to educate the public on methods of reducing food waste;
- construction of appropriate storage processing and other facilities;
- establishment of central technical units;
- promotion (through research, infrastructural development and incentives to farmers and fishermen) of improved methods of drying, preservation, storage, pest control and processing;
- improvement of livestock routes and holding grounds;
- training of technical staff for food loss control work, preferably through sub-regional/ regional institutions, seminars, and workshops.

Food security

Most Member States should aim, as a first step, at setting up national strategic food reserves of the order of 10 per cent of the total food production.

Urgent steps should be taken by every Member State to adopt a coherent national food security policy. National policies must be translated into concrete actions such as early construction of storage facilities, creation of grain reserves, improvement of grain stock management and better forecasting and early warning systems.

The need for collective self-reliance will require sub-regional food security arrangements similar to the one initiated in the Sahelian zone. In addition, it is recommended that Member States should examine the feasibility of setting up an African Food Relief Support with a view to assisting member countries in times of food emergency.

Food production

Food development must be promoted in an integrated manner and should take into consideration the problem of transportation and distribution of farm products at the level of consumers. Food self-sufficiency should take into consideration the nutritional values of foodstuffs and should solve simultaneously the problems of undernutrition and malnutrition.

The set-up of agricultural production should be based on adequate and realistic agrarian reform programmes consistent with political and social conditions prevailing in the respective countries. An

improved organization of agricultural production must be given priority so as to increase agricultural production and productivity.

The OAU, in co-operation with the ECA, FAO, IFAD, WFP and other relevant international organizations, should carry out studies on the establishment of regional food trade and distribution organizations and make recommendations to the next economic summit.

Food crops

All Member States should adopt necessary measures for the implementation of the regional food plan for Africa adopted by African Ministers of Agriculture. The main immediate objective should be to bring about quantitative and qualitative improvements in food-crop production (cereals, fruits, tubers, oil seeds, vegetables, etc.), with a view to replacing a sizeable proportion of the presently imported products. Besides, the production of these food products should be encouraged in countries which have the potential for these crops. Special attention should be given to the cultivation of cereals such as millet, maize and sorghum, to replace the increasing demand for wheat and barley.

Areas in which urgent action is recommended include

- promotion of better agricultural practices, particularly the intensive use of improved input packages and plant protection measures;
- modification of techno-economic structures of production, to provide small farmers and members of agricultural co-operatives with the necessary incentives to increase production;
- better utilization of water for irrigated cereals on on-going irrigation schemes, and initiation of new schemes;
- soil and water conservation;
- flood control and drainage;
- intensification of the use of improved hand tools and draught animals, and promotion of mechanized farming, where justified;
- physical infrastructural development, including the building of small bridges, dams, access and feeder roads, and the improvement of education, health, and other social facilities much of which at this stage should, as far as possible, be undertaken through voluntary self-help participation.

Livestock

The main areas in which increased support is recommended in the immediate future are

- training: establishment of sub-regional training centers and workshops on livestock production, slaughterhouse practices, and poultry and small stock development;
- animal health: establishment of specialized trypanosomiasis control units, improving productivity of trypan tolerant breeds, and integrated development of areas freed from tsetse fly;
- establishment of vaccine production facilities and an effective regional quarantine system; establishment of sub-regional research centers in tick-borne disease; and improvement of laboratory services and disease surveillance systems;
- animal breeding;
- control and eradication of foot-and-mouth disease;
- development of animal feed; and
- infrastructural development.

Fisheries

The target should be to increase annual fish production from African waters by 1 million tons by 1985, which should permit a rise of 1 kilogram in the level of average annual fish consumption per person between 1980 and 1985.

The measures recommended are

- development of industrialized offshore fleets (where justified by resource availability) and increased productivity of artisanal fisheries;
- expansion of aquiculture;
- improvement of communications between landing points and markets, especially of inexpensive feeder roads to fishery communities;
- improvement of traditional processing methods;
- investment in shore-based infrastructure, particularly in storage facilities;
- expansion of inter-regional trade in fishery products;
- encouragement of sub-regional co-operation in the assessment of fish potential, especially where common stocks are concerned as well as in international lakes and river basins;
- formulation of joint schemes for the rational exploitation and management of sub-regional fish stocks;
- review and, as necessary, renegotiation of existing fishing agreements.

Incomes and price policy

It is strongly recommended that Member States formulate and apply effective and coherent policies to ensure that prices of farm inputs and farm produce provide an adequate incentive for increasing food production, particularly by small farmers, while safeguarding the interests of the poorer consumers at the same time. Similarly, the individual activities entailed in the recommended programme of action should be designed and implemented with a view to ensuring beneficial impact of income distribution on the rural poor. In particular, efforts should be made to reduce the widening gaps in income between rural and urban populations as well as those between the rich and the poor in rural areas.

Forest production

The objective should be to integrate forestry more closely with agriculture in order to ensure adequate supplies of fuelwood and to increase the contribution of forest resources to industrialization. The most urgent actions that need to be taken for the development of forest production in Africa are:

- organization of inventories of national forest resources;
- intensification of programmes for integrating woodlots and trees in land use and agricultural practices at village and farm levels;
- control of soil erosion;
- expansion of areas under forestry regeneration programmes by 10 per cent per annum up to 1985, with special attention paid to community woodlots and agro-forestry;
- expansion of forest reserves by 10 per cent over the next five years;
- progressive reduction of exports of unprocessed logs from their present level;
- preparation and launching of a regional plan for the development and harmonization of forest industries;
- strengthening of existing regional bodies dealing with forestry;
- increased training at national and regional levels of forest professionals, technicians, and guards;
- expansion and inter-country co-ordination of applied research programmes.

Research

Science and technology have a pivotal role in the development of agriculture, especially in connection with agronomic research, training, and extension. Within the context of agronomic research, special emphasis should be placed on improvement of selected seeds, fertilizers, pesticides, and other chemicals suitable for African conditions. Agricultural research is crucial to the transformation of agriculture in Africa. National research systems and inter-country co-operative research programmes

should be strengthened. Agricultural research work should be geared to supporting the objective of food self-sufficiency, and liaison between research and extension should be made more effective. It is therefore recommended that:

- agricultural research should put more emphasis on the development and spread of new technologies than has occurred in the past;
- biological innovation such as plant and livestock breeding, and control of agricultural pests could substantially increase agricultural production and output in Africa; they provide more productive plant and animal species and other husbandry techniques and should be emphasized in agricultural research programmes;
- research has, in the past, addressed itself to a narrow spectrum of food crops and has neglected several food crops indigenous to Africa; such crops are grown by a large number of the rural population and constitute a major proportion of the diet-this situation should be rectified;
- research should also be intensified in the area of root crops, tubers and soya beans, and in improvement of production and nutritional values of all food crops;
- special attention should be given to problems affecting food production in semi-arid areas in order to stabilize production in this fragile eco-system. Research should develop adapted crop varieties and production systems that ensure optimal utilization of the limited soil and water resources.

Extension service

It is crucial that research findings be made available with minimum delay to the farming community. It is therefore recommended that:

- a closer link be established between research and extension services;
- the extension service should lay more emphasis on the spread of existing technologies;
- the extension service should be strengthened and given additional resources in order to reach the bulk of the rural population rather than concentrate on a relatively small group of progressive farmers;
- training efforts should concentrate on extension workers who should, in turn, focus their work on rural youth and women; extension Institutions, especially farmer training centers, need to be strengthened.

Agricultural services

Rational exploitation and development of natural resources, especially forestry and wildlife, should be promoted as a means of improving food supply in the region within the context of integrated rural development programmes.

Strong institutions should be developed for rural development, planning and monitoring; data collection; provision of agricultural credit and inputs; efficient transport, marketing, agro-industrial development; and storage and processing.

Agricultural mechanization has a priority role in increasing agricultural production and in modernizing farms. However, this problem must be studied very carefully and should be related to industrial development so that it will not further increase the dependency of Member States on the developed world. In the process of agricultural mechanization, special emphasis should be put on animal traction in countries that have not yet reached the appropriate level of motorization.

Resources

1. Total investments required over the 1980-85 period for the implementation of the proposed programmes amount to about US\$21,400 million, at 1979 prices. In addition, expenditures for inputs would rise by about US\$560 million over the same period. This level of expenditure will form only part of the total expenditure requirements of the agricultural sector for the 1980s, as contained in the

document *Regional food plan for Africa* (AFPLAN), approved by the Ministers of Agriculture in Arusha, Tanzania, in 1978, and endorsed by the Heads of State and Government in the Monrovia Declaration in 1979. Additional resources will be necessary to cover the latter half of the decade which is not covered in this Plan of Action for only 1980-85.

2. All Member States reaffirm their support for IFAD and WFP. They appeal to the international community to place more resources at the disposal of these organizations, which should accord top priority to requests coming from Member States.
3. It should be desirable to aim at financing at least 50 per cent of the investment requirements with domestic resources.

Implementation and monitoring

1. As an initial step, Member States should determine the manner in which the foregoing recommendations should be applied in the specific contexts of their respective countries. In carrying out this task, Member States may avail themselves of the services of the Inter-Agency Strategy Review Missions which should be set up for this purpose.
2. High priority should be given to building up national capabilities for identification, preparation, execution, monitoring and evaluation of agricultural development projects. FAO, in co-operation with ECA and other relevant agencies, should expand its training programmes in this field. Regional and sub-regional seminars/workshops should also be organized.
3. Member States should expand their economic and technical co-operation in food and agriculture through increased trade, exchange of manpower technology, and joint development programmes at the sub-regional and regional levels.
4. Member States should set up specific yearly goals for food and agriculture and establish effective national and regional machineries to monitor progress towards them. At the regional level monitoring should be an inter-agency exercise involving OAU, ECA, FAO, W17C and UNDP.
5. In the context of the new strategy and targets in food and agriculture, it will be necessary to reappraise the on-going projects that are financed from external sources, with a view to ensuring that they too contribute to the realizations of these new objectives.

CHAPTER II

Industry

I. Introduction

Twenty years after the attainment of political independence by a majority of African countries, Africa is entering the 1980-90 decade in a state of underdevelopment which makes the continent the least developed region in the world, an underdevelopment which has resulted from several centuries of colonial domination.

Aware of their handicap and determined to follow through their action which is aimed at lifting them out of their underdevelopment, Member States undertake to promote and accelerate their economic and social development individually and collectively.

Member States accord, in their development plans, a major role to industrialization, in view of its impact on meeting the basic needs of the population, ensuring the integration of the economy and the modernization of society. To this end, and in order for Africa to achieve a greater share of world industrial

production as well as to attain an adequate degree of collective self-reliance rapidly, Member States proclaim the years 1980 to 1990: *Industrial Development Decade in Africa*.

In order to achieve the industrial development objectives in the short-, medium- and long-term Member States decide to take all measures at the national, sub-regional and regional levels and in the areas of human resources, natural resources, financing and promotion institutions in order to lay the foundation for the total and complete mobilization of all energies in ensuring the success of the gigantic task undertaken.

Member States are determined to act in concert with the rest of the international community whose co-operation in all forms is indispensable to their own action.

In this connection Member States consider that they are owed a massive and appropriate contribution by the developed countries to the development of Africa, the successful achievement of which they see as the very condition for the continued development of the advanced countries and the preservation of world peace.

The industrialization of Africa in general, and of each individual Member State in particular, constitutes a fundamental option in the total range of activities aimed at freeing Africa from underdevelopment and economic dependence. The integrated economic and social development of Africa demands the creation, in each Member State, of an industrial base designed to meet the interests of that country and strengthened by complementary activities at the sub-regional and regional levels. Industrialization of this kind will contribute, inter alia, to:

- the satisfaction of basic needs of the population;
- the exploitation of local natural resources;
- the creation of jobs;
- the establishment of a base for developing other economic sectors;
- the creation of the basis for assimilating and promoting technological progress;
- the modernization of society.

By harmonizing development activities through ensuring that optimum use is made of the limited resources of the various Member States, industrial co-operation creates conditions conducive to regional and sub-regional collective self-reliance, while at the same time provides the framework for strengthening the effort of each country.

Conscious of this situation and of the need to strive to translate development targets, the Heads of State and Government reiterate their support for the resolution adopted at the Third General Conference of UNIDO recommending that the United Nations General Assembly should proclaim the 1990s as the African Industrial Development Decade. They are fully aware that such a proclamation will confer certain obligations on those who work for it and thus undertake to make an appropriate contribution to the efforts required to ensure its success. They are determined, furthermore, to take all necessary steps to ensure that this decade is fully successful.

Member States note, with great disappointment, the negative results of the Third General Conference of UNIDO. In the first place, they appreciate the true significance of this failure, namely the importance of the developed countries to induce the developing countries to abandon their legitimate demand for a just and equitable new international economic order. Attention should also be drawn to the negative attitude of the developed countries towards efforts being made by Member States for accelerated industrialization in the region. This failure, inter alia, underlines the necessity for individual and collective self-reliance.

In addition, they draw several conclusions, including

- the need to promote, side by side with the other developing countries, recognition of their right to development;

- the need for fruitful co-operation between Member States on the one hand, and between Member States and the other developing regions, on the other hand;
- the urgent need for each country to adopt a national development policy based, above all, on using its own resources;
- the urgent need to implement a plan for the collective industrialization of Africa based on the concept of self-reliance.

II. Long, medium, and short-term industrial development objectives

In application of that section of the Monrovia Declaration relating to industrial development in Africa; bearing in mind the targets set at the Second General Conference of UNIDO at Lima and the relevant resolution of the Third General Conference of UNIDO at New Delhi on the African Industrial Development Decade; and in accordance with the New Delhi Declaration and Plan of Action submitted by the Group of 77, the Heads of State and Government adopt the following industrial development strategy for the long, medium and short term up to the years 2000, 1990 and 1985, respectively. In doing so, they underline the priority accorded to the creation of the sound industrial base and related aspects embodied in the Declaration of African Heads of State and Government adopted at Monrovia.

1. Long term objectives up to the year 2000

In implementing the long-term development strategy up to the year 2000 Africa's target shall be to achieve 2 per cent of world industrial production, in accordance with the Lima target.

- The attainment of this target will require the creation of an industrial structure at national levels within the framework of an integrated economy.
- Stress should be put on the need to establish links between industry and other sectors as well as between various industrial sub-sectors, so as to promote interdependence among them and achieve harmonized industrialization and over-all economic development.
- In formulating their industrial development strategy African countries should bear in mind the need to select suitable technology which will also be socially suitable, compatible with resource endowment, and increasingly to reduce Africa's present overdependence on the developed countries for technology.

2. Medium-term objectives up to the year 1990

During the decade 1980 to 1990 Member States intend to achieve 1.4 per cent of world industrial production and at the same time to do all within their power to attain self-sufficiency in the following sectors: food, building materials, clothing, and energy. To this end, they have set themselves the following targets:

- creation of a solid base for self-sustained industrialization at the national and sub-regional levels;
- development of human resources to ensure that they are fully mobilized in the industrial development process;
- production in sufficient quantities of agricultural inputs such as fertilizers, pesticides, agricultural tools, and machines;
- production in sufficient quantities of building materials for the construction of decent urban and rural housing for the continent's growing population and in general to meet the economy's requirements in terms of building materials;
- development of the intermediate and capital goods industries, particularly those intended for other industries and infrastructure building;

- on-the-spot processing and up-grading of an increasingly large portion of the continent's raw materials;
- satisfaction of industry's energy needs by developing the different forms of energy available in the continent;
- satisfaction of textile requirements.

3. Short- term objectives up to the year 1985

In pursuing their medium and long-term industrial development objectives, Member States intend to achieve the following targets in the short term:

- to achieve at least 1 per cent of world industrial production;
- to lay the foundation for phased development of basic industries which are essential for self-reliance, since they produce inputs for other sectors.

It is, therefore, important to conduct studies that will establish those basic industries which can be developed in the short term on a national or sub-regional basis, and those which must be developed in the long run and require sub-regional or regional co-operation. The modalities for the creation of these basic industries must be studied and established:

- food and agro-industries;
- building industries;
- metallurgical industries;
- mechanical industries;
- electrical and electronic industries;
- chemical industries;
- forest industries;
- energy industry.

III. Requirements for the achievement of industrial development

If the whole set of long, medium, and short-term industrial development objectives set by Member States are to be achieved a variety of requirements will have to be met at national, sub-regional, regional, and international levels.

1. At the national level

Industrial development in each Member State will depend on:

- designing a national industrialization policy which lays down priorities, targets and the human, financial and institutional resources required;
- establishing training facilities for technical personnel which will meet the requirements at all skill levels;
- training of nationals both at supervisory and intermediate industrial management levels should be given high priority so as to lessen Africa's dependence on foreign managerial competence;
- launching of a prospecting programme with a view to making an inventory of all the resources in a country and establishing how they should be exploited;
- establishing financial institutions which offer such terms and conditions as to promote accelerated industrial development and take account of the special features of emerging sectors;
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- making every effort to ensure that the industrial surplus funds realized from industrial activities in Africa are reinvested in the region;

- creating a machinery to co-ordinate and promote industrial co-operation between the country concerned and other countries in the sub-region and the region;
- creating a network of small and medium-scale industries as well as actively promoting and encouraging the informal sector;
- taking effective measures and providing incentives for the development of small and medium-scale industries by taking into account the need for local resource uses, employment and technological diffusion;
- monitoring the activities of transnational corporations;
- putting strong emphasis on the utilization of local raw materials as inputs to industry so as to lessen the present excessive dependence on imported industrial inputs;
- careful selection of product lines, emphasizing those that will contribute towards satisfying the basic needs of their people and for development;
- formulating and implementing policy measures to stem rural-urban drift through decentralization of resource based small and medium-scale industries to rural areas, and the development of rural infrastructures;
- developing, encouraging, and supporting indigenous entrepreneurs to participate effectively in industrial production, with a view to gradual control of the capital ownership in the sector by nationals;
- the utilization of research, determination of the role of private, semi-public as well as public enterprises as instruments for the implementation of the plan.

2. At the sub-regional and regional levels

Member States are convinced of the fundamental role of intra-African industrial co-operation, in all its various forms, as an instrument for self-reliance and acceleration of industrial development to achieve the 2 per cent Lima target for Africa, considering, in particular, the discouraging attitude of developed countries, and of the present low progress in the intra-African co-operation. Member States have therefore decided to give concrete expression to their will to co-operate by adopting the following measures:

- preparation of sub-regional and regional plans for the creation of major industrial complexes whose cost and production capacity would exceed national financial and absorptive capacities;
- creation of multinational regional or sub-regional institutions to make an inventory of and exploit shared natural resources. The modalities for establishing these institutions should be determined through consultations among the countries;
- giving high priority to the establishment of multi-national industries in Africa, especially in such basic areas as metallurgy, foundry, chemicals, etc., with high investment costs, expand bilateral industrial co-operation among Member States through such means as joint ventures;
- strengthening of existing institutions such as:
 - a. African Regional Centre for Technology;
 - b. the African Regional Centre for Engineering Design and Manufacturing;
 - c. the African Industrial Development Fund;
- establishment of machinery to monitor industrialization at the sub-regional level;
- creation of the African Regional Centre for Consultancy and Industrial Management Services;
- promoting trade in manufactures among Member States; adopt measures to encourage the consumption of national and regional industrial products;
- strengthening and, where necessary, creating industrial project financing institutions;
- reforming credit policies adopted by financial institutions operating in Member States, with a view to increasing the volume of credit available to national public and private industrial enterprises;

- creation of industrial co-operation areas without customs and trade barriers;
- adoption of measures to ensure harmonization of tax systems at the sub-regional and regional levels in order to facilitate industrial co-operation among African countries;
- creation of multinational institutions to promote financial flows and the acquisition of technology for Africa;
- undertake measures at national, sub-regional and regional levels to facilitate fuller utilization of excess industrial productive capacity in Africa;
- initiation of research work at the sub-regional and regional levels in new sources of energy;
- optimizing the utilization of existing training infrastructures before embarking upon the creation of new institutions-existing training centers should be strengthened and effectively used by nationals of the various Member States;
- exchange of information among Member States on technical and financial specifications and costs related to contracts on implementation of industrial projects with developed countries as a means of reducing excess costs in foreign exchange resulting from the weaknesses in negotiation capacity of developing countries due to lack of information among them relating to these contracts.

3. At the international level

Member States feel that it is essential to co-operate with other regions of the world in order to attain their industrial development objectives. They insist on the fact, however, that such co-operation should be mutually advantageous and should be based on respect for the fundamental interests of the continent and in particular sovereignty of every country over its natural resources.

In their relations with other developing regions Member States will in particular strive to:

- promote the exchange of industrial technology;
- implement joint technical training programmes;
- conclude trade, monetary and payments agreements with a view to promoting trade in finished and semi-finished products with such regions;
- obtain the additional resources required to finance their industrial development from financial institutions which, like BADEA, are controlled by developing countries and in particular the oil exporting countries;
- strengthen their bargaining power by working together with other developing regions and harmonizing with them the positions to be taken vis-à-vis the developed countries.

For member state's co-operation with the developed countries should lead, in particular to

- a massive transfer of resources to finance industrial projects which are accurately costed to take account of all types of additional expenditure borne by the industries of Member States;
- acquisition of technology at the lowest cost, considering the social cost and resource endowment factors;
- inventions, patents, and technical know-how should be made available freely by industrialized countries to the countries of the Group of 77 as a definitive contribution of developed countries to the industrial development of developing countries;
- monitoring the activities of transnational corporations so as to ensure that their activities are compatible with the interest of Member States;
- the adoption of an international code of conduct on the transfer of technology as well as a code of conduct for transnational corporations designed to safeguard the interests of Member States;
- industrial redeployment at the world-wide level which ensures that Member States achieve the Lima targets;
- free access to developed countries' markets for the industrial products of Member States through the removal of protectionist tariff and non-tariff barriers.

Concerning the role of international organizations whose task it is to promote industrial development and, in particular, UNIDO, Member States would like them to concentrate, as a matter of priority, on the least developed countries, and would want to see these organizations receive more material and financial resources so that they can play an effective role in promoting the industrialization of Africa. In particular, the United Nations Capital. Development, Fund which at present does not fund manufacturing projects in the public sector, should be urged to amend its policy to enable it to do so, thereby significantly assisting small-scale manufacturing in the least developed countries through the provision of grants and long-term "soft" loans.

Furthermore, they call for measures to be taken to put the system of consultations within UNIDO on a legal and permanent basis and to ensure that decisions reached are binding. These consultations should be undertaken at the sub-regional, regional and international levels.

CHAPTER III

Natural resources

The major problems confronting Africa in the field of natural resource development include: lack of information on natural resource endowment of large and unexplored areas and the activities of transnational corporations dealing with natural resource assessments; lack of adequate capacity (capital, skills and technology) for the development of these resources; a considerable dependence on foreign transnational corporations for the development of a narrow range of African natural resources selected by these corporations to supply new material needs of the developed countries; the inadequate share in the value added generated by the exploitation of natural resources of Member States due to imperfect pricing and marketing practices; non-integration of the raw materials exporting industries into the national economics of the Member States thus impeding backward and forward linkages; extremely low level of development and utilization of those natural resources of no interest to foreign transnational corporations; and disappointingly low general contribution of natural resources endowment to socio-economic development. Because of these factors Member States are unable to exercise meaningful and permanent sovereignty over their natural resources.

During the 1980s the strategy for the developing countries of Africa in their natural resources, development should aim at:

- undertaking the assessment of their natural resources' endowments and the use of the information on natural resource distribution and availability for national and African multinational socio-economic development projects intended to produce goods and services to meet the needs of Member States;
- integrating natural resource development within national and African multinational socio-economic development programmes and projects, so as to encourage complementarity of different natural resources available in various Member States in the production process and to promote backward and forward linkages that the development of the natural resources can generate within the African economics;
- undertaking comprehensive manpower, technology, and capital needs surveys for natural resource development activities with a view to enabling the countries to pool their resources for the implementation of national and African multinational natural resource development programmes and projects;

- strengthening existing national and African multinational institutions dealing with natural resource development and conservation activities at all levels including training, research, production, processing, fabrication, marketing, finance, etc., and the establishment of new ones;
- harmonizing national natural resource development policies with a view to creating a favorable environment for co-operative efforts by the Member States in the development of their natural resources to meet socio-economic needs of their peoples; and
- working closely with the international community and other non-African agencies involved in natural resource development in the region, so that external resources are directed principally to natural resource development projects which promote and sustain co-operative arrangements among Member States to enable the region to obtain the fullest possible development benefits flowing from regional linkages.

General proposals and recommendations

In recognition of the significance of natural resources in providing a sound base for national socio-economic development, Member States should take early steps to acquire a thorough knowledge of their natural resource endowments. These include the establishment of a manpower development and institution building programmes for the conduct of field studies and preparation of inventories of natural resources.

Member States whose economy essentially depends on production of raw materials should endeavour to co-ordinate and harmonize their positions in all international negotiations on raw materials so as to protect their interests.

In particular measures should be taken by each Member State to ensure that all results and basic data, especially foreign transnational companies during their mineral prospection activities in the country, are handed over to the government.

To ensure the best possible storage and utilization of these data, a documentation center (data bank) should be established at the national level.

To enable African governments to exercise sovereignty over their natural resources they should take all necessary measures through the development of relevant human and institutional infrastructure, to establish indigenous technological capabilities in the exploration, processing, and exploitation of their natural resources.

The constant aim of African governments should be the rational development and utilization of their natural resources, employing technologies that are appropriate to their local conditions, and paying due regard to such aspects as conservation of natural resources.

At the sub-regional and regional levels measures or policies should be adopted to ensure effective intra-African co-operation among Member States, namely:

- harmonization of national development programmes for the use of mineral, energy and water resources;
- establishment of joint facilities for applied research, specialized services and training;
- participation in multinational projects and enterprises for the exploitation, production, and processing of usable natural resources.

Mineral resources

The main development objectives of the strategy for development of mineral resources during the 1980s would be:

- Improved knowledge of African mineral resources through possession of an adequate inventory of existing and potential resources, better forecasting of consumption patterns and research towards

rational use of known reserves. Particular attention should be paid to those mineral raw materials with strategic importance for building up the basic industries making up intermediate products such as: iron and steel, aluminum, base metals, petrochemical products and fertilizers, cement, etc. In the economic evaluation of the resources account should be taken of the structural changes which have occurred in the world due to the effect of the energy crises, the new technologies as well as the increased needs for local consumption of some raw materials.

- Creation, at the national and regional levels, of proper scientific, technical and industrial environment necessary for the development and expansion of the mineral extractive industries. To this end, the first effort should be directed towards the strengthening of the capabilities of the national geological surveys and mining departments. In promoting the new methods and techniques of research the national capabilities have to be complemented by the multi-national African centers for development of mineral resources.
- Correlation of national programmes of geological research and mineral surveys at the sub-regional and regional levels in view of increased efficiency and establishment of joint operational activities. Of particular importance will be co-operation among the Member States for exploitation of the resources of the seabed.
- Training in all aspects of mineral resources development of high level specialized personnel as well as of medium level technicians from Member States in order to alleviate the shortage of qualified manpower and to reduce the dependence on overseas expertise and specialized services.
- Development of a system of transfer of know-how, and exchange of scientific, technical and economic data in geology, mining activities and mineral economics among Member States as well as with countries from other developing regions.

The objectives outlined above should be achieved through the following activities

- The completion of preliminary studies related to the appraisal of known African mineral resources and their present development with proposals as to how best they could be developed to meet the needs of the region by mid-1981. The Regional Conference on the Development and Utilization of Mineral Resources in Africa, to be convened by ECA in Kampala, Uganda, from 6 to 15 October 1980, is one of the steps intended to achieve this objective.
- The completion of preliminary studies on manpower, technology and capital needs in mineral resource assessment activities in the Member States for the specific programmes agreed upon at the Regional Conference mentioned above, including suggestions on how existing internal resources could be mobilized to effect their implementation by the end of 1981.
- The active participation of Member States, through political and material support, in the operation of institutions of African multinational mineral resource development. To that end, those Member States of the eastern and southern sub-regions which have not yet joined the sub-regional mineral resources center based in Dodoma (United Republic of Tanzania) should do so by the end of 1980. A similar center for the central sub-region should be established in 1980-81 and should become fully operational by 1984. The establishment of similar centers for the western and northern sub-regions should also be considered after 1982. These multinational institutions for applied research are also likely to strengthen national institutions involved in similar activities.
- Regular or annual meetings of experts of geological surveys of Member States to review past performance of mineral resource research activities in the region, with a view to taking appropriate national measures for improvement in the years ahead. Such meetings should commence in 1980 with the Regional Conference already mentioned above.
- Establishment of joint coordinating offshore prospecting committees for the rational exploration and devaluation of the sea-bed resources.

- The preparation between 1980 and 1983, at the country level and on a regional basis, of the inventory of mineral resources of Africa using a standardized methodology for classification of reserves and evaluation of mineral deposits.
- A joint regional programme for the preservation and proper use of geological documentation, reports and maps and mineral collections.

Water resources

The following recommendations are proposed in line with the Mar del Plata Action Plan of the United Nations Water Conference, of March 1977 and the proposals made on the follow-up and implementation of the Action Plan for integration, development, and management of water resources at the African Regional Meeting in October 1978.

Institutional strengthening

It is suggested that this problem be approached at the following three levels:

- at the national level National Water Committees should be established (by 1980) in countries which have not yet done so;
- at the sub-regional level existing sub-regional organizations such as river and lake basin commissions should be strengthened. A review of the requirements for strengthening of these should be carried out and completed in 1980. By the end of 1982, these sub-regional organizations should be equipped with additional resources in staffing and funding;
- at the regional level, an Inter-governmental Committee on Water for the African Region, as approved by the ECA Conference of Ministers at their Fifth Meeting in Rabat in 1979, should be established.

Formulation of national water plans

Member States should take action to formulate master plans in the sectors of water supply and agriculture and integrate them into a composite national water plan at the national level. This should be completed by 1983.

The plan concerning water supply should represent national aspirations for the International Drinking Water Supply and Sanitation Decade and the plan for agricultural water use should be integrated with the regional food self-sufficiency plan adopted as a part of the Regional Development Strategy.

Project identification, preparation, and implementation

Member States should identify and prepare bankable water supply and irrigation project reports for implementation with external financial and technical assistance as well as with domestic resources. This should be taken up without waiting for the formulation of national water plans.

Sub-regional and regional co-operation

Joint river-lake basins organizations should be established to promote inter-governmental co-operation in the development of shared water resources. Member States requiring such institutional arrangements should immediately start negotiations among themselves and try to complete them so that these new joint organizations can be brought into existence by 1983. Through these organizations greater co-operation amongst Member States should be encouraged so that less advanced Member States may benefit from those more advanced countries in the region, in the context of TCDC.

Cartography and remote sensing

The strategy for development in cartography and remote sensing is geared to providing the means to achieve self-sufficiency in qualified personnel in all branches of cartography, to bringing to light the present position of Africa's attainment in mapping and to providing the means to establish and

strengthen national surveying and mapping institutions in order that the Member States may be in a position to undertake surveying and mapping projects which are essential for development.

Actions recommended

To recognize the importance of their national surveying and mapping institutions and to rate them high among their national priorities and to provide sufficient budget for them to take steps to establish them where none exist.

To actively participate and support regional training and services centers in cartography in order to reduce costs of producing badly needed manpower and to provide lacking services.

To share equipment and services between those with capabilities and those without, especially the least developed nations.

Considering that remote sensing is an important tool in the inventory, planning and exploitation of natural resources; taking into account the efforts already made towards the establishment of the African Remote Sensing Council and the Regional Training and User Assistance Centers, it is highly recommended that Member States participate fully in the African Remote Sensing Programme and provide both political and material support for the success of the programme.

CHAPTER IV

Human resource development and utilization

The summit takes note of the situation in the development and utilization of human resources in Africa, the principal aspects of which are the high rate of population growth, the growing level of unemployment and underemployment, the shortage of different types and levels of trained manpower, the high level of adult illiteracy, the deficiencies in the educational system and the lack of coordinated policies and programmes of manpower training and the funding of training at the national level. It also notes the various recommendations of the regional training development conference that was held in Addis Ababa in December 1979, aimed at providing specific guidelines for achieving development-oriented educational and training systems.

Recognizing the need to achieve an increasing measure of self-reliance in the economic and other spheres, the summit stresses the importance of trained manpower as input to activities in the various production sectors and support services as well as in the education and training sector as producer of skills and know-how for its own needs and for other sectors.

The need for increasing employment and income as a way of achieving better living standards for the bulk of the population, particularly for the rural inhabitants, is stressed. To this end, it is necessary to give adequate attention to the development of indigenous technologies and methods of training that will benefit those in the production sectors at all levels, particularly in the informal sector.

Since Africa's greatest asset is its human resources, full mobilization and effective utilization of the labour force (men, women and youth, both trained and untrained) for national development and social progress should be a major instrument of development.

The importance of scientific and technical skills and know-how for modern development cannot be overemphasized. It is in this area that Member States are overdependent on imported technical and scientific manpower. It is therefore very cardinal, and in accordance with the principle of self-reliance, that Member States should give special priority to the development of scientific and technical manpower at all levels, including the training of science and technical teachers and instructors.

A primary objective of socio-economic development is the improvement of life for the entire population of a nation. The attainment of this objective requires full participation of all segments of the population in gainful and productive employment and provision of all essential services for enrichment of life of the community. It also requires effective programmes of social welfare, community development, social security and mobilization of the masses for the development of public works and community services.

Regarding the immensity of the task of training to be accomplished, lack of training facilities in some fields and scarcity of financial resources, the summit urges meaningful co-operation among Member States in developing and utilizing specialized regional, sub-regional and multinational training and research institutions for training nationals in specialized skill areas by using, wherever possible, existing national institutions as a base. While co-operation and collective self-reliance should be the guiding principles in human resource development, the summit stresses that the principal responsibility for manpower training and employment promotion should be seen as resting squarely at the national level.

The foregoing highlights of the African situation draw attention to serious manpower and employment constraints in major sectors of development. The situation calls for action, determination, and sustained efforts commensurate with the challenge of manpower development that faces Member States, if they are to achieve self-sustained, internally self-generating socio-economic development. This challenge calls for hard options and difficult choices. There is need to re-align development priorities in order to emphasize the development of human resources not only as the object of development, but also as the custodian and mentor of socio-economic development; as services of all the development as well as of the terminal products and services of all the development efforts. The human resources development sector in Africa requires positive action if it is to play its proper role in ensuring the continent's survival and progress.

To ensure that Member States achieve a good measure of self-reliance in trained manpower and technical know-how; that the skill input into production and services activities in the various sectors are assured and available as, and when, needed, and that Member States have adequate policy and programme guidelines in this important sector, the summit adopts the following programme of action:

At the national level

The translation of public pronouncements at international meetings into national action programmes through the integration of manpower planning and programming functions, personnel development, placement, and utilization services into a Ministry of Manpower Development charged with the responsibility of:

- undertaking realistic, manpower assessment, projections, planning and programming and continuous monitoring of its development and proper utilization; and
- developing a career capability for coordinating and planning manpower development effort and monitoring manpower placement and utilization on a continuous basis.

Establishing and operating definitive and comprehensive policy guidelines for national training development and legislative acts that not only legitimize national commitments to human resource development but also establish and delineate the coordinating authority and functions of the following:

Operational training administrative guidance and coordinating machinery with a proviso for its manning by:

- a profession-oriented Training/Staff Development Officer cadre deployed at the center and in all centers of socio-economic activity, with established career and definitive scheme of service, and one that derives its satisfaction from its own inner standards of excellence and commitment to the development of its field of practice-training development, and supported by
- sectoral/ministerial advisory committees in sectoral centers of socio-economic activity or service-rendering agencies.

Maintaining a centrally administered *Training Fund* that ensures steady availability of funds to operate the training function and contributed to by all those that demand and use trained manpower. Establishing and operating a *Central Advisory Council* deriving its membership from sectoral committees and charged with training development and utilization so as to ensure a timely availability of trained manpower and its proper utilization advising on priority skill needs and judicious utilization of available training resources.

Ensuring that multinational, regional, and sub-regional project activities concerned with human resource development and utilization are incorporated and reflected in national policy guidelines as well as in related legislative acts and development plans, for example:

- policies and activities of multinational or sub-regional graduate schools being reflected in national University Charter and Education Acts;
- reappraisal of national employment policies so that provision is made for shared use and co-operative exchange of African expertise.

Establishing, operating, and periodically reviewing training and development programmes, laying emphasis on those with multiplier effects, with priority accorded to:

1. science and technical teacher training;
2. training and staff development officer training;
3. managerial, executive, and supervisory cadre development training;
4. accelerated skill development programmes in selected and key sectors for industry, agriculture, transport and communications, science and technology, education, and integration of women in development based on:
 - task analysis and subsequent employable skill training modular approach;
 - double in-takes or other cost-saving alternatives in post-primary educational institutions;
 - non-formal programmes in adult learning through distant teaching, university of the air, workers' education, etc.;
 - in-plant industrial training, teaching factories and development project attachment training.

Periodic appraisal and review of educational policy, training and practice; of institutional and staff capacity and capability; and of reform and re-orientation of curricula, course content and course offerings, in a response to changing patterns in assessed future manpower demand.

Consolidation and integration of fellowship and scholarship programmes and financial resources for training under one agency, within a ministry, so as to ensure that:

- available resources are directed towards meeting the most critical training needs in order to facilitate placement for study in areas that are not locally or adequately provided for;
- recipient country or agency is able to determine by itself the fields in which donors are to provide institutional and financial resources for training;
- efficient and more equitable use is made of the available resources for those areas with critical skill shortage, thus ensuring savings in, foreign exchange outflows;
- commitments and national obligations to support regional or multinational specialized training, research institutions as well as related fellowships and training programmes are duly honored.

Restructuring and streamlining of national administrative structures so that these can monitor their own internal operations, of implementing their activities and programmes, and of adjusting to the changing internal and external demands of development efforts through:

- continuous monitoring of performance of these structures in relation to national development effort, making necessary structural, resource (man/materials/money) mix, and the plan being executed;
- continuous review and monitoring of the application and effectiveness of rules, procedures, communication patterns and machinery, and readjusting them for better results;

- setting up performance audit systems and units in order to ensure that and above are affected and institutionalized, and that open communication systems, organizational development and policy examination analysis and review process form an integral part of the organizational performance audit and renewal process;
- controlling the proliferation of administrative and organizational structure in the light of resource demands of the economic development efforts and the need to minimize government operation costs;
- maintaining an efficient merit system for the attraction, retention, motivation, training and career development of public servants in order to ensure the use of staff which is motivated by internal standards of excellence and by commitment to development objectives, as they discharge their duties.

Adoption of policies and measures that would ensure increasing reduction of dependence on the use of foreign experts and skills while promoting training of nationals in technical co-operation projects and fostering employment of African expertise within the region.

Developing programmes for training rural inhabitants and those in the informal sector in various occupations and adapting such training to improve indigenous skills and technologies. This measure should provide for fundamental and comprehensive review and overhaul of prevailing methods and techniques of training and adult learning for the acquisition of skills, transfer of technologies and know-how. The role of non-formal training methods and the use of media in the training of the masses should be given adequate recognition and support.

Developing capacity to respond to the increasing demand for more technical manpower input in production sectors, especially in industry, agriculture, science and technology so that the skill-mix ratio in the production of scientists, technicians and artisans should be increased to one scientist to five technicians to 30 craftsmen and artisans.

Improving income opportunities and gainful employment for youth and school leavers should remain one of the principal objectives in development activities in all production and service sectors. Such a policy should be reinforced with effective skill and managerial training programmes in the informal sector, especially in the unorganized entrepreneurial economic activities in urban peripheries.

Attention should be given to programmes that improve the quality of life and the performance of workers through improved nutrition, better housing, medical and health care and healthy environment. Requisite manpower, at all levels, for execution of programmes and activities contributing to the improvement of the quality of life, should therefore be developed and efficiently utilized.

Development of a nation requires collective efforts of the whole population; therefore, measures should be taken to ensure full and effective participation of all the people.

Regional and sub-regional levels

The required actions at these levels would necessarily be directed to reinforce national actions through providing guidelines for, and facilitating actions in, manpower development and utilization. The programme strategy therefore emphasizes co-operation and collective self-reliance in manpower resource through:

- manpower studies, preparation of manpower profiles, and training programmes in specific branches and product lines in the main production sectors and supporting services, thus providing guidelines for formulation and initiation of training programmes at national levels designed to meet manpower requirements;
- supporting an information and placement service, facilitating the identification and employment of African experts, and encouraging consultancy organizations, such as is being operated by the ECA programme for promoting the use of African experts and the development of indigenous consultancy services;

- adoption of employment policies that permit free movement of labour within sub-regions, thus facilitating employment of surplus trained manpower of one country in other Member States lacking in that requisite skill.

Effective support for, and full use of, the facilities of regional and sub-regional training and research institutions through providing funds for the operation and sponsoring the training of nationals in specialized regional, sub-regional or multinational training institutions. Co-operation and collective self-reliance in manpower development can only be effective when African States pool their resources to develop and operate newly established training and research institutions in support of the manpower requirements of priority development sectors and product lines, and to strengthen and make full use of existing institutions.

Support for the OAU and ECA coordinated and administered Expanded Training and Fellowship Programme for Africa, which aims at training 8,000 Africans in Five years, with priority given to manpower requirements of the various priority sectors and product lines already mentioned; to the development of the teaching and research staff of regional and sub-regional institutions; to experiencing transfer; and to evolving an African TCDC in utilizing available training facilities within the region. This programme needs a minimum operational budget of US\$1.5 million a year as well as training places. Support for this programme by Member States is required through:

- financial grants for the operation of the programme;
- provision of fellowships, scholarships, and trainee places through the OAU and the ECA for the benefit of other Member States;
- nominating nationals for training under the programmes, including student and teacher exchange arrangements;
- providing regular information on national training and scholarship facilities available for training nationals of other African countries.

International action

The principle of co-operation and collective self-reliance, which Member States have adopted, recognizes, in respect of human resource development and utilization, that Member States must first help themselves individually and collectively in striving for survival and progress. However, international support to aid human resource development is welcome as supplementary to the African self-reliant effort. Such assistance should be seen and regarded as reinforcing national, regional, and multinational development efforts that Member States must make in order that there can be development and progress. In this effort the continued and active collaboration of all international agencies within the United Nations system and other international, inter-governmental and non-governmental bodies should be effectively mobilize in support of national, sub-regional and regional effort for human resource development and utilization.

CHAPTER V

Science and technology

The summit notes the background and evolution of the negotiation procedure and the final outcome of the United Nations Conference on Science and Technology Development (UNCSTD).

The inevitable conclusion arrived at is that as far as Member States are concerned, the UNCSTD realized only part of its objective and the Vienna Programme of Action leaves much to be desired.

117. Even though for Africa the outcome of UNCSTD was not as effective and fruitful as anticipated, it is felt that Member States should take appropriate steps to ensure their active participation in the post-UNCSTD dialogue.

While doing so Member States should direct their efforts to spelling out a strategy for development which should guide their thinking, planning and action on bringing about socio-economic changes necessary for improving the quality of life of the majority of the people. This objective requires them to invest in science and technology resources for raising African standards of living and for relieving misery in the rural areas.

Attention should therefore be paid to the role of science and technology in integrated rural development. This would require, among other things, the generation of financial resources and political will and courage on the part of policy and decision-makers of the continent to induce a profound change with far-reaching effects on the use of science and technology as the basis of socio-economic development as a matter of the utmost importance and urgency at this fateful juncture of history.

Member States should, therefore, adopt measures to ensure the development of an adequate science and technology base and the appropriate application of science and technology in spear-heading development in agriculture; transport and communications; industry, including agro-allied industries; health and sanitation; energy, education and manpower development, housing, urban development, and environment.

It is essential within this context, for governments to also take measures for exploiting markets for their locally manufactured capital and consumer goods as well as services in the Third World and other developing countries and to provide machinery for bilateral and/or multilateral co-operation among African or Third World countries, in a conscious effort to promote collective self-reliance.

The summit takes note of the Programme of Action for Science and Technology, which was endorsed subject to the following additional considerations

(a) Member States should organize science and technology fairs on an annual or a biennial basis. These fairs will provide a forum for:

- exhibiting indigenous technologies;
- exchange of knowledge and experience among African scientists and technologists;
- promotion of technology transfer among Member States;
- promotion of technical co-operation among Member States.

(b) Member States should formulate national policies on science and technology plans to be incorporated in the over-all national development plan, as science and technology are a fundamental input to the development of all other sectors identified in the Strategy and Programme of Action for the Third Development Decade;

(c) Member States should take measures to promote research and development in science and technology, particularly by providing the necessary financial resources;

(d) Member States should take measures that will encourage skilled labour cadres to return to their countries of origin;

(e) Africa should have a total allocation of the order of at least 40 per cent of the Interim Fund for Science and Technology for Development established by General Assembly resolution 34/218, for the implementation of projects submitted to the Fund;

(f) Member States should endeavour to participate effectively in activities of the International Year of the Disabled, more particularly in the International Symposium to be held in July 1981 on Technical Co-operation among Developing Countries and technical assistance for disabled persons, particularly with a view to establishing or strengthening machinery for the application of science and technology to the fabrication of prototypes and new production of medical, educational and vocational equipment by utilizing indigenous resources and expertise.

National level

Programme 1: The national science and technology base for development

At the end of the Second United Nations Development Decade (1970-79) most Member States were becoming more and more aware of the role of science and technology in development. A number of institutions for science and technology had been set up. However, in spite of past and current efforts most Member States still lack the necessary national scientific and technological capability and consequently remained dependent on foreign technical skills for the execution of their scientific and technological tasks. Some of the shortcomings of the development of scientific and technology base for development at the national level may be traced to several factors, including:

- persistence of the old international economic order and its technological dimensions, which have not changed;
- Ineffectiveness of existing national machinery in coping with indigenous technology development;
- negative effects of imported foreign technology;
- vagueness in the conception of science and technology policy and its contents;
- inability of existing science education to provide students with the essential skills for development and inappropriate clinical settings for essential skill acquisition;
- rural/urban technological dichotomy;
- ineffective linkage pattern of research and development and national production activity, in particular the persistent orientation towards research of general interest and free knowledge;
- ineffective mobilization of the population for science and technology transfer transactions;
- inadequacy of existing machinery for the regulation of technology transfer transactions;
- limited volume of financial resources devoted to science and technology;
- low level priority accorded to science and technology; particularly where available material financial resources are concerned.

For science and technology to play an effective role in national development, they must operate within a national framework and be coordinated with other sectors of the economy.

A new strategy for science and technology base has therefore to be evolved for the Third United Nations Development Decade.

Programme element 1.1: Establishment by, each Member State of a national "Centre" for Science and Technology for Development

In this context the "Centre" is not necessarily meant to connote a physical and monolithic structure. It is used as a "shorthand" for national organ or mechanism, the form and character of which is to be determined by each Member State with due regard to the structure and *modus operandi* of its governmental machinery.

The characteristic feature of the Centre is that it should have inputs from, and effective linkages with, national institutions such as:

- the development planning organization;
- investment and financial institutions;
- research and development institutions;
- the education and training system;
- public and private enterprises;
- the industrial property system, technical and patent information;
- standardization and quality control systems;
- the legal system.

The over-all goal of the Centre is to help the country in determining the origins and effects of alleviating the technological dependence and in approaching technological self-reliance by striking a socio-economically favorable balance between foreign inputs and those inputs that are generated by the indigenous science and technology system and utilized by the national sectors of production and services. To attain this over-all goal, the Centre would have to be capable of:

(a) formulating an explicit national science and technology policy which translates the national policy for socio-economic development into technological lines of action, and indigenous inputs;

(b) assisting in the guidance and maximization of indigenous inputs through:

1. initiation and monitoring of the national science and technology policy, and preparation of national science and technology plans;
2. organization of programmes for training manpower in science and technology policy formulation and planning;
3. initiation of science and technology policies in areas such as:
 - indigenous development of technology, including research and development;
 - technology transfer;
 - development of critical natural resources;
 - science and technology manpower development and utilization;
 - population of science and technology;
 - financing science and technology activities;
4. creation of the missing components needed for a comprehensive science and technology system (such as research and development institutions, technological information services; consultancy services, pilot plants and testing grounds, standardization, and quality control establishments);
5. identification of the needs of the full range of the national economy, in terms of goods, services and techniques, which can be provided with the help of the national science and technology system;
6. establishment of the policy instruments which encourage local innovations and facilitate more rapid and less costly acquisition of technology, through the provision in incentives and programming of the integrated and coordinated activities of the national science and technology system;
7. promotion of the indigenous generation of technology linked specifically to design/production, research and development.

(c) assisting in the rationalization and regulations of foreign inputs through:

1. identification of the needs of the full range of national economy, in terms of goods, services and techniques which must be produced with the use of foreign inputs;
2. acquisition and analysis of information on alternative sources of technology for production and service sectors;
3. evaluation and selection of technologies for production and service sectors;
4. unpackaging of imported technology to progressively increase the share of the indigenous contributions;
5. promotion of the adaptation and absorption of important technologies;
6. negotiations of transfer of technology transactions from a position of relative strength.

Programme 2: Development of human resources for science and technology

Top priority should be given to the development of human resources for the creation of a science and technology infrastructure of manpower, knowledge-skills, innovation and productive capacities to absorb and adapt imported technology, on the one hand and, on the other, to develop technology locally for the identification, exploration and exploitation of natural resources and the conversion of raw materials into semi-finished and finished goods and products; this would entail a drastic change in the

orientation of education and training programmes within a newly created social infrastructure in which social facilities and services are accessible to all and the dignity of labour accorded a high social value.

Primary education should aim at providing instructional materials highlighting the role of technology in society in a simple and demonstrative manner. At this stage, an understanding of the rural environment and the use of traditional technology by past and present African rural societies to make life easier should form major components of instruction. The learning-by-doing method of skill and knowledge transfer should play a significant role.

At advanced levels, training programmes need to be reoriented towards the production of technologists and not merely engineers in the various traditional or "conventional" disciplines. This would require the introduction of courses in economics, management, technology, including the history of technology development, the impact of technology on society, technology generation and diffusion, and law.

At the middle level, where the need is currently acute, measures must be taken to introduce elements of the above programmes in education programmes, adequate attention being paid to students' motivation. Emphasis must be placed on do-it-yourself techniques.

Regarding the development of technical entrepreneurship there is a need to direct attention to current practice in the training of technical manpower.

The learning-by-doing method of skill transfer and the demonstration effect in production and service-type situations must be given top priority in order to produce the professional with the versatility required to solve design problems in the country.

Programme element 2.1: Manpower needs surveys

This element involves the conducting of surveys of scientific and technological manpower needs in all sectors, and the determination of the mix of professional manpower requirements on which development should be based.

Programme element 2.2: Development of technical entrepreneurship

This element requires the following activities:

- expansion and intensification of the learning-by-doing method in the training of technical manpower;
- introduction of management courses in existing conventional engineering and technical training curricula;
- broadening of the training of engineers to include mastery of the practical elements of technology as well as of other related dimensions of technology development processes.

Programme element 2.3: Training in technical fields of critical manpower shortage

This calls for the establishment of training programmes in technical fields where there are acute shortages of manpower, such as production engineering, industrial design, chemical engineering, and metallurgy, and in fields relevant to project preparation, evaluation, etc.

Programme element 2.4: Development of programmes to train and encourage more women to enter science and technology.

Programme element 2.5: Mobilization of the adaptive technology potential in the informal sector

In Africa today a considerable amount of adaptive technology and technical creativity exists in way-side smithies and other mechanical workshops.

Programmes should be developed to mobilize these capabilities for:

- feeding into the productive sectors.,
- training (through the process of learning-by-doing) of school dropouts;

- training/orientation of the rural population, in general, and women, in particular, to deal with simple technical problems arising from living and working in these rural areas.

Programme element 2.6: Mass popularization of science and technology

Adult skill and literacy campaigns in science and technology should be mounted, using the national languages, where possible, with the primary object of getting rural women to participate more effectively in agricultural and rural technology programmes and projects (e.g. food production, preservation, storage and use, and nutrition, etc.); the method of learning-by-doing should be used in these campaigns.

Programme element 2.7: Curriculum revision

Campaigns for large-scale curriculum revision should be mounted as a matter of priority by Member States so as to render all levels of education and training more relevant to the development needs of the local African environment. Member States should carefully define the objectives of such curriculum revision by highlighting the need to emphasize traditional cultural values and to understand the working of rural society. The curriculum revisers must aim, when their proposals are appropriately executed, at arriving at human end-products possessing skills and knowledge which would make them socially useful, either on their own or as employees, and capable of living and working in harmony with their environment. The first phase of this activity should be completed by the end of 1981.

Programme element 2.8: Training of science and technology trainers

Institutions and programmes should be established or strengthened for training, on a continuous basis, of science and technology teachers and instructors.

Programme element 2.9: Stopping the brain-drain

Member States currently suffer major losses resulting from migrations of indigenous skilled manpower to the developed countries. Action should be initiated, in collaboration with the international community, to tackle the root causes of this problem in order to reverse this trend.

Special attention should be paid to the aforementioned human resources development programmes and especially to the following areas in which product development is deemed critical in the short run:

- (a) building materials;
- (b) pharmaceutical and fertilizers;
- (c) transport and communications equipment;
- (d) agricultural tools and equipment.

Programme 3: Development of infrastructure for science and technology base

The continent continues to be technologically backward and dependent on industrialized countries, principally because many Member States have failed to take most of the actions required to achieve self-reliance.

The summit notes the grave consequences this technological backwardness and dependence that make it urgently necessary to break with conventional methods and concepts and to get away from dysfunctional internal economic patterns.

The patterns need to be restructured and methods devised for the kind of development process that Africa should institute in the 1980s: the success of this approach will depend on the degree of political will and commitment that Member States can muster for this purpose.

Programme element 3. 1: Development and transfer of technology

Special attention should be paid to the socio-cultural milieu of the majority of the population and an attempt to satisfy their needs should be made by urging traditional technologies, where worthwhile, developing new ones and adapting imported technology. Invention, innovation, and diffusion should be given top priority in this context. Existing scientific and technological capability could have a market, and some mechanisms whereby capability can be transformed into goods and services to satisfy demand should be evolved.

Member States should encourage a balanced development of rural industry and agriculture so as to ensure that there will be demand for rural goods and services as well as for the technologies to produce them.

The development of research and development should be encouraged in the above exercise by the creation of a competitive environment in which the research undertaken at universities and other institutions is geared to development needs, and particularly to those identified in the rural areas. When relevant inventions are made, technical entrepreneurs can transform them into practical production items, thus providing a much-needed link between the innovative and productive systems.

Action should be taken to ensure that technology is transferred under general conditions acceptable to the recipient country and supportive of a self-reliant and self-sustaining strategy in the development of local and scientific capabilities. Technical assistance and foreign aid programmes should be scrutinized through established machinery so as to ensure that the country will benefit to the greatest possible extent from these programmes and that balanced socio-economic development will result.

Such machinery should regulate the technological and other activities of transnational corporations in the recipient country so as to ensure that they make a positive contribution in areas such as the development of indigenous scientific and technological skills; the generation of local employment opportunities; and the transfer of technological and managerial knowledge to local distributors and users of capital goods and other products manufactured by the local subsidiaries.

(a) a primary activity is to conduct studies:

- to identify technological needs of most of the population;
- to understand the character of the local recipients of technology, their orientation, and preferences;
- to understand how technology affects development, develops and is diffused in society, as well as technology adaptation techniques;
- to understand how transnational corporations operate their structure and policies, and how these affect the development process, so as to increase awareness and perception of policymakers on all the above matters (seminars and workshops should be arranged for this purpose).

(b) national sectoral policies should then be formulated, and laws enacted to guide the development and use of local technology, and to regulate the choice, flow, adaptation and use of imported technology and the activities of transnational corporations;

(c) national policy units to advise on development choice, transfer and adaptation of technology, and to supervise and follow up implementation of technology-related activities should be established or strengthened. The result of the manpower survey will assist in determining professional skill mix required in these sectors, and adequate training programmes can then be mounted to develop negotiating capacities and strengthen bargaining positions, and to improve the capacity to assess, unpackage, install, operate, and maintain technology;

(d) awards and patent incentives should be established for inventions and innovations, and for work done in local scientific and technological institutions, other types of institutions in industry, etc., directed towards satisfying the development needs of the rural population and towards other neglected development areas;

(e) local scientific and technological personnel should be encouraged to participate in debates on development issues, and on science and technology matters, so as to ensure a wide diffusion of knowledge of technological achievement;

(f) registers of imported technologies, classified by sector and by short, medium, and long-term replacement potential should be set up;

(g) national negotiating capabilities should be strengthened by crash training programmes developed with the assistance of Third World countries, regional organizations such as ECA, the United Nations and other international organizations, in areas such as the following:

- the international code of conduct on the transfer of technology;
 - the international code of conduct relating to TNCs;
 - the revision of the Paris Convention for the protection of industrial property.
- (h) the facilities and expertise of the regional technological institutions should be used in order to develop a common African position in negotiations with TNCs.

In many of the areas outlined above, Member States can benefit from the assistance of OAU, the United Nations system, and other regional and international organizations.

Programme element 3.2: Acquisition, processing, and dissemination of technological information

Lack of information is one of the most serious obstacles to selection, acquisition and use of appropriate technology options. An understanding of the local environment, character and orientation of the transferees is as important as information on the technology to be supplied. Care should therefore be taken to ensure that the technology supplies match the local needs identified. Machinery should be established to assess and promote the acquisition and dissemination of information on the range of alternative technologies, processes, and products available for a particular application. The following measures are proposed:

(a) establishment or strengthening of a national center for technology information dealing with:

- importation of technology: identification of subsidiaries of foreign firms in the region and elsewhere; compilation of information on the operation of transnational corporations and regular dissemination of such information to the business sectors of the economy; compilation of data on low-cost and other adapted technology within the country or available from other developing countries and regions; compilation of data on foreign investments, imports, raw materials, prices of products on the international market, standards and related matters, etc.;
- data and statistics on local technological capabilities and infrastructure: data on local capability to obtain, adapt or generate the required technology; information on the relationship between demand for goods and services and efforts to supply adequate technology (and the related problems of understanding the character and orientation of transferees); information on centres capable of providing technical advice and information, existing engineering consulting firms, standard institutions, etc.;
- the provision of the above services to various sectors of the economy, but especially to the production system.

(b) the organization jointly by African and Third World governments of programmes to provide fellowships and/or scholarships to enable science and technology students to study and visit centres of technology development in countries such as China, Japan, India, the Republic of Korea, etc., to gain experience and collect information on the history of technology development in these countries. Such programmes should be planned by interdisciplinary teams of experts drawn from Third World and participating African countries and African national training programmes involving universities, research and development institutions, industry, management, and business institutions;

(c) encouragement of the establishment and/or strengthening of local scientific and technological associations and societies. National technology information centers should establish or strengthen ties with other regional technology information systems and technology information centers of Third World countries to facilitate the flow and exchange of information in all fields relevant to socio-economic development;

(d) with the assistance of ECA, regional institutions and other Third World country institutions pilot studies on agricultural and industrial extension services so as to establish an improved framework for feed-back from them to the research and development and productive centers;

(e) actively supporting and strengthening African regional organizations in the field of patent documentation and information, such as ESARIPO and ESAPADIC, CAPI and PADIS.

Programme element 3.3: Institution building

Institutions and/or institutional arrangements are required at both the national and sectoral levels for the development of technology, the regulation of the transfer and adaptation of technology, for educating and training scientific and technological manpower, at various levels, and for financing science and technology development activities.

Considerable political will and commitment on the part of policymakers are requested in order to create adequate institutions and to restructure and reorient existing ones to enable them to provide effective solutions to the problems of development. All Member States should establish by law an overall guiding agency with economic and administrative autonomy and make provision for the permanent financing and establishment of other sections of the science and technology infrastructure.

Programme element 3.4: Markets

Member States should take measures for collectively exploiting markets for locally manufactured capital and consumer goods and services in Third World and developed countries.

Programme element 3.5: Co-operation

Member States should provide machinery for bilateral and/or multi-lateral co-operation among themselves and/or Third World countries in a conscious effort to promote collective self-reliance. Such machinery should identify areas of common interest requiring collective action and make full use of the expertise available within the regional and international organizations when advice and other forms of assistance are required.

Programme 4: Establishment, improvement and strengthening local production capacity

Programme element 4.1: Measures

Member States should take specific and explicit measures for making full use of local production capacity in railway and civil aviation workshops, arts and crafts centers, etc., already existing in their countries. These measures should provide guidance and directives for the establishment of new workshops which would diversify their activities by manufacturing spare parts, agricultural implements and machine tools necessary for production in various sectors.

Programme element 4.2: Mobilization of indigenous technology potential in the formal and informal sectors

The workshops mentioned above should also serve as basic structures for promoting, strengthening, and encouraging individual initiatives in informal local technology so that production can

be improved and increased. These workshops should furthermore be used to the greatest possible extent for in-plant vocational training of indigenous personnel in the various fields of industrial production.

Programme 5: Enactment of rural development

Programme element 5.1: Development of low-cost rural technologies

A common characteristic of the African population is that a very high proportion (about 80 per cent) lives in rural areas. To improve the quality of life of these rural populations and minimize the drudgery of their existence, it is necessary to develop and diffuse low-cost rural technologies.

Special facilities and resources should be devoted to:

- the development of low-cost technologies for rural agriculture and industrial production, transportation, communication, and other activities to be carried out, whenever possible, in the rural areas;
- the development of low-cost energy sources, particular attention being paid to solar energy, wind-power, and biomass, water-power, and geothermal energy;
- the establishment or strengthening, as a model for industrial development, of small-scale industries and "artisan" enterprises, combined with the vigorous promotion of research and development capabilities in agriculture and small-scale industrial activity.

Programme 6: Science and technology in-puts required for the activation of the development Programme sector

Africa's development strategy for the next decades has, inter alia, the following priorities:

- the attainment of self-sufficiency in food;
- the establishment of a sound industrial base;
- the physical integration of the region through the development of transport and communication;
- the development of the capabilities required to enable governments to establish sovereignty over their natural resources;
- the establishment of mutually beneficial and equitable relations between Member States and the rest of the world,
- the attainment of a substantial increase in the present meagre share that intra-African trade accounts for in total African trade.

This African strategy has been further translated, for operational purposes, into specific areas that deserve immediate and particular emphasis during the Five-year period from 1980 to 1985.

The following sectors, which have been identified as priority areas for urgent action, require science and technology inputs for their development and activations:

- research and development;
- development of appropriate technologies;
- evaluation and regulation of technologies that may be imported for the sector;
- transfer of research findings and locally developed packages of technology;
- development of essential equipment and technical facilities;
- scientific and technical training and manpower development for the various sectors, including manufacturing, production, maintenance, and repairs.

Programme element 6.1: Food and agriculture

In the area of food and agriculture, scientific and technological activities are needed in the priority areas of:

- (a) agricultural chemicals;

- (b) improved seeds;
- (c) forest products;
- (d) agricultural tools and implements;
- (e) storage and processing techniques;
- (f) irrigation technology;
- (g) fisheries.

Programme element 6. 2: Establishment or strengthening of national machinery

Food and agricultural development policy and policy instrument must be created with emphasis on the integrated development of the rural sector of the economy, taking into account, inter alia, the following:

- (a) the provision of an institutional infrastructure for training the required manpower, especially women, in identified priority areas of need (see programme elements 2.2; 2.3; 2.4);
- (b) the provision of adequate channels of communications linking the agricultural, transport and communications, industrial planning, finances, labour and employment, research and other relevant sectors of the economy;
- (c) the provision of local machinery at the national level to regulate land use and to foster sub-regional and regional multinational co-operation in the use of such mechanisms when established Such a policy and policy instruments should also perform the following functions:
 - development and improvement of irrigation facilities, including water conservation and management;
 - intensification of the use of improved hand tools and draught animals and promotion of mechanized farming;
 - ensuring that processing is carried out to a greater extent at least to the secondary, if not final, stages, so as to promote substitution of local for imported food;
 - improvement of storage facilities in order to reduce post-harvest losses and to ensure adequacy of food supplies;
 - multiplication and distribution of high-yielding seed varieties and of animal breeds;
 - improvement of animal health and hygiene;
 - development of industrialized offshore fishing fleets and increased productivity of fisheries;
 - intensification of plant protection.

Programme element 6.3: Industry

In the industrial sectors scientific and technological inputs are required in the six priority areas identified by African Ministers of Industry:

- food and agro-industries;
- building materials and construction industries;
- metals and metal products industries;
- engineering and engineering products industries;
- chemical industries; and
- forest-based industries.

Action for the development of the above areas would require the provision of facilities for the capital goods industry to produce transport and communications equipment, and agricultural tools and equipment, and to manufacture basic chemicals, leading to the production of fertilizers and pharmaceuticals, as well as to key building materials, spare parts and components for the above products.

Programme element 6.3.1: Establishment or strengthening of national machinery for the establishment of industrial policies and instruments which would ensure, inter alia, the following:

- adequate and integrated rural development and backward and forward linkages between and among the sub-sectors of industry mentioned above, the transport and communications system, health facilities, water and energy supply, finance, the education and training system, research, labour and employment and other relevant sectors of the economy;
- the provision of an institutional infrastructure for the training of the required manpower at all levels, and especially women, in the areas of need identified by African Ministers of Industry (see particularly programme elements 2.2; 2.4;2.5).

It would also perform the following functions in certain industrial sub-sectors, namely chemicals, metals, engineering, forestry building materials and construction:

- evaluate existing capabilities in all the above sectors, and develop appropriate manpower development programmes in them, as outlined in programme elements 2.2 and 2.3, with a view to exploiting adequately the sectors identified;
- evaluate existing potential in domestic raw materials, existing facilities for financing, markets, and production of imports for the industries;
- conduct studies on the local environment and on the character and orientation of transferees and transferees, especially the TNCs, with a view to ensuring that the supply of technology matches the demand (e.g., the creation of small-scale industries) and for creating policies to regulate the business activities of the TNCs;
- conduct studies of the kinds of structures developed by other Third World countries to develop scientific and technological capabilities in the industrial sectors identified with a view to using the results in pilot operations designed for initiating a self-sustaining industrialization process;
- examine possible ways of generating funds locally for science and technology activities in the industrial subsectors identified;
- examine the structural requirements for making the best use, at the national level, of regional institutions with functions having a bearing on the development of the various sectors.

Programme element 6.3.2: Establishment or strengthening of the following national institutions

- a consulting engineering and management institution with capabilities for undertaking feasibility studies, project evaluation and design, selection of equipment, evaluation of contracts, etc.;
- a standards and quality control institution;
- legal mechanisms for regulating the import of techniques, and for promoting regional and sub-regional co-operation.

Program element 6.4: Natural resources (minerals, water, and forests)

Establishment or strengthening of national machinery for the creation of policies to ensure that proper backward and forward linkages exist between these resource sectors and other sectors of the economy in order to promote integrated rural development.

Such machinery will also perform the functions listed below

Programme element 6.4.1: Mineral resources sector

- establish the mineral resource base (both land and sea-based) by undertaking geological, mineral exploration and mapping;
- prospect, evaluate, extract and market the minerals;
- negotiate satisfactory agreements with foreign governments or TNCs for carrying out any of the functions mentioned above;

- make provision for providing equipment, and for training of the range and quality of the manpower required, taking into account programme elements 2.2, 2.3, 2.5.

Programme element 6.4.2: Water resources sector

- establish an inventory of surface and groundwater sources;
- develop special techniques for managing water resources, i.e., collect data on water availability and quality, forecast demand in various rural sectors and develop and use technologies for recovery and recycling;
- develop technologies for collecting water in rural areas, for distribution (e.g., hand pumps and other devices), for irrigation, for treating polluted water, and for disposal of wastewater;
- negotiate technology transfers for the activities outlined above, as necessary, on terms most favourable to the recipient country.

Programme element 6.4.3: Forest resources sector

- establish an inventory of forest resources;
- introduce new plant species for increased productivity through breeding and fertilization techniques;
- promote indigenous research and study of indigenous species in particular ecological areas;
- develop appropriate labour-utilizing technologies and manufacture equipment for clearing, planting, logging and processing of all sizes of logs;
- develop technologies for storage and preservation of forest products;
- develop adequate treatment or management techniques for forestry, through use of the most appropriate system of silviculture;
- make provision for training of manpower and dissemination of information on management and use of forests.

Programme element 6.5: Energy resources

Establishment or strengthening of national machinery for the creation of policies to ensure that proper backward and forward linkages exist between the energy sector and other sectors of the economy in order to promote integrated rural development, and for performing the following functions:

- make an exhaustive inventory of the energy resources (land-and sea-based), using geological, geophysical, airborne, etc., techniques and evaluate the potential;
- periodically assess demand and supply patterns for rural household, and for agricultural, industrial and transport uses, so as to develop energy techniques and to plan future management;
- develop efficient structures for energy distribution;
- collect, analyze, assess, catalogue, and disseminate information, by means of various techniques on technologies available locally and in the foreign markets, for the development and use of new and renewable sources of energy;
- make arrangements for training manpower at all levels, particular attention being paid to relevant manpower development under programme elements 2.2, 2.3, 2.5;
- make arrangements for the development of R and D and of institutions for producing energy from waste materials, and for the development of storage or conservation techniques;
- develop capabilities for negotiating elements if necessary, for the transfer of technology to perform various functions related to energy development;
- examine possible structures for making the best use of regional and sub-regional institutions.

Programme element 6.6: Transport and communications:

Provide the science and technology inputs or the implementation of the programme of the United Nations Transport and Communications Decade

Programme element 6.7: Health and sanitation

Establishment or strengthening of national machinery to develop policies, taking into account, inter alia, the following elements:

- the over-all need to provide health care to the community as a whole and particularly to its poorest segments within the context of integrated rural development;
- the development of environmentally and culturally, sound technology, so as to ensure that the equipment and drugs selected will be manufactured at low costs (e.g., from indigenous materials) and making provisions for acquiring information relevant to the pressing problems of health care, and for the regular exchange of information with other countries;
- the assessment of needs in terms of the range and numbers of personal and institutions required within the context of integrated rural development;
- the development of appropriate linkages with the other vital sectors of the economy.

Such machinery will also be responsible, inter alia, for the performance of the following activities:

- drawing up an inventory of essential drugs necessary to cure debilitating diseases;
- intensive studies (R and D) of the effectiveness of medicinal plants for treating various transmissible diseases and recording of cures; special attention should be paid to identifying suitable forest resources for this purpose;
- the selection of middle-level manpower for training under programme elements 2.2 and 2.3 to work with health research workers in universities and hospitals in order to produce low-cost health equipment;
- the transfer of traditional medicine from the informal to the formal health sector, especially in the rural areas, and the training of practitioners of traditional medicine in basic health procedures in various fields (e.g. family planning, preventive health care, food products available in the rural areas and of high nutritional value), and the encouragement of R and D activities in this sector;
- the establishment and improvement of training institutions for paramedical and nursing personnel at the required levels;
- coordinating the collection, analysis, assessment, cataloguing and dissemination of relevant health information from indigenous and foreign sources;
- the expansion and improvement of medical and nursing services and facilities for both urban and rural areas.

Programme element 6.8: Housing and urban development

In this sector appropriate attention should be paid to the development of specifications (i.e. building construction requirements with reference to particular materials and methods) and performance codes (design and engineering criteria-see programme element 6.2 (i) in relation to the building materials industry).

Establishment or strengthening of national machinery to perform the following functions:

- establish a coherent national system of codes and standards, and develop techniques and processes, etc., for testing and for quality control;
- promote the development of self-help construction by providing design standards, manuals, and codes, etc., for simple housing units for the urban and rural areas;
- make provision for adequate utilities, particularly for water, sewerage, and waste disposal systems;
- take steps to promote tropical architecture and urban and rural planning and design;

- examine possible structures to be created at national level to make best use of sub-regional, regional, and international institutions.

Programme element 6.9: Environment

Programme element 6.9.1: Establishment of machinery to assess and mitigate the impact on the environment of development activities.

This will embrace activities in all the sectors mentioned above with a view to minimizing or eliminating altogether any harmful effects on the biosphere. This would require, for example:

- establishment of techniques to manage and use forests and grasslands so as to prevent the exposure of the land to soil and wind erosion;
- making provision for training manpower and dissemination of information on improving the environment;
- establishment of techniques for the proper exploitation of natural resources so as to prevent water and air pollution.

Programme element 6.9.2: Introduction of relevant measures to support at the national, sub-regional and regional levels, the establishment of networks for monitoring and predicting natural disasters well in advance so that appropriate preventive and precautionary action can be taken at the national level in good time.

Programme element 6.9.3: Establishment or strengthening of national machinery to combat drought and desertification particularly through.

- planning and managing the rational use of land, water and forest resources as part of the campaign against desertification;
- developing alternative sources of energy in order to reduce the use of woody plants and charcoal as the main sources of energy;
- developing innovative approaches in drought management and desertification control;
- developing systems to facilitate the exchange of scientific and technological information in these fields.

It may be necessary in some of these sectors, prior to the submission of proposals governing the nature of the infrastructure and other facilities required for a comprehensive action plan, to undertake the following activities:

- convene an expert working group to delineate priority fields of action and to develop a programme of field missions;
- send missions to compile information on the *status quo* with respect to R and D and production facilities, manpower, technology components, etc., necessary to activate action in priority areas;
- convene a meeting of experts to examine the mission report and make comprehensive proposals for a phased action plan at national and regional levels;
- convene an inter-governmental meeting to ratify proposals.

Projects of this nature can be undertaken by OAU and ECA or by other regional organizations.

Programme 7: Mobilization of funds for science and technology

Member States should take steps to improve existing and create new funding mechanisms to provide funds on a predictable and continuous basis at the national level, with a view to substantially

increasing the resources available for the development of their scientific and technological capabilities and to the implementation of the Programme of Action.

To demonstrate their political will and commitment to improving the lot of these peoples, Member States are urged, within the coming decade, to aim at gradually reaching the target of mobilizing, at the domestic level, 1 per cent of their GDP for the development of their scientific and technological capabilities. This target could be achieved, among other things, through the following.

Programme element 7.1: Establishment of a National Science and Technology Development Fund (NSIDF)

An S & T Development Fund should be established for financing science and technology activities and for developing technological capabilities of relevant sectors of the economy.

This fund could be augmented by one of the following methods:

- increasing budgetary allocations for science and technology;
- allocation of a certain percentage of taxes derived from the consumption of imported items to the R and D activities aimed at producing their equivalents locally and for using local resources;
- institution of a levy on the gross income or turnover of major public and private enterprises engaged in production activities;
- requiring all firms and enterprises with foreign equity holding to allocate a fixed percentage (to be determined nationally) of their total expenditures to nationally approved R and D activities within these enterprises. Where this cannot be done, the firms should contribute an equivalent amount to the NSTDF.

The national Center for science and technology for development should work closely with the National Science and Technology Development Fund in these matters. The former will decide on the priorities for the use of the funds collected, the credit lines being allocated by the latter to the R and D institutions.

Sub-regional and regional levels

Programme element 8.1: Support for the operations of regional and sub-regional intergovernmental technological institutions

Several regional and sub-regional technological institutions have been established, following decisions taken by the Member States. Adequate resources should be made available by Member States and obtained from other available international sources in order to develop such institutions to full operational levels. ECA should provide the means of coordinating the activities of these institutions, both among the institutions themselves and in close consultation with the OAU, and among Member States. Member States should designate national local point for effective linkage with the institutions and ECA so as to ensure that full use is made of their services.

The following is an illustrative list of such institutions

- African Regional Centre for Technology (Dakar, Senegal);
- African Regional Centre for Engineering Design and Manufacturing (Ibadan, Nigeria);
- African Institute for Higher Technical Training and Research (Nairobi, Kenya);
- Industrial Property organization for English-speaking Africa (Nairobi, Kenya);
- organization Africaine pour propriété intellectuelle (OAPI) (Yaoundé, United Republic of Cameroon);
- East African Mineral Resources Development Centre (Dodoma, United Republic of Tanzania);
- African Regional Organization for Standardization Centre (Accra, Ghana);
- African Remote Sensing Council and its relevant Centre (Ouagadougou, Kinshasa, Cairo, Ile-Ife, Nairobi);
- Regional Centre for Training in Aerial Surveys (Ile-Ife);

- Regional Centre for Services in Surveying and Mapping (Nairobi, Kenya).

Other institutions at various stages of establishment are:

- Central African Mineral Resources Development Centre;
- Regional Centre for Solar Energy Research and Development.

The successful operation of these intergovernmental institutions depends to a large measure on financial contributions from Member States.

Member States are invited to take steps to ensure the regular payment of their contributions at the agreed intervals, so as to enable these institutions to perform the functions that the governments themselves have assigned to them in furthering the development and progress of Africa.

Institution building constitutes an important, strategic and tactical device in the process of inter-linked forward movement of socio-economic systems. Member States should therefore collaborate in the establishment of institutional machinery in the areas of science and technology development whenever it is deemed necessary to do so.

Programme element 8.1.1: Bilateral and multilateral co-operation; science and technology

Member States should, whenever possible, co-operate in the identification and implementation of elements of the Programme of Action for Africa as a further means of strengthening their scientific and technological capabilities.

Programme element 8.2: Undertaking feasibility studies for the programme

Programme element 8.2.1: Establishment of multinational teaching companies

The history of the development of technology in countries such as Japan, China, India, Republic of Korea, Mexico, and Brazil, provides Africa with several lessons worthy of emulation. In particular, the carefully planned institutionalization of the learning-by-doing process is recommended for serious attention. Institutions which are "engineering equivalents" of teaching hospitals should be established, initially, at the sub-regional level.

Programme element 8.2.2: Establishment of regional and sub-regional technical consultancies

Africa continues to rely heavily on external sources for consultancy in the planning and preparation of 'development projects, including feasibility studies, project preparation and evaluation, project design and monitoring of implementation.

A few indigenous consultancy agencies exist, but these require strengthening and their capability needs to be increased. Through sub-regional and regional co-operation, institutions of associations of indigenous technical consultants should be established at the regional and sub-regional levels to assist in the development and strengthening of national consultancies and to handle multinational, and, where appropriate, complex national projects.

Programme element 8.2.3: Establishment of centers of excellence for training and research

Programme element 8.3: Development of exchange programmes for women for the improvement of skills.

Certain African sub-regions are noted for highly developed traditional skills in weaving, dyeing, local production of toys and general handcraft. Exchange programmes should be developed for women on a sub-regional basis, through the specialized agencies of the OAU and ECA MULPOCs, for transferring these skills from sub-region to sub-region, thus diffusing them generally throughout Africa.

Programme element 8.4: Regional finance

Special efforts should be made to ensure the availability of adequate resources for funding science and technology development and activities at the regional level. These efforts should include the following:

- the African Development Bank (ADB), in the spirit of the African Declaration on Co-operation, Development and Economic Independence, should devote at least half of its programme resources to multinational projects, and assign a definite percentage of these resources to financing S and T projects during the period 1980 to 2000;
- the Arab Bank for Economic Development in Africa (ABEDA) should devote at least one-third of its resources to multinational projects and assign a definite percentage of its resources to financing S and T projects during the period 1980 to 2000;
- regional development banks should help to build regional potential in the fields of consultancy, engineering, design and construction, by making maximum use of the potential available within the region;
- OAU and ECA should seek funds from international funding and development agencies, UNDP, the newly established United Nations Financing System for Science and Technology and other international financing institutions in order to finance those projects in the region during the period 1980 to 2000 which contribute most to the strengthening of scientific and technological capabilities.

International level

Programme element 9. 1: Financial and technical assistance

Of the regional groupings of countries of the world that constitute the developing countries (Group of 77) Africa is the largest in terms of number of countries, has the largest concentration of the least developed countries, and is the most backward and disadvantaged in the field of science and technology for development.

Africa should therefore be accorded serious and urgent attention in the allocation and disbursement of the Interim Fund for Science and Technology for Development during the two years of operation of this fund under the administration of UNDP.

Member States should request a total allocation of the order of at least 40 per cent of the fund for projects submitted for the development of scientific and technological capabilities.

The following are the proposals for disbursement of this allocation

- assistance to countries in developing and implementing projects under programme element 1.1;
- assistance to countries in developing and implementing projects under programme elements 2.2 and 2.5;
- assistance to countries in developing and implementing projects under programme elements 2.3 and 2.4;
- assistance to countries in developing and implementing projects under programme element 5.1;
- for UNDP preparatory assistance and/or full-scale projects with the appropriate executing agencies under programme elements 6.1 (i) to 6.8 (iii);
- for UNDP preparatory assistance and full-scale projects with the appropriate executing agencies under programme element 8.1;
- for preparatory assistance for the establishment of industrial complexes under the relevant programme element;
- for preparatory assistance for the establishment of the sub-regional institutions or associations under programme element 8.2 (ii);

- for the development and implementation through the specialized agencies of the OAU and ECA MULPOCs of the women's institutions or associations under programme element 8.3.

Member States should join with other Third World countries in restructuring relevant existing international funding agencies, with a view to establishing a better balance and distribution of power within them. Adequate African representation at decision-making level in the newly established United Nations Financing System for Science and Technology Development should be demanded.

Member States should give active support to and participate in the effort to establish a Third World Bank for Science and Technology.

Other sources of funding

Member States are urged to continue to seek funding on an increased scale from the international funding agencies which have, in the past, provided financing for development projects, such as IBRD and IBAD. Emphasis should be placed as much as possible on collaborative or multinational projects among Member States themselves and other Third World countries;

New regional science and technology funds should be established and existing ones, such as the UNESCO Special Fund for R and D projects in Africa and the United Nations Industrial Development Fund administered by UNIDO, should be strengthened for appropriate utilization.

CHAPTER VI

Transport and communications

The Member States have always recognized that transport and communications constitute a most important sector on whose development depends not only the growth in other sectors but also the socio-economic integration of Africa, as well as the promotion of intra- and extra-African trade.

In recognition of the special importance of the transport and communications sector for the African economy, the Economic Commission for Africa Conference of Ministers in March 1977 adopted a resolution calling for the declaration of a Decade for Transport and Communications. This resolution was endorsed first by the Economic and Social Council and secondly by the General Assembly of the United Nations which accordingly proclaimed the Transport and Communications Decade for Africa, 1978-88. This resolution was subsequently adopted by the OAU Assembly of Heads of State and Government in Monrovia in July 1979.

General strategy

The summit endorses the principal goals of the strategy for the decade defined by the ECA Conference of Ministers of Transport, Communications and Planning in May 1979, that Member States should work towards:

- promotion of the integration of transport and communications infrastructures with a view to increasing intra-African trade;
- ensuring the co-ordination of the various transport systems in order to increase their efficiency;
- opening up of the land-locked countries and isolated regions;
- harmonization of national regulations and reduction to a minimum of physical and non-physical barriers with the aim of facilitating the movement of persons and goods;

- stimulating the use of local, human, and material resources, the standardization of networks and of equipment, research and dissemination of techniques adapted to the African context in the building of transport and communication infrastructures;
- promotion of industry in the field of transport and communication equipment; and
- mobilization of technical and financial resources during the decade, with a view to promoting the development and modernization of transport and communication infrastructures in Africa.

These goals have to be realized through the implementation of projects classified in accordance with their relevance in meeting the problems of transport and communications in Africa as follows:

- regional projects;
- sub-regional projects;
- national projects with a regional or sub-regional impact;
- projects for the least developed, land-locked, newly independent, island and frontline and other majority ruled countries in southern Africa;
- projects of concern to other countries.

The summit decides also to implement the decade in two phases

Phase I: 1980 to 1983

- continued implementation of on-going projects;
- implementation of projects already identified and studied, and which are only waiting to be financed;
- identification of technical feasibility and economic studies of other projects and a search for their financing.

Phase II: 1984 to 1988

- continued implementation of projects undertaken in the course of the first phase;
- financing and implementation of new projects;
- continuation and identification of other new projects.

Mechanism, for the implementation of the decade

To ensure a proper and successful implementation of the decade, mechanisms for co-ordination and monitoring have been set up at both regional and sub-regional levels. These mechanisms will work in co-operation with the existing or planned national structures.

At the regional level ECA has been designated by the United Nations. General Assembly as the "lead agency" with over-all responsibility for the whole decade programme, including co-ordination of the implementation of the decade programme at all levels and assisting in the mobilization of the resources required.

In carrying out this work ECA, in collaboration with the OAU, will co-operate through an Inter-Agency Co-ordinating Committee with all relevant United Nations organizations.

A conference of ministers responsible for transport and communications matters should be convened every two years to follow up the implementation programme for the decade and to define the means for mobilizing the resources needed.

At the sub-regional level ECA set up, in 1977, Multinational Programming and Operational Centers (MULPOCs) in five African sub-regions (Eastern and Southern Africa, West Africa, Central Africa. North Africa and the Great Lakes Community). These MULPOCs will co-ordinate the implementation of the decade programme at the sub-regional level.

In each MULPOC the respective Ministers of Transport and Communications will review annually the implementation of selected projects under the decade.

First phase programme

1. In order to contribute further to the success of the United Nations Transport and Communications Decade in Africa, ECA was entrusted with the responsibility of drawing up the groundwork for the first phase of the decade programme, i.e., the identification of projects in the different sub-sectors of transport and communications.
2. These projects were subsequently screened and approved by the ECA Conference of Ministers of Transport, Communications and Planning in Addis Ababa in May 1979.
3. Resulting from that conference, the total projects and their costs have been published in two volumes entitled *Global strategy and plan of action: First phase 1980-83*.
4. Volume 1 contains an analysis of the present state of the various modes of transportation and means of communication in Africa and an attempt to formulate specific recommendations in the light of which projects have been identified.
5. A technical description of each of these projects and an estimate of its costs and advantages are compiled in volume II. This last volume is, in fact, divided into 12 sub-volumes corresponding to the 12 sub-sectors of transport and communications which have been analyzed.
6. The total number of projects ready for implementation during the first phase comprises 450 transport projects and 100 communications projects.
7. The cost of the 550 projects that are ready for immediate implementation, plus the cost for studies relating to the 221 remaining projects, amounts to a total of US\$8.85 billion, which is broken down into the various sub-sectors, as shown in the table below.

Transport	In millions of United States dollars	Percentage
I Roads and road transport (ROP)	1,796.19	20
II. Railways and rail transport	3,223.10	36.5
III. Maritime transport (SHP)	320.04	4
IV. Ports (HAP)	2,240.76	25
V. Air transport (AIP)	632.74	7
VI. Inland water transport (INP)	86.20	1
VII. Multimodal transport (MMP)	43.15	0.5
	8,342.19	94
Communications projects	In millions of United States dollars	Percentage
VIII. Telecommunications (TEP)	223.48	2.5
IX. Communications by satellite (SAP)	0.38	-
X. Broadcasting (radio and television) (BRD)	169.41	2
XI. Manpower training in telecommunications (MAP)	76.13	1
XII. Postal services (PO)	44.35	0.5
Subtotal	513.75	6
Total	8,855.94	100

Review, sector by sector, of the projects selected

Most of the projects selected by the Conference of Ministers were aimed at specific targets relating to the main problems encountered in the relevant mode of transport or means of communication.

Roads and road transport

Projects under this sub-sector are designed to promote the interconnection of national networks with those of neighboring countries. Most of them are part of the planned trans-African highway (its main trunks and feeder roads), the object of which is to provide, in the long run, an effective network for the transportation of goods and persons which will facilitate trade and communication within and between Member States.

Railways and rail transport

The projects selected under this sub-sector are aimed at making the present railway services fully efficient. They deal with rehabilitation of existing tracks, purchasing of new rolling stock, and with training programmes at all levels to improve operational and management techniques.

Maritime transport

The Member States have only recently become interested in maritime transport. They require technical assistance to set up the various activities required to develop this type of transport. Moreover, a large manpower training programme has been approved including the construction of two regional maritime academies as well as national nautical colleges.

Ports

African ports require a large programme of renovation and provision of modern equipment to enable them to cope with the growing traffic which they all now face. Thus, port projects were selected to meet these requirements. Furthermore, the importance of training for all categories of port staff has been emphasized in various identified projects.

Air transport

The development of air transport infrastructure in Africa calls for urgent improvement and provision of facilities and services required in Member States to meet the minimum standard and requirements essential for the operation of the critical aircraft. Projects for extension and modernization of airports represent the main body of the projects selected. Projects concerning training have been stressed and construction of few regional schools has been recommended.

Projects on technical assistance in the form of task forces to undertake *ad hoc* advisory missions and study activities which would encourage better air transport integration for the continent have been taken into consideration.

Inland water transport

The projects selected are either studies to determine navigability potential of African rivers and lakes as well as investments in those which are already in operation (e.g. setting up of river craft schools, renovation of ports, and buying of vessels).

Multimodal transport

Among the multimodal transport projects, a study on determining the scope of a transport institute and the condition for its establishment is the most prominent one.

Telecommunications

Projects in the telecommunications sub-sector consist first in the continued implementation of the Pan-African Telecommunication Network (PANAFTTEL) for routes which have already been studied and, secondly, in the survey of additional routes. Other projects deal with telecommunication management, development, operation and maintenance systems and the introduction of rural telecommunications.

Communications by satellite

The Member States have expressed a desire to establish a regional satellite communications system as a complement to the PANAFTTEL system. A feasibility study on such a regional satellite system and the holding of seminars or workshops on satellite communications has been selected for the first phase to implement this objective.

Broadcasting

Projects selected relate to the setting up and improvement of broadcasting, training institutes, manpower development, the provision and expansion of broadcasting facilities to rural areas as well as the exchange of programmes.

Postal services

The approved projects provide notably for the training of personnel, establishment of main sorting centers and regional transit centers, the development of rural postal services, the extension of gyro centers, post office savings banks and the establishment of workshops for making postal equipment.

Manpower development and training in telecommunications

The importance of qualified operational and management personnel, essential for effective communications development, will require, in the first phase, the establishment of training centers at national and sub-regional levels in the various fields of telecommunication operations, and the organization of specially oriented seminars and workshops.

Expected impact of the United Nations Transport and Communications Decade in Africa on the food situation in Africa, agricultural and industrial development, and the exploitation of Africa's natural resources, by Member States in co-operation with one another.

The Programme of Action of the Decade and the Strategy, for implementing it are aimed at encouraging, initiating, or restoring the movement of goods, information and people among the Member States. They are also fundamental to any policy for the continent having as its main economic aims:

- self-sufficiency in food;
- industrialization;
- the exploitation of Africa's natural resources and of its mineral resources in particular.

To be effective, this policy must take into account the possibility that countries and regions, although separated by frontiers, may be complementary to one another. This situation obviously calls for close co-operation between producers and consumers, and for interconnected transport and communications systems, which must be established where they do not already exist. This is precisely what the decade is intended to achieve.

The industrialized countries developed smoothly over the centuries. Economic, agricultural, and industrial development, therefore, generated, as a matter of course, the transport and communications infrastructure to meet their needs and requirements. The same is not true of Africa, which has a good

deal of leeway to make up in all fields if it is to catch up with the developed countries. Transport and communications together constitute an essential tool, which must be created, developed, and maintained, if African industry, agriculture, forestry and mining are to expand. African industries, however, which are in embryonic stage of development and are rapidly being left behind by the continuous progress of technology, and African efforts in the other fields mentioned above, will not be able at one and the same time to satisfy domestic needs and also to generate the necessary resources for these purposes at the present rate of progress. Transport and communications are thus a prerequisite for development: with their aid, the immense potential of the continent can be rationally exploited with some chance of complete success.

The Pledging Conference

After the African Ministers had approved this programme, and in preparation for the Pledging Conference which the Secretary-General of the United Nations was to convene, ECA took the initiative:

- of calling a meeting on 31 July 1979 with the ambassadors of the industrialized countries accredited to the Government of Ethiopia;
- of calling a meeting early in September with officials of EEC/EDF and the ACP Group in Brussels; and an appropriate resolution was adopted;
- of organizing in September and early October, when a large number of meetings were held in Brussels, missions to industrialized countries and financial institutions to explain to them the background, objectives and prospects for implementing the decade, the Programme of Action and the investments to be made, and to encourage them to increase their assistance to Africa in order to finance this programme;
- of calling, in New York, prior to the Pledging Conference, a meeting of the Inter-Agency Co-ordinating Committee on 12 November 1979, and a "pre-pledging meeting" on 13 November 1979.

The Pledging Conference which was held on 20 November 1979 resulted in

- firm commitments, exclusively by African countries, totaling US\$155,588;
- pledges for contributions for the development of transport and communications in Africa in the form of bilateral assistance by a number of industrialized countries, Nigeria (for its own programme), and various international financial institutions, totaling some US\$6.3 billion.

ECA was appointed "lead agency" for the Transport and Communications Decade in Africa by the United Nations General Assembly. In this regard ECA, in collaboration with the OAU, should play fully its role as coordinator, organizer and catalyst and should also prepare periodic reports on the implementation of the decade programme and take appropriate action to prepare the programme for the second phase for which it needs resources to be placed at its disposal. African countries and funding agencies should assist ECA and OAU in playing this role.

- one of the essential tasks of ECA in collaboration with OAU will be to ensure that African countries which took the initiative for the decade and which prepared and even approved the programme accord it first priority by including it in their national development plans;
- the donor countries and the financial institutions having shown their preference for bilateral assistance, African States should take the initiative of submitting to the various funding agencies those projects approved for the first phase, also achieve a consensus among countries involved in sub-regional and regional projects in their financing and implementation and to enable ECA to participate in any discussions between individual African States and donor country or organization on transport and communications projects;

- in order to enable ECA to prepare reports on the implementation of the decade programme for submission to ECOSOC and to the Assembly of Heads of State and Government of OAU, African countries and funding agencies should provide ECA with information as and when ECA requires it;
- in order to mobilize the necessary funds for implementation of projects other than national and for specific studies, technical consultative meetings with groups of donor countries and financing institutions will need to be held under the auspices of ECA regarding specific programmes and with the participation of governments, organizations within the United Nations system, the OAU and other African intergovernmental organizations concerned;
- with a view to participating actively in the implementation of the decade programme, it would be advisable for African countries to consider the possibility of earmarking part of the national budget and external assistance for purposes of the decade;
- the Interagency Co-ordinating Committee on the Decade should meet every year and, if necessary, before summits of Heads of State and Government of the OAU.

CHAPTER VII

Trade and finance

Trade

Domestic trade

Particular attention should be given to domestic trade and to improving the conditions under which it is now taking place, so as to optimize its contributions to the socio-economic development of Member States. To this end steps should be taken where appropriate:

- to promote internal trade at the national level, with particular attention to the potentials offered by the rural markets;
- to rationalize channels of distribution with a view in particular to minimizing the number of intermediaries and to ensuring control thereof by indigenous enterprises whether private or public or a combination of both;
- (c.) to keep a balance between investment in the domestic trade sector and investment in productive sectors in such a way as to ensure that the growth of the former does not jeopardize the growth of the latter.

Intra-African trade expansion

In so far as intra-African trade expansion-which is meant to constitute the mainstay for the present strategy-is concerned, the following measures are recommended:

Reduction or elimination of trade barriers

- interested countries, within the framework of their respective MULPOCs based at Gisenyi, Yaoundé and Tangier, should commence negotiations among themselves as soon as possible, with a view to establishing appropriate preferential trade areas or similar institutions, *not later than December 1984*. In this connection the establishment of a preferential trade area for the North African States should be accorded appropriate priority;
- in anticipation of establishing preferential trade areas or institutions by *the end of 1984*, inter-sub-regional negotiations should, commence thereafter but *not later than 1985* with a view to progressively reducing and eventually eliminating inter-sub-regional trade barriers;

- existing economic integration groupings which have advanced beyond the level of preferential trade area arrangements should be assisted in achieving more advanced co-operation arrangements among themselves;
- the reduction and eventual elimination of trade barriers should place particular emphasis on the exchange of essential goods while ensuring that no undue advantage is taken of the liberalization process;
- Member States should endeavour to eliminate all obstacles which have the effect of curtailing trade among themselves by *the year 1990*;
- Member States should grant to each other best favoured nation treatment in their integrational trade as soon as possible;
- all customs duties applied by member countries to intra-African countries (cereals, coffee, pulses, sugar, meat, maize, fish, oilseeds, rice, wheat, sorghum, tea, vegetable oils, etc.) should be substantially *reduced not later than December 1984*; and the machinery for negotiating further tariff cuts at intervals of two years be established at the regional level;
- all food products originating from member countries should be exempted from the application of regulatory non-tariff barriers except health requirements, *effective from January 1982*.

Mechanisms and measures for the facilitation and development of trade

- to minimize the use of foreign exchange and promote intra-African trade, studies should be undertaken by the OAU, ECA and other competent organizations as soon as possible on the demand and supply of major intra-African trade commodities with a view to assisting governments in establishing agricultural and non-agricultural commodity exchange arrangements at the sub-regional and regional levels *before the end of 1985*;
- Member States should endeavour to establish specialized marketing organizations in respect of their major export/ import commodities not later *than the end of 1985*, with a view eventually to establishing sub-regional and regional levels *before the end of 1985*, with a view eventually to establishing sub-regional and regional councils of buyers and sellers for each major commodity by *the end of 1985*;
- studies should be undertaken by the OAU, ECA and other competent organizations, and action should be taken to establish adequate bulk storage and conservation facilities for food commodities at the national and sub-regional levels, *not later than the end of 1984*;
- associations of state trading organizations should be established at the sub-regional level which should evolve into an African Association of State Trading Organizations *not later than the end of 1985*, with a view to harmonizing their operational policies and procedures and agreeing on the joint procurement of selected key imports among the countries concerned;
- governments should promote and facilitate the establishment of national Chambers of Commerce (where they do not exist), to include both state and private trading companies, with a view to establishing sub-regional associations (wherever they do not yet exist) and agree to facilitate the setting up of an African Federation of Chambers of Commerce *not later than 1985*;
- considering the need to promote foreign trade in general and intra-African trade in particular, all countries which do not have them should endeavour to establish trade promotion councils which should be responsible for the establishment of trade promotion centers with a view eventually to bringing such centers within sub-regional associations and expanding the activities of the Association of African Trade Promotion Organizations;
- to reduce the cost of trade promotion activities, Member States should endeavour to establish, through sub-regional associations of trade promotion centers and through the Association of African Trade Promotion Organizations, joint facilities for conducting market surveys, disseminating information on trade and training experts in foreign trade promotion;

- Member States should endeavour to establish within their territory the intermediate processing plants in their industrial production chain now located outside Africa in order to maximize the potentialities of intra-African trade;
- trade data banks should be established at the sub-regional and regional levels;
- countries which have not established national standards bodies should do so as soon as possible,
- membership of the African Regional Organization for Standardization (ARSO), which presently comprises only 19 countries, should be expanded to include all Member States by *the end of 1982*. ARSO should be entrusted with the task of establishing African regional standards for all products of interest to intra-African trade. If need be, ECA should be requested to offer the necessary advice and assistance;
- trade fairs and publicity campaigns should be held at least annually at the national sub-regional and regional levels, with particular emphasis on publicizing the quality of African products. In this respect, ARSO should operate a regional certification marking scheme with a view to certifying the quality of and promoting African products. A permanent "Buy African Goods" campaign should also be vigorously launched under the aegis of OAU and ECA within the framework of the all-Africa trade fairs, starting with the next fair to be held in 1980. Participation in these fairs should be confined solely to African countries with a view to promoting African products;
- Member States should identify goods which are largely consumed in rural areas with a view to promoting their production on a large scale and making them available for intra-African trade,
- the OAU and the ECA should conduct studies on border trade in the region, with a view to examining the extent to which such trade could make an optimum contribution to the socio-economic development of the continent;
- efforts should be made constantly to explore and exploit possibilities of processing locally available raw materials for marketing within the African region;
- African countries should take all appropriate measures (including trade fairs and campaigns) to promote the exchange of commodities consumed in rural areas at the regional and sub-regional levels;
- African countries should establish distribution enterprises where they do not exist and with necessary storage facilities for their major intra-African trade commodities at the national and sub-regional levels;
- multinational shipping enterprises and freight booking centers should be established by African countries at all the sub-regional levels *before the end of 1985*, and accorded appropriate preferential treatment in intra-African trade;
- furthermore, African countries should co-operate in the establishment and improvement of the necessary transport and communications links among themselves as well as insurance facilities for indigenous tradesmen with a view to securing the quick and efficient movement of trade goods and their preservation during such movement.

Establishment of African multinational production corporations and joint ventures:

- given the large potential for trade creation which exists within the African region. priority should be accorded to investment in the production sector as a first step to intra-African trade expansion;
- co-operation in processing of domestically available raw materials should be encouraged through the establishment of joint or multinational corporations;
- countries should conclude long-term purchase and supply contracts as a means of promoting their mutual trade.

Establishment of an African Common Market.

The above measures, including those for the establishment of sub-regional arrangements and the strengthening of existing ones, are meant to converge on the establishment of an African Common Market.

International trade

Measures should be taken to diversify, both geographically and structurally, Africa's present trade patterns. These measures should include:

- systematic exploitation and exploration of trade and economic co-operation potentials with other developing regions and countries. The summit notes the adoption of the proposal for a generalized system of trade preferences among developing countries by the inter-regional meeting on ECDC held in Geneva in March/April 1980. The creation by the inter-regional meetings of a Committee on the Generalized System of Trade Preferences implies that Africa should be adequately prepared for the negotiations. The Secretariats of the Organization of African Unity and the Economic Commission for Africa are therefore called upon to provide the necessary logistic support for African participation in the negotiations on the GSTP among developing countries.
- promotion and expansion of trade and economic co-operation with the developed countries having centrally planned economies, taking into account Member States' due right to determine their own individual policies in this respect.
- measures to ensure control of foreign trade by national structures, whether this is effected by way of state intervention or private indigenous corporations, or a combination of both;
- measures to set up a new trading framework at the international level including agreement on new trading rules and principles covering, inter alia, structural adjustment, preferential treatment for developing countries and elimination of protectionist measures aimed at hampering access of manufactures and semi-manufactures from developing countries to markets of developed countries;
- regulation of the operations of transnational corporations in the region with a view, in particular, to eliminating all forms of restrictive business practices and controlling transfer pricing;
- by the year 2000, Africa's share of world industrial production should reach 2 per cent and efforts should be made to increase Africa's share of world trade in manufactures within the framework of the 25 per cent target which has been set for developing countries as a whole.

Finance

At the national level, wherever appropriate, new monetary policies should be devised including:

- the complete restructuring and reorientation of the policies and programmes of monetary and financial institutions imported into Africa (central banks, commercial banks, etc.) in such a way as to integrate them better in the development objectives of each country;
- Member States should ensure that available funds are properly used by taking appropriate measures to fight against the waste of financial resources in all their forms;
- national commercial banks and other appropriate financial institutions should be encouraged to extend credit, including short-term credit, to exporters of intra-African trade commodities;
- such measures as will assist in the integration of the so-called modern (urban import/export) sector with the rest of the economy;
- the establishment of institutional machinery geared to the mobilization of domestic financial resources, particularly in the form of national savings.

At the sub-regional levels

- each sub-region should review whatever financial co-operation arrangements exist among Member States, with a view to integrating them into one sub-regional multilateral clearing and payment arrangement *not later than the end of 1984*;

- for those sub-regions where institutional payments arrangements do not exist, Member States should embark on negotiations to establish appropriate clearing and payments arrangements concurrently with the negotiations on the creation of preferential trade areas and *not later than the end of 1984*;
- following the establishment of institutional clearing and payments arrangements in all sub-regions, Member States should embark on negotiations for linking up such arrangements to form an African Payments Union *before the end of 'this decade*;
- development finance institutions should be established, wherever appropriate, in all sub-regions covered by the respective MULPOCs, *not later than the end of 1984*;
- coordinated measures should be taken to establish financial markets at the national, sub-regional and regional levels;
- associations of African Central Banks, in collaboration with the Caribbean and Pacific Central Banks, the OAU Secretary General and the Project Co-Ordinator, in conformity with the UN Recommendations, should take all appropriate measures for the establishment of the ACP Bank of Foreign Trade and Investments.

At the regional level

- the African Development Bank should be financially strengthened so that it may be able to offer more assistance to Member States, particularly the least developed ones among them;
- an African monetary fund should be established;
- an African mutual guarantee and solidarity fund should be set up.

At the international level, Member States should

- Intensify efforts, with a view to resuming international negotiations on a fundamental reform of the international monetary system;
- take necessary steps with a view to establishing an adequate international framework to sustain their development efforts;
- appeal to industrialized countries and international financial institutions to give increased financial assistance and aid to Africa.

Participation in international negotiations

The following steps should be taken:

- Member States must urgently act to increase their effective participation in international economic negotiations;
- an integrated approach to international negotiations should be adopted, with the view to ensuring that African countries benefit as much as possible from these negotiations. All measures proposed in different areas of negotiations should be consistent with one another and should fit into the global pattern of negotiations for the establishment of new African and world economic orders;
- Member States should take steps to establish appropriate structures for the training of qualified senior officials in international economic relations and negotiations;
- all Member States should establish appropriate structures and machinery for ensuring that the agreements reached, and arrangements made in international negotiations are properly implemented;
- measures should be taken to set up permanent national, sub-regional and regional machinery dealing with the information, consultation and co-ordination aspects of international negotiations.
- At the regional level it is recalled that the Ministerial Follow-up Committee on International Trade and Finance for African Development, which the sixth session of African Ministers decided to create, will be responsible for:

- monitoring the implementation of the African strategy in the field of international trade and finance, including intra-African trade and finance as part of the over-all development strategy for Africa;
- coordinating, harmonizing and preparing the African position on issues relating to international trade and finance for development;
- reviewing from time-to-time progress made in the implementation of multilateral agreements between African countries and the outside world in the field of international trade and finance.

CHAPTER VIII

Measures to build up and strengthen economic and technical co-operation including creation of new institutions and strengthening of existing ones

The need to establish institutions which can help Member States, collectively, to develop capabilities and infrastructures essential for their economic and social development and which, individually, they are too poor to set up, was recognized soon after the establishment of ECA. Among the first such institutions to be established by ECA are the African Development Bank (ADB), the Association of African Central Banks and the African Institute for Economic Development and Planning (IDEP). ADB, to which all independent African States belong, has, after a slow start, developed into a useful tool for development: it has enlarged its sphere of activities and its resources. Other institutions have, however, been less successful.

The various institutions that have been established, all at the request of African governments, in fields such as natural resources, science and technology, industry, training and human resources and transport and communications, have all suffered from the ill effects of lack of follow-up in the implementation of political decisions. This lack of effective follow-up finds expression in various ways, the commonest one being that after pressing for the establishment of an institution, many African governments, even after having approved the legal document setting up the institution concerned, either fail to become members of the institution or, if they do, fail to give it adequate financial and material support. The net result is that the growth of such an institution is stifled, disillusion sets in and the collective self-reliance of African countries is undermined. Member States must realize that the success or failure of the institutions which have been established at their request for their collective development lies in their own hands.

A more alarming development is the fact that potential donors, which promised assistance to various institutions at the time of their establishment, now appear to want to give assistance to them only if their membership is increased so as to give them a more truly sub-regional or regional character. Potential members of institutions, it is also believed, wait to see how well, or otherwise, institutions develop before deciding to join them. The unhealthy vicious circle thus engendered is one that frustrates the establishment and development of multinational institutions.

The lack of financial support in respect of multinational institutions by its members is the bane of nearly all multinational institutions established under the aegis of the ECA secretariat at the request of African governments, and which are all to be operated principally on the basis of contributions from its members.

It is clear that the problems that face African multinational institutions are mainly the result of two factors, namely restricted membership which, in turn, affects the finance of the institutions and the apparent reluctance of some members to pay their contributions, or a combination of both. It is

undeniable that, given the limited resources of Member States, institutions for collective co-operation such as those referred to in this chapter are essential to the economic and social development of Africa. What is, therefore, required is some method of ensuring that such institutions achieve their full quota of membership and that sufficient funds are available to them to ensure their efficient and effective functioning.

Multinational institutions particularly affected are those in the field of natural resources, such as the Regional Centre for Training in Aerial Surveys, the Centre for Services in Surveying and Mapping, the East African Mineral Resources Development Centre, and the African Remote Sensing Council. Other multinational institutions which have also been affected by the lack of political and financial support are, inter alia, the African Regional Centre for Technology, the African Regional Organization for Standardization, and the Association of African Trade Promotion Organizations.

Since, however, the vital role of an appropriate number of multinational institutions to the economic and social development of Africa cannot be gainsaid, steps must be taken to ensure that new multinational institutions are established only after careful considerations of their necessity, objectives and activities and where there is clear indication that they will obtain the political as well as the financial support of Member States. As regards existing multinational institutions, they should also receive the fullest political and financial support of Member States. It is therefore proposed that the following guidelines should be followed for the strengthening of existing multinational institutions and the establishment of new ones:

- the Executive Secretary of ECA and the Secretary General of the OAU, in co-operation with UNDP and major donors, should undertake an assessment of the objectives and operations of the various existing multinational institutions established under the aegis of the Commission with a view to making proposals as to their continued relevance and effectiveness and to advise on ways and means by which they may be better rationalized, coordinated or harmonized, or what new multinational institutions shall be required.
- existing multinational institutions should be strengthened by the prompt provision to them of the political and material support of all Member States which supported their establishment, since without such support, the purposes of the establishment of the multinational institutions would be undermined and frustrated.
- no new multinational institutions should be created unless their creation has been thoroughly examined and after the possibilities offered by national institutions, of existing multinational institutional ones, have first been fully considered.

In addition, appropriate arrangements should be made for the use of existing mechanisms and institutions in the promotion of technical co-operation among Member States, on the one hand, and between the Member States and other non-African developing countries, on the other, as recommended by the Buenos Aires Plan of Action for Technical Co-operation among Developing Countries (TCDC).

CHAPTER IX

Environment and development

The main recommendations to promote environmentally sound socio-economic development in the Plan of Action for Africa in the context of the Monrovia strategy for the 1980-90 development decade are summarized below:

- African governments must identify priority areas of environmental concern within their countries for concerted effort to combat environmental problems;
- the Plan of Action at the national level should incorporate the development of policies, strategies, institutions and programmes for the protection of the environment;
- regional co-operation in tackling environmental problems with trans-boundary effects is recommended and Member States must also seek international support, advice, and financial resources to implement action on environmental assessment and management.

The priority areas of environmental concern requiring immediate action in Africa are as follows:

- Environmental sanitation and health and safe drinking-water supply Action is required to utilize urban wastes for the production of biogas to save energy and for conversion of garbage into manure; combating of water-borne diseases; control of water pollution from agricultural and industrial effluents for the provision of safe drinking-water; and removal of contaminants from food and drugs.
- Desertification and drought. Promotion of reafforestation programmes with native trees and adaptable exotic species as wind breaks, indigenous grasses for soil stabilization, exploitation of underground water for irrigation, maintenance of carrying capacity of the lands, establishment of meteorological and hydrological monitoring stations; enforcement of strict land management are some of the major measures which should be taken.
- Reforestation and soil degradation. Preventive action must be taken to convince local farmers to incorporate agro-silvicultural practice in shifting cultivation to ease the pressure on firewood and charcoal production as energy sources; other alternative actions required involve creation of woodlots around urban centres as fuel for cooking, and the use of other energy sources such as biogas, solar and wind.
- Marine pollution and conservation of marine resources Pollution control from land-based industrial wastes and oil from shipping, stricter control of fish exploitation in the economic zone by foreign transnationals, are measures which must be taken to deal with the problem.
- Human settlements. Better planning of towns and villages for space allocation of facilities; proper ventilation of houses and construction of low cost dwellings using local materials; and creation of rural development projects using appropriate technology to ease rural-urban population migration, constitute some important steps which need to be taken.
- Mining Establishment of programmes to rehabilitate mined-out sites by removing earth tailings; filling-up ponds to eradicate water-borne diseases; and control of toxic heavy metal poisoning in crops grown in certain mined-out soils-these measures must be taken.
- Air pollution control Establishment of stations for monitoring air pollutants from factories, automobiles and electrical generators using coal; control of the importation of pollutive industries (cement, oil refineries and tanneries), maintenance of pollution standards for environmental quality, and noise control.

- Environmental education and training, legislation, and information Creation of national programmes in environmental education to develop environmental consciousness in the population, improvement of legislation and law enforcement to protect the environment; and collection and dissemination of environmental data to monitor the state of the environment in Africa.

At the national level the Plan of Action requires governments to define realistic policy options, strategies and programming for the incorporation of environmental considerations in development planning. For institution building, a national co-ordination machinery to monitor environmental problems for action, develop environmental education and training programmes and advise on environmental legislation, should be set up in each African country. The work of the secretariat can be supported by a national environmental committee to advise governments on policies, on national standards and norms for environmental quality, on the formulation and implementation of national programmes to combat priority environmental problems and to liaise with international organizations on environmental matters.

Regional and sub-regional co-operation should be strengthened by the establishment of an intergovernmental committee on environmental matters, supported by its technical group of experts, as a sectoral subsidiary body of the Regional Commission (ECA). Such a body can examine the regional environment programme, order priorities for action in the region and sub-regional MULPOCs and seek financial resources for the implementation of the agreed action plan, especially to combat transboundary environmental problems.

The Plan of Action calls on Member States to co-operate with international organizations dealing with environmental matters and the industrialized countries for technical assistance in tackling priority environmental problems. International co-operation is also required in the provision of educational software on the environment, training facilities, scientific equipment to establish environmental monitoring centers, development of environmental protection legislation and data bank storage-retrieval of environmental information for countries within the region.

CHAPTER X

The least developed African countries

The Assembly of Heads of State and Government endorses the conclusions and recommendations for the Conference of African Least Developed Countries held between 17 and 22 March 1980 at Addis Ababa on the "Problems and Perspectives of the Least Developed African Countries". These conclusions and recommendations were based on a report of experts appointed by the UNCTAD Secretariat in accordance with a decision taken in UNCTAD V. The report offers strategies, priorities and programmes for the least developed African countries.

The experience and individual Member States indicate that common problems exist which require similar courses of action. Any success in the implementation of the Comprehensive New Programme of Action requires the assessment of priorities for domestic policy and international assistance. Therefore, the summit recognizes the urgent need for Member States to attain the following objectives and measures:

- the primary responsibility of developing their economies remains with the African least developed countries themselves and the total political commitment of the Member States to the pursuit of these objectives is necessary;
- social and economic reforms should be undertaken by these countries themselves to ensure that the benefits of all productive efforts are shared equitably by the total population and also to ensure full participation of the people in the development process;

- development of national capabilities should be accelerated in order to utilize efficiently and exercise full control over their natural resources, on the one hand, and to lay a strong scientific and technological infrastructure for rapid economic growth and transformation, on the other hand; and
- they should establish a self-reliant and self-sustaining economy as rapidly as possible.

For the fulfilment of the above objectives, priority action areas should include the following:

- the development of the agricultural base in order to achieve, not only self-sufficiency in food production, but also production of an adequate surplus. Emphasis should in particular be given to the increased production of grain and cereals which now account for a major source of foreign exchange drain. Since currently about 30 to 40 per cent of the food in African countries is wasted due to the lack of adequate handling, marketing and storage arrangements and transport facilities, there is need for an integrated programme embodying the production, processing and marketing of agricultural products along with massive investment in irrigation systems, training farmers in the use of improved techniques, price policies to ensure sufficient incentives to farmers to increase production and, finally, an adequate transportation network. Since many African least developed countries suffer from chronic food insecurity, emphasis needs to be given to national, sub-regional and regional food security programmes;
- making industry a leading sector of the national economy so that the state of gross underdevelopment is brought to an end. Emphasis should be given to the establishment of a sound industrial base with strong linkages to agriculture and priority should be accorded to the processing of locally produced raw materials and to the production of basic inputs to agriculture;
- the development of transport and communications with emphasis on building local capacities for the construction and maintenance of feeder roads in order to ensure efficient production and distribution of goods and services. Stress should also be laid on the improvement of transit services for land-locked countries and on the development of multimodal transport systems. In view of the special conditions prevailing in these countries coastal countries are requested to facilitate their access to the sea and to provide them with port facilities. The accelerated development of transport and communications is essential not only as a first step towards regional co-operation and integration but also as a means of opening up land-locked countries;
- the development of a national education and training programme with a view to ensuring an appropriate linkage to the production processes as well as to internal and external marketing activities and to product development,
- the development of energy potentials and, in particular, renewable sources of energy, so as to reduce dependence on external sources;
- the improvement of their development planning and administration including data collection, processing and dissemination, in order to strengthen their capacity to formulate and implement plans and programmes as well as to facilitate the monitoring of progress at the regional and international levels;
- the strengthening of efforts to redress drought and combat desertification.

The international environment in which Africa's least developed countries are required to sustain their economics has been extremely oppressive and indeed exploitative. The least developed countries neither get fair values for their products nor receive any protection for the accelerating cost of technology and essential imports, including the cost of importing oil.

The summit therefore endorses the following recommendations

That the volume of Official Development Assistance (ODA) to African least developed countries should immediately increase substantially, in real terms, so that these countries can realize economic and social changes and make real progress in the present decade. In that context, donors should:

- make commitments to give financial and technical assistance to individual least developed African countries on a continuous and automatic basis and on highly concessional terms;
- streamline procedures of aid in order to reduce delays in approving projects and in disbursing funds;
- adopt criteria for project evaluation and selection based on the conditions and needs of African least developed countries;
- refrain from using non-economic criteria in the allocation of aid;
- create mechanisms to control the implementation by donor countries of their aid commitments;
- cancel all debts so far contracted by Member States concerned, without any discrimination; and
- make greater efforts in granting aid in favour of the least developed Member States;

That appropriate mechanisms be created urgently, at the international level, in order to finance the oil requirements of African least developed countries and to reduce the existing heavy burden on their balance of payments and the uncertainty in oil supply.

The forthcoming United Nations Conference on the Least Developed Countries offers an unprecedented opportunity to the international community to examine exhaustively and comprehensively the historical, geographical and prevailing economic factors relating to the least developed countries and to embark on an irreversible international process committed to real economic growth and justice.

The summit further endorses the recommendations that:

the country programmes envisaged in the Substantial New Programme of Action for the Least Developed Countries should be built on the existing development plans and programmes which the African least developed countries have and should not disrupt.

- for the purpose of the United Nations Conference in 1981, least developed countries should not be asked to prepare detailed programmes for the whole decade of the 1980s, but rather to focus on the first five years;
- the United Nations Conference on the Least Developed Countries should not degenerate into an occasion which would require the poor countries to beg for aid. This would be contrary to the concept of world economic interdependence. The United Nations Conference should emphasize the need to take co-operative measures, without delay, to assist the least developed countries in their efforts to attain self-reliance and self-sustaining growth. The preparation and actual conference arrangement should take fully into account the sovereignty of participating States.

As far as the role of ECA during the Third United Nations Development Decade within the framework of the African strategy in the 1980s is concerned, ECA-as the main organ of the United Nations in Africa, and in close co-operation with the OAU-is responsible for initiating and participating in measures for facilitating concerted action for the socio-economic development in Africa.

Furthermore, considering the Development Strategy for Africa for the Third United Nations Development Decade and the mandate given to regional commissions by the General Assembly in its resolutions 32/197 and 34/206 it is imperative that the ECA in collaboration with the OAU be totally involved in the development process of African least developed countries, particularly since about two-thirds of the world's least developed countries are in Africa and comprise almost half the membership of ECA Member States.

- ECA has a special role to play in the monitoring, review and evaluation of the implementation of the Comprehensive New Programme of Action on behalf of least developed African countries in accordance with resolution 5 (iii) of UNCTAD inter-governmental Group on the Least Developed Countries.
- with regard to the preparations for the forthcoming United Nations Conference on Least Developed Countries scheduled for 1981, UNCTAD has the paramount role in the global United Nations organ designated by the General Assembly to prepare for the Conference. Since, however, ECA is the

Regional Commission covering two-thirds of the world's least developed countries, UNCTAD should work closely with OAU and ECA in the preparation of the conference.

- while it is recognized that the UNDP, the specialized agencies and UNCTAD have a responsibility for resource mobilization at the global level, OAU and ECA should be involved in the various donor-recipient consultations, including the country roundtables envisaged for the preparation of the country programmes.

In view of the large number of least developed countries in Africa and in order to ensure the effective monitoring, review and evaluation of regional and international activities on behalf of the least developed countries it is decided that a Conference of Ministers of African Least Developed Countries be instituted by the ECA Conference of Ministers as a subsidiary organ of the Commission. The sessions of this conference should take place a few days before the ECA Conference of Ministers. Furthermore, in order to develop the capacity to undertake the substantial and continuous technical work that needs to be undertaken on behalf of the African least developed countries it is necessary to strengthen the capacity of the ECA secretariat in coping with the additional responsibility. Accordingly, a special unit within the secretariat of ECA responsible for the special problems of the least developed countries and monitoring the implementation of the special measures in favour of least developed African countries should be set up.

It is also recommended that ECA should expand its work on projection models for the least developed countries since these models are a useful tool for programming and policy formulation. It is further recommended that the annual *Survey of economic and social conditions in Africa* should contain a special section on individual African least developed countries which should contain a review of the implementation of special measures in favour of the least developed countries.

There is need to review the present classification of least developed countries based on in-depth study of the socio-economic conditions of all countries concerned. It is specifically recommended that a review of the socio-economic conditions of those African countries which have already requested to be included in the list of least developed countries, namely Djibouti, Guinea-Bissau, Equatorial Guinea, Sao Tome and Principe and the Seychelles should be undertaken as a matter of urgency and that the procedure for identifying least developed countries should be expedited so that all these countries could be identified as least developed.

The three criteria currently used to identify the least developed countries do not permit all aspects of the level of socio-economic development of these countries to be grasped. It is therefore recommended that other socio-economic criteria be developed in order to better understand the situation of the least developed countries.

CHAPTER XI

Energy

The African energy situation is disturbing. Energy consumption is rising faster and faster to the point of arousing serious anxieties about the continent's future energy supplies. The continuous rising of petroleum prices has serious impact on the economies of African countries. As far as Africa is concerned, the main related problems are the following:

- the lack of a national energy policy in most African countries and of short, medium and long-term energy development programmes;
- the non-integration of energy activities in over-all national development planning efforts;

- the need to undertake an exhaustive inventory of all energy resources, having regard to their potentials, possible development and utilization, including energy needs and suitable equipment;
- the urgency to undertake an inventory of the existing and needed manpower in Africa in the field of energy;
- the need for African countries to undertake joint action for the development and utilization of existing energy resources on the continent, for which co-operation would have to be initiated or expanded (where it already existed) in the energy field at the sub-regional and regional levels;
- the lack of funds for the implementation of energy development projects;
- the need to intensify exploration of hydrocarbons and coal resources, especially in those areas which had not yet been explored;
- the desirability of an increased use of hydrocarbons for the development of petrochemical industries and transport rather than for the production of electrical energy;
- the difficulties existing in Africa in the transportation of energy, the lack of standardization in the electricity sector, the shortage of qualified manpower (scientists, technicians, and management cadres) and the exorbitant prices which African governments often had to pay for imported energy and equipment;
- the lack of a suitable framework for concerted action and co-ordination which had made it difficult to implement the recommendation made at earlier meetings on the subject of energy.

These points emphasize the urgency of the energy issue in Africa and the necessity to find adequate short, medium, and long-term solutions. These solutions can be defined within the framework of the following objectives:

- the availability of energy resources in Africa should be increased rapidly, and in increasing quantities, so as to ensure endogenous and self-sustained development;
- energy sources should be diversified;
- a solution should be found quickly to the problem of the supply of hydrocarbons, so that the existence of the most disadvantaged African countries as sovereign States is not threatened;
- better living conditions should be provided for inhabitants of the rural areas by making better use of energy resources and by achieving self-sufficiency in food.

Taking into account the above-mentioned objectives, the following priorities can be outlined; they should embrace the following areas:

- the development and utilization of fossil fuels (hydrocarbons, coal, lignite and peat);
- the increase in utilization of the continent's hydropower resources;
- the development of new and renewable sources of energy (solar, wind, geothermal, biomass and others);
- the utilization of nuclear energy.

A real political will be capable of promoting genuine co-operation and active solidarity should be asserted. It is in this spirit that the following Plan of Action is proposed.

Short-term plan

Hydrocarbons supplied to African countries: everything possible should be done to ensure stable and guaranteed supplies of oil to African countries;

- arrangements must also be made for African oil producing countries to increase their assistance to other African countries wherever possible in the training of cadres and technical staff and in prospecting for and exploiting of oil deposits;
- it is also recommended that African experts should be placed at the disposal of Member States who so desire in accordance with the 1975 OAU Intra-African Convention Establishing African Technical Co-operation Programme;

- with regard to oil prices, and to demonstrate African solidarity, various ways of integrating the impact of oil prices, particularly on the balance of payments, can be suggested such as preferential tariffs, a compensation fund financed from African and possibly external contributions, including the planned OPEC fund to partially offset balance-of-payments deficits and finance development projects.
- It should be noted that there are problems associated with the lack of storage and distribution infrastructures, the existence of middlemen and the shortage of senior technical staff. To reduce the risk of misdirection of supplies, there should be direct negotiations between producing and importing countries. To alleviate the difficulties caused by monetary transactions, it is suggested that the possibility of importing countries being allowed to pay in local currency, or to use bartering, be studied.

Medium and long-term plans

Fossil fuels. Efforts in this area should include:

- intensification of geological and geophysical exploration in non-producing countries;
- evaluation of known hydrocarbon resources and their potentials;
- offshore exploration for hydrocarbons;
- development of known coal-bearing areas and exploration of new regions with similar geological conditions;
- assessment of coal reserves and integration of coal utilization in national energy planning;
- establishment of machinery to co-ordinate activities and formulate policies for national development and utilization of hydrocarbons;
- establishment of training and research institutions in the field of fossil fuels exploration, development and utilization.

Development of hydropower resource

Measures taken in this area should embrace undertaking of:

- inventory of hydropower resources in all African countries, taking into account their integrated utilization such as electricity, irrigation, fisheries and navigation, etc.;
- surveys of hydroelectric power plants and master plans at the scale of whole river basins for an optimum exploitation of the resources, which should include rural electrification;
- promotion of standardization in power supply equipment and expansion of interconnection of grids (including a decrease in the number of existing voltage levels);
- manufacturing of electrical equipment suitable to the needs of African countries by utilizing local raw materials.

Development of new and renewable sources of energy

In this area the following measures are proposed:

- intensification of geothermal exploration with the use of modern exploration methods;
- continuation of scientific and technological research for industrial application of geothermal resources as a source of generating electricity, for heating, cooking processes, extraction of minerals and production of water and steam;
- establishment of geothermal power-generating pilot plants;
- surveys of possibilities and feasibilities of harnessing tidal waves and ocean thermal energy, including research in the techniques to be used for such forms of energy;

- intensification of research on economic conversion of solar energy into mechanical or electrical energy; examination of potentialities of solar heating systems and solar distillation of saline water; development of instruments for measuring solar radiation and establishment of modern stations;
- establishment of sub-regional and regional machinery for co-operation and co-ordination of solar energy activities in Africa;
- development of economically attractive small-scale hydro-electric power schemes for rural areas;
- need for neighboring countries to exploit hydro-electric installations jointly. In that connection, certain commonly neglected parameters should be taken into account such as the need to protect the environment, health problems and the relocation of displaced people;
- evaluation of the needs to be satisfied since the investment required is large. As far as the conveyance of energy over long distances is concerned, the advantages of direct current should be considered in the future;
- study on internationalizing the status of installations from the point of view of insuring safe supplies of electrical energy;
- when finance is being sought, projects should be given a sub-regional and possibly regional character, so as to make better use of the priority often given to undertakings of that type;
- in the search for solutions to the energy problem, priority should be given to sites with great hydropotential, since their enormous potential would make it possible to consider interconnecting a large number of African countries;
- establishment of national boards for rural electrification.

Utilization of nuclear energy. Actions in this area include the following:

- nuclear-fuel-producing countries should think of conserving their resources for the future;
- the necessary technical cadres should be trained, and research encouraged so as to follow technological developments in the field and be able to make the right choice when the time comes;
- in future thought should be given to using the uranium produced in Africa as a source of energy by building nuclear power stations in the form of joint projects among neighboring countries in view of the size of the plants which would probably be available.

Modalities for Implementation

To rapidly and efficiently implement this Plan of Action, the following recommendations are endorsed:

1. urgent establishment of an African Energy Commission² responsible for:
 - coordinating all activities being undertaken in the field of energy in Africa, assisting African States in the formulation and co-ordination of energy policies and programmes and disseminating data and information pertaining to energy on the continent;
 - promoting the preparation, as a matter of urgency, of an exhaustive inventory of all energy resources on the continent;
 - promoting the establishment of an African Nuclear Energy Agency, with a view to following up development in nuclear technology, formulating and harmonizing nuclear energy development programmes in Africa and providing manpower training in the nuclear field;
 - promoting the establishment of a Regional Geothermal Energy Centre in order to assist African countries to explore and exploit their geothermal resources;'
 - establishing an appropriate framework for the implementation of recommendations made at earlier meetings in the field of energy.
2. possible establishment of an African Energy Development Fund designed specifically to finance the implementation of energy projects in Africa;

3. urgent establishment of a Regional Solar Energy Centre, the objectives of which are outlined in the constitution already approved by the ECA Fifth Conference of Ministers, held in Rabat in March 1979. In this connection, it is urgent for Member States to sign the said Constitution in order to make the center operational as soon as possible;
4. particular attention should be paid to renewable energy resources, such as solar energy, wind energy, biomass and geothermal energy, and research and development in these fields should be intensified;
5. special attention should be given to reafforestation following the intensive use of wood for heating and charcoal as the main sources of energy;
6. the highest priority should be given to the use of hydro-electric resources, particularly by developing small hydro-electric power stations;
7. national arrangements for controlling and managing activities involving hydrocarbons should be strengthened;
8. the African countries should take joint action to develop and use the energy resources available in the continent, through co-operation and solidarity, with a view to safeguarding their economic development and survival;
9. priority should be given to the rapid implementation of the recommendations and resolutions already adopted on energy problems.

CHAPTER XII

Women and development

1. The Second Extraordinary Session of the Assembly of Heads of State and Government takes note of the report of the Second Regional Conference on Women and Development and the strategies proposed.
2. The importance of giving special attention to women in the analysis of the reported situation and to measures to be taken in each of these sectors (industry, agriculture and trade, etc.), which have been previously considered, is acknowledged. The steps to be taken to solve the problems of African women should not be marginal and separate from the question of over-all development.
3. The strategies related to women adopted at national, sub-regional and continental levels should spread as widely as possible.
4. It was pointed out that actions taken during the first half of the Women's Decade were not enough, in spite of the efforts which have been made within Africa.
5. It is agreed that the strategy relating to women should include the following fields: agriculture and nutrition, handicrafts and small-scale industries, employment, education and training, science and technology, trade, natural resources, especially water supply, energy, health and family life, population, research, mass media and establishment of national and sub-regional machineries for integration of women in development.
6. Steps should be taken to include women in higher administrative and policy-making levels.
7. Member States should give special attention and effective support to the Pan-African Women's Organization and see to it that this organization fully plays its role.
8. Steps should also be taken to lessen the domestic burden of rural women and also provide supporting services for women workers.
9. Considering the many sectors which should be covered, the following fields have been chosen for the period 1980 to 1985.

Organizational machineries

1. To make these national machineries functional it is necessary for Member States to provide adequate resources and technical personnel. The experience gained indicates that the variety of socio-political and economic structures of Member States necessitate a less rigid formula for establishment of these machineries. Organizations established to meet the needs of women should be functional, technically competent, and should reach rural women. A strategy that should complement the establishment machineries is the promotion of a women's unit in planning ministries and commissions to feed and monitor national development plans with data of women and to integrate a plan of action in national strategies. The establishment or strengthening of the women's unit in collaboration with Member States will be a major preoccupation of OAU and ECA in the second half of the decade.
2. The strategy for period 1980 to 1985 will involve the strengthening of the Women's Programme of each MULPOC by providing manpower and resources for projects. A high priority will be given to measures aimed at assuring their research capabilities. The part of coordinator of women's programmes should be strengthened, making it the major channel of communication between the Member States of the sub-regions and ATRCW.
3. ATRCW strategy is to include a women's dimension in a different division of the ECA. The center will endeavour to use existing research and training institutes within Africa as additional instruments for the implementation of its programme. OAU/ECA will assist both (a) in the development of programmes in institutions directed to women, and (b) in the introduction of programmes which meet the special needs of women, such as development planning and upgrading of intermediate rural workers. Some of the institutions concerned include PAID, ENDA, CAFRAD, the Arusha Management Institute and the Centre for African Family Studies.
4. Since data collection remains an important tool for planning, OAU/ ECA/ATRCW will co-operate, and co-ordinate their activities, with the Centre for Social Development and Humanitarian Affairs and with the International Institute for Training and Research for Women.

Education and training

1. *Planning and policy implications*

- all projects for increasing and diversifying education and training of women and girls must be planned and executed within the context of over-all national planning for manpower needs;
- national educational policies and programmes must take due cognizance of the national economy and employment objectives in order to provide education and training geared to equipping women for effective participation in the economic life of Africa. The objectives of the new international economic order should be taken into account when preparing national education and training policies.

2. *Formal education*

- special efforts should be made to ensure that girls with the ability to advance to higher levels of education or to specialized training receive education and training suited to their aptitudes, with the help of special nurseries for those whose sponsors could not meet the costs;
- special subjects in nutrition, family law, and sex education, for example, should be introduced to both girls and boys;
- in the fight against juvenile delinquency, out-of-school activities, improvement of playgrounds, cinemas, clubs, etc., should be developed further and manual and cultural activities should be given their proper place in intellectual training. These measures will help develop a sense of what is good and beautiful.

3. *Literacy*

- because illiteracy among women constitutes a major obstacle to their participation in economic life of Africa, dynamic programmes to eradicate illiteracy should be adopted and target dates set for its elimination;
- in literacy campaigns emphasis should be placed on functional literacy and on teaching subjects which are of special interest to the community;
- in accordance with the Algiers Cultural Charter, functional literacy programmes should be conducted in national languages. In this connection, an appeal is made to UNESCO to provide national institutions with teaching materials adapted to teaching national languages;
- cheap transistor radios and inexpensive and graded literature for mass education should be made available. Radio and television programmes should also include more items on civic and political education of women.

4. *Adult education*

- adult education programmes should be geared towards increasing awareness and full participation of women in the modern world of science and technology;
- women should be encouraged through adult education programmes to take part in activities of trade unions and to be informed of their civic responsibilities.
- adequate facilities should be made available in the community for women to continue their education with opportunities made available in such fields as nutrition and family health.

5. *Training*

- the number and variety of vocational institutions for women should be increased, bearing in mind the following points: differences in the level of education; those who have no formal education at all; the existing employment opportunities and future job opportunities, in the light of growing industrialization and technological advancement;
- vocational training should be encouraged and valued;
- training of agricultural extension workers, social welfare workers, community development officers and other rural workers should be carried out, keeping in mind the needs of rural women;
- emphasis and priority should be put on training of instructors, with equal access for girls and boys at all levels, giving special consideration to appropriate agricultural technology;
- training should be offered to women in the field of management promotion and administration of co-operatives.

6. *Training for formal and informal employment in business, commerce, industry and handicrafts*

- there should be more in-service training for women already at work in order to prepare them for supervisory and managerial posts. Chambers of Commerce and Industry should participate actively in providing more opportunities for such training.
- women should be trained in all aspects of running small-scale industries and of trade management, marketing, and co-operatives, by holding conferences, seminars and organizing courses for the exchange of experience among countries.
- the apprenticeship system in handicrafts training should be encouraged.

7. *Training women for their multiple roles*

- vocational training institutions should adapt their programmes and schedules to the multiple roles of women as wives, mothers, citizens, and workers;
- leadership and internship programmes should be encouraged so that women take an active role in village activities.

Employment

8. Rural areas. African governments are beginning to pay attention to the economic roles of women in the rural areas and measures are being undertaken to improve this contribution. Nevertheless, the situation of rural women does not seem to have undergone much improvement since 1975. Lack of accessibility makes it impossible for information and training to reach many rural women and lack of transport and assured markets for their farm produce and handicrafts tend to decrease their productivity;
9. The Regional Food Plan for Africa emphasizes the importance of roles women can play in the promotion of substitute foods, in changing eating habits and in nutrition education. In conjunction with the Regional Food Plan, to strengthen the Plan of Action regarding women's labour in rural areas, the following strategies are suggested:
 - based on continuous research, promote the recognition and documentation of women's contribution to agriculture as a productive activity contributing to the Gross National Product, especially in terms of food supply;
 - in national plans, recognize women as vital instruments for solving the food crisis and make deliberate provisions to upgrade women's skills and lessen their labour;
 - in the choice of appropriate technologies, make women's work more productive and less onerous, improve traditional techniques in food preservation and storage;
 - devise appropriate training programmes to familiarize women with new and improved technologies suited to their situation and resources;
 - to give priority attention to employment in rural areas in order to keep there those young women who, to escape the hard and dull life in the countryside, go off to seek adventure in the cities, where they swell the number of the unemployed.

Special attention should be paid to the development of women's co-operatives, in particular those dealing with agricultural marketing, labour and production. More female extension officers should be trained.

10. Urban areas. Women who work in urban areas are either self-employed in trade and business or are in paid employment. Despite legislation and constitutional provisions to the contrary, many employers continue to prefer men to women in certain fields and in higher categories of employment where decisions are made. Possibilities for women's self-employment could be increased by the provision of guarantee or loan funds for small and medium-scale enterprises in urban and rural areas. The following strategies are suggested:
 - provision for relevant education and training;
 - provision for credit facilities and seed capital to enable women to be self-employed;
 - campaign for the change of attitudes and traditions relating to women and employment;
 - maternity benefits should be provided to both women and girls;
 - government commitment at planning levels to the improvement of women's contribution in employment by including measures for employment of women in all national plans;
 - it is necessary to improve the provision of present labour laws concerning women workers in rural and urban districts:
 - a. trade unions should be asked to train young women workers;

- b. States should prepare a labour and welfare legislation code adapted to African conditions and ensure its implementation.
11. In-service training and refresher courses organized by employers should take into consideration the family responsibilities of women employees and adequate provisions should be made in this regard.

Communications and mass media

12. On this subject the Plan of Action remains a useful guide for constructive selection of priorities within the realities of national plans and budgets. Thought must be given to the following areas in the 1980s:
 - training of women for careers in journalism and specialized training for journalists in the particular problems of women;
 - increasing women's access to the media;
 - establishment of sub-regional and regional networks for information exchange among women and government policy organs;
 - analysis of folk media and developing a systematic adaptation of these media in promoting integration of women in the development process;
 - more exchange of experiences should take place among Member States.

Health, nutrition, and family life

1. The following are suggested strategies for the future:
 - encourage research on and promotion of traditional medicine so as to alleviate the dependence on foreign imported drugs; promote local manufacturing of necessary pharmaceuticals. Measures should be taken to prevent dumping of dangerous drugs in African countries;
 - upgrade training of traditional midwives and family health workers. Recruitment and training should be undertaken at the village level to prepare villagers as health workers to provide basic health services for their community;
 - strengthen centers for training health personnel and research, paying attention to the techniques of organizing primary health care;
 - strengthen maternal and child health care centers by expanding their trained staff, and increasing their material means to make proper use of local products;
 - in order to help physically handicapped persons, national centers for rehabilitation and integration of such persons in the economic system should be established;
 - encourage analysis and exchange of country experiences through analytical case studies particularly in the following fields:
 - a. approaches and models which have had good results;
 - b. methods and techniques of obtaining active involvements of communities;
 - c. methods of identifying, training and evaluating community health workers.
 - develop appropriate technologies to ensure provision of adequate and safe water supplies;
 - encourage both men and women to take an interest in improved methods of producing food crops so as to improve the nutritional status of the community;
 - establish appropriate childcare facilities for pre-school children, managed by well trained staff including a systematic programme of training day-care workers.

Research, data collection and analysis

1. The areas identified for study in the Plan of Action remain valid, particularly in the light of the fact that few national censuses and surveys have been undertaken since 1975. When they are about to commence, it is important to stress to national directors of statistics the need for breakdowns by sex to identify areas for action relevant to women, particularly in the sub-theme areas of employment, health and education. Lack of such sex breakdowns has in the past hindered identification of special needs of women.

2. More research needs to be done on women as food producers; on cropping methods used by women and possibilities for introducing improvements; on poor (urban and rural) women who perform multiple roles; and on women as heads of household, in view of the development emphasis since 1975, particularly on agrarian reform and rural development as well as on alternative development and the new international economic order. Research should be done on the following fields:
 - study self-help methods in the urban and rural areas;
 - research on data collection systems in sectors such as agriculture, small businesses, etc.;
 - study on conservation and storage methods;
 - study of integrated development projects to establish areas of integrated development through better exploitation of family plots.
3. To implement the activities which were spelled out in the Plan of Action, the following strategies are suggested for the remainder of the decade:
 - co-operation between existing research institutions, specialized non-governmental organizations (such as the Association of African Women for Research on Development (AAWORD), international agencies and the ATRCW to further common research aims;
 - establishment and promotion of research wings of national machineries, with stress on assuring their technical capabilities to undertake research in line with national priorities;
 - encouragement of collection of annotated bibliographies and dissemination of research results and their translations into action programmes through fostering region-wide information networks, emphasizing the role of the ATRCW as a clearing-house for information on women and development in the region and the establishment of effective mechanisms for the exchange of information between the Regional Commission, the Sub-regional Committees on the Integration of Women in Development at the MULPOCs and Member States;
 - further research on changing attitudes towards full participation of women in all aspects of society, and spreading of the results of this research through, inter alia, the establishment of small information/ communication units in institutions involved with research;
 - emphasis should be placed on the exchange of information on economic changes and their impact on women, along with measures to be taken to overcome negative impacts, in accordance with the themes of the new international economic order.

Legislative and administrative matters

Strategies for the future should be directed to:

- establishment of appropriate bodies to be responsible for monitoring and reviewing the implementation of equal treatment provisions in the laws; infringement of these laws should be punishable;
- standardization within each Member State of the various legal systems governing marriage, personal relationships in the family and inheritance in order to eliminate existing discrepancies and inconsistencies;
- one of the reasons why many women shy away from enforcing their rights is fear of intricacies and expenses involved. Free legal aid centers, staffed by lawyers who are committed to the principle of equality between the sexes, should be established in low income urban and rural areas. These should include free consultations and discussions. Such offices should inform women of their rights.
- re-orientation of law enforcement agents to strictly enforce equal treatment provisions;
- publication of rights and duties of both men and women in society and as husbands, wives, fathers, mothers at home. This should be done through campaigns in the mass media as well as through wide circulation of booklets on these issues;

- women and girls should be more aware than men of disadvantages of institutions such as polygamy and payment of bride price and of diminution of status in marriage caused by those practices and should recognize that they themselves must take steps to eradicate old customs, traditions and prejudices which tend to give women an inferior position in the family. Women's organizations must, therefore, as a matter of priority, make extensive use of discussion forums as well as of other modern techniques of mass education and communication to educate public opinion on the values of women as human beings;
- special attention should be paid to the legal situation of women under apartheid, through promotion of legal defense funds, among other means;
- basic family codes should be prepared in countries where they do not yet exist;
- involvement of women in law-making processes in order to ensure that legislation is better adapted to current realities.

CHAPTER XIII

Development planning, statistics, and population

Development Planning

What is lacking the most is the implementation part of the plan, which usually consists of: manpower requirement, technological requirements; more clearly defined financial implications; a time frame; a monitoring system; and harmonization with economic development plans of neighboring countries as well as at the sub-regional and regional levels. The absence of such an implementation plan has rendered the economic development plans in most African countries not only most susceptible to political and world economic changes but also unattainable.

Successful elaboration and implementation of an economic development plan depend, to a large extent, on maximum involvement of national technical capabilities. A national institutional and economic development infrastructure therefore needs to be well articulated in order to provide an appropriate framework for involvement of the entire population, particularly the technical expertise in the entire spectrum of economic development endeavors.

In accordance with national priorities, appropriate ministries, delegations, directorates, organizations, technical committees and professional associations would need to be established within such an economic development institutional infrastructure. In this connection, it may be noted that the governmental institutional machinery which has been set up in most Member States is for administrative purposes and not for economic development.

In the light of the above, the following plan of action is adopted:

- the Member States should elaborate on the basis of well identified objectives and priorities, national short, medium and long-term integrated development plans which should be integrated at the sub-regional, regional and continental levels.
- the elaboration of development plans should also be based on integrated sectoral plans and emphasis should be placed on national and collective self-reliance and self-sustaining development as well as on manpower, technology and financial planning which should be well defined within a specified time schedule.

- the institutional arrangements for implementation, continuous evaluation and monitoring of the plan both at the macro as well as at the sectoral levels should be clearly specified, developed and existing ones strengthened, to ensure proper co-ordination and to avoid undue duplication of efforts and resources. In this regard, there is need to accord special emphasis to comprehensive statistical data and information on population and natural resources as a basis for effective policymaking and planning.

The poor performance of Africa in the 1970s and the bleak prospects in the 1980s, if past policies and trends continue, is a cause of great concern. Therefore, the planned scenario proposed by the ECA secretariat for Africa in the 1980s-which is in line with resolution 332 (XIV) of the fifth meeting of the Conference of Ministers and the fourteenth session of the Commission and endorsed by the OAU summit at its last session held in Monrovia in 1979-is sound and challenging.

According to the planned scenario, developing Africa is projected to grow by around 7 per cent per year in the 1980s. The major oil exporting countries, which constitute over 40 per cent of the total GDP of Africa, are projected to grow by about 8 per cent while the non-oil exporting countries were projected to grow by around 6 per cent yearly in the same period. The over-all growth has other consistent sectoral growth targets and has various policy implications. Agriculture would have to grow by 4 per cent yearly while manufacturing would have to attain a growth rate of 9.5 per cent in the period 1980 to 1990. Exports would also have to expand by about 7 per cent yearly in real terms while imports would have to be maintained at growth rates of less than 8.2 per cent yearly, implying a reduction in the import elasticity to less than 1.2.

It is necessary to put into practice in the 1980s the concept of collective self-reliance at sub-regional and regional levels, especially in the field of self-sufficiency in food, trade, industry and in financing development. Every effort should be made in promoting regional co-operation and physical integration through the rapid implementation of the United Nations Transport and Communication Decade for Africa, especially for land-locked and island Member States.

For the 1980s emphasis should be given to the development of agriculture and agro-based industries, development of socio-economic infrastructure, co-operation, eradication of mass poverty, unemployment, underemployment, and the satisfaction of basic needs.

Member States should accord priority to a complete and in-depth survey of their potentials in natural resources, especially in agriculture, mining, energy, water and environment.

In agriculture individual Member States are urged to draw up food plans to facilitate the attainment of collective self-sufficiency in food production. Efforts would have to be directed towards land reform, appropriate mechanization, remunerative prices for agricultural products, establishment of efficient storage facilities, distribution and processing of agricultural products, better utilization of human resources and development of scientific research centers related to adequate extension services.

For industry, and particularly for large scale industries (e.g., iron and steel, metal, chemical and petrochemical industries), capacity utilization studies are needed as a basis for national resource mobilization and for allocating of such projects at sub-regional and regional levels. Similarly, it is also necessary to identify types of import substitution industries which can best be undertaken at multinational levels.

In the energy sector, modelling work should be undertaken on the supply of and demand for energy in Africa, and short- and long-term projections should be carried out so as to enable the building up of a regional energy programme in the field of production, consumption and conservation.

Member States should establish regional systems for domestic resource mobilization for development and, as a starting-point for such a system, it is proposed that appropriate mechanisms be established for mobilizing and channeling resources from surplus Member States, particularly the oil exporting surplus countries-to the deficit countries and especially the least developed Member States.

Action should be taken to reinforce measures to redress drought and desertification. In transport the opening of land-locked countries must be considered as a priority and as a fundamental stage in the physical and economic integration of Africa. In technology emphasis has to be put on the acquisition, development and utilization of labour intensive techniques and to take this aspect into consideration during the selection and implementation of projects.

In plan formulation and implementation, appropriate steps should be taken to ensure the strengthening of the planning machinery at the national level and a greater integration of national plans within sub-regions. This would facilitate the concretization of collective self-reliance.

Greater political backing should be given to the implementation of development plans and all efforts aimed at efficient management of the economy.

Statistics

As a matter of urgency, Member States must strengthen their statistical infrastructures as bases for effective policymaking and planning. In this connection, they are urged to formulate statistical development programmes and these should be included in national development plans. These programmes should incorporate a list of data requirements in line with its needs and priority.

In order to mobilize external resources for the implementation of the African Household Survey Capability Programme, the 1980 round of Population and Housing Censuses and the System of National Accounts, Member States should reaffirm their priorities in these programmes and should provide the necessary counterpart financial support,

Each Member State should institute appropriate mechanisms for collection, processing, evaluation, analysis, and dissemination of data. These mechanisms should ensure proper linkage between data collectors, analysts, and users.

It is desirable that a statistical data base for the storage and retrieval of information be established in individual countries.

Population

Appropriate machinery should be established, where necessary, to ensure greater integration of population variables in development planning, bearing in mind the expected doubling of the African population between 1975 and 2000 and the impact of this on economic planning and development.

Member States should attach more importance to analysis of relevant demographic data from both the 1970 and 1980 rounds of censuses and other demographic surveys.

Nationals must be trained to undertake the collection and analysis of demographic data. In this regard, support should be given to the existing training centers.

Better collaboration is needed between demographers, planners, and statisticians in their work at the national level, and mechanisms should be deliberately established for this purpose.

The current excessive rural-urban migration calls for the establishment of a programme of planned distribution and redistribution of population tied to policies and programming for human settlements and integrated rural development.

The current levels of fertility and mortality are of concern. The resultant high rates of growth have implications for meeting the needs of majority of the population.

Any population programme attempting to improve the quality of life should stand on a firm knowledge base that covers the most important social, economic, and demographic factors related to the family. The following are some topics on which research should be encouraged:

- population characteristics and their perception in selected countries so as to provide a comprehensive knowledge base for programme content in these countries;
- socio-economic and cultural factors infringing on, or influencing the growth and development of, concepts related to population and other socio-cultural issues;

- identifiable sources of population related concepts (family, peer group, other adults, mass media, etc.);
- communication channels suitable for the diffusion of new innovations and population concepts;
- effective values, beliefs, taboos and traditions which control decision-making processes in the family in selected countries, and the ways in which levels of understanding of population issues effect these values and attitudes;
- government and public reinforcement contingencies with population implications in selected African countries,

ANNEX I

Final Act of Lagos

We, the Heads of State and Government of the Organization of African Unity, meeting in Lagos, Nigeria, in the Second Extraordinary Session of the OAU Assembly of Heads of State and Government, devoted exclusively to economic problems of Africa,

Considering the relevant provisions of the Charter, particularly those relating to the OAU objectives to co-ordinate and intensify co-operation and efforts of Member States with a view to providing the best conditions of life to the peoples of Africa;

Recalling the various Resolutions and Declarations adopted at our previous summit stipulating that the economic development and integration of the African continent are an essential condition for the achievement of the objectives of the OAU, particularly those formulated in Algiers (September 1968), Addis Ababa (August 1970 and May 1973); and Libreville (July 1977);

Recalling our decision taken in Libreville in July 1977, on the adoption of the Kinshasa Declaration of December 1976 establishing an African Economic Community in successive stages within 15 to 25 years;

Recalling our "Monrovia Declaration of Commitment on guidelines and measures for national and collective self-reliance in economic and social development for the establishment of a new international economic order" which, inter alia, calls for the eventual establishment of an African Common Market, paving the way for an African Economic Community;

Noting that developments in international economic relations and global negotiations between the developed and the developing countries confirm Africa's judicious choice in promoting collective self-reliant and self-sustaining development as well as economic integration;

Also noting the progress being made in the field of economic co-operation among developing countries, and especially the setting up of a Committee on a Generalized System of Trade Preferences among Developing Countries, with particular reference to the African Region;

Noting the initiative already taken to promote intra-African economic co-operation and integration at sectoral, sub-regional and regional levels;

Convinced of the need to co-ordinate progressively existing and future economic activities of the continent and to promote the integration of the various economic sectors;

AGREE on the following

I. Plan of Action

Confirm our full adherence to the Plan of Action, adopted at the present Extraordinary Session of the Assembly of Heads of State and Government for implementing the Monrovia Strategy for the Economic, Social and Cultural Development of Africa and to adopting, among other measures, those relating to the setting up of regional structures and the strengthening of those already existing for an eventual establishment of an African Common Market as a first step towards the creation of an African Economic Community.

II. Implementation of the Plan of Action

A. *African Economic Community*

We reaffirm our commitment to set up, by the year 2000, on the basis of a treaty to be concluded, an African Economic Community, so as to ensure the economic, social and cultural integration of our continent. The aim of this community shall be to promote collective, accelerated, self-reliant and self-sustaining development of Member States; co-operation among these States; and their integration in the economic, social, and cultural fields.

We are, consequently, authorizing the Secretary General of the OAU:

- to appoint, as quickly as possible, a Drafting Committee, at ministerial level, to prepare the draft of the treaty establishing the African Economic Community;
- to submit this draft for the consideration of the Assembly of Heads of State and Government scheduled for 1981.

B. *Stages of implementation*

To achieve this ultimate objective, we commit ourselves:

1. During the decade of the 1980s to:

- strengthen the existing regional economic communities and establish other economic groupings in the other regions of Africa, so as to cover the continent as a whole (Central Africa, Eastern Africa, Southern Africa, Northern Africa);
- strengthen, effectively, sectoral integration at the continental level, and particularly in the fields of agriculture, food, transport and communications, industry, and energy;
- promote co-ordination and harmonization among the existing and future economic groupings for a gradual establishment of an African Common Market.

2. During the decade of the 1990s to:

- take steps for further sectoral integration through harmonization of our strategies, policies and economic development plans; promotion of joint projects, particularly in the above-mentioned economic fields; harmonization of our financial and monetary policies;
- take measures to effect the establishment of an African Common Market and other measures that would lead to the attainment of the aims and objectives of the African Economic Community.

To implement the Plan of Action at the various stages, we direct the Secretary General of the OAU, in co-operation with the Executive Secretary of the United Nations Economic Commission for Africa, to take all the appropriate measures, in accordance with Part II, paragraph 7, of the Monrovia Strategy and to submit a progress report to the 1982 Session of our Assembly.

Done at Lagos, Nigeria, April 1980.

ANNEX II

Resolution on the Lagos Plan of Action

The Assembly of Heads of State and Government of the Organization of African Unity meeting in its Second Extraordinary Session from 28 to 29 April 1980, Lagos, Nigeria,

Noting the various factors hampering the development of the African continent and thereby seriously jeopardizing the future of its peoples;

Recalling the Monrovia Declaration of Commitment on the guiding principles and the steps to be taken to achieve national and collective self-reliant economic and social development for a new international economic order;

Conscious of the need to adopt and implement this Plan of Action in the shortest possible time in order to secure economic integration of Africa, taking into account its urgent needs with regard to economic, social and cultural development;

Reaffirming that, in conformity with the Charter of the OAU, the role of the Organization consists in harmonizing Member States' policies, defining common priorities in matters pertaining to development, coordinating, monitoring, and assisting in the implementation of these policies and priorities in economic, social and cultural fields,

1. Adopts the Plan of Action for the implementation of the Monrovia Strategy, hereafter called the Lagos Plan of Action,
2. Appeals to all Member States to take all necessary measures to implement the Lagos Plan of Action at national, sub-regional and continental levels,
3. Requests all OAU Member States and the African Group at the UN to support this Plan:
4. Directs the Secretary General of the Organization of African Unity to act, in collaboration with the Executive Secretary of the ECA, to take all necessary measures to implement the Lagos Plan in utilizing the resources of the (OAU Specialized Agencies along with the technical and financial assistance of the ECA, Specialized Agencies and appropriate national and international organs:
5. Requests the OAU Secretary General to take all appropriate measures to:
 - prepare and convene the appropriate commissions of the OAU:
 - prepare and submit periodical progress reports on the implementation of the Plan of Action by Member States to the Assembly of Heads of State and Government;
 - prepare the financial and organizational implications of the implementation of the Plan of Action and submit them to the next Budgetary Session of the Council of Ministers.
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ANNEX III

Resolution on the participation of Africa in international negotiations

The Assembly of Heads of State and Government of the Organization of African Unity, meeting in its Second Extraordinary Session devoted to economic problems in Africa, held in *Lagos*, Nigeria, from 28 to 29 April 1980,

Conscious of the importance of international economic negotiations dealing with the socio-economic development of *Africa* and of the role Africa should play in these negotiations to safeguard its interests;
Deploing the lack of political will and the negative attitude of industrialized countries in international negotiations relating to the restructuring of the world economy for the establishment of the new international economic order;

Recognizing that an active and coordinated participation of African countries in the activities of the Group of 77 would strengthen the negotiating power of Africa and of the Group of 77 in international economic negotiations;

Recalling the relevant provisions of the Arusha programme on collective self-reliance and on terms of negotiations;

Recalling the ministerial meeting of the Group of 77, held in New York, from 11 to 14 March 1980, and the important decisions taken at the meeting;

Recalling the resolution of the Thirty-second Session of the OAU Council of Ministers, held in Nairobi, in February 1979, relating to the need to reinforce the structure of the OAU Department of Economic Affairs and of its liaison offices of New York, Geneva and Brussels,

1. Appeals to OAU Member States to participate fully and actively in the international economic negotiations, especially at the Eleventh Extraordinary Session of the United Nations General Assembly and in the global negotiations based on the Plan of Action adopted at the Second Extraordinary Session of the OAU Assembly of Heads of State and Government held in Lagos, from 28 to 29 April 1980;

2. Reaffirms its support for the Draft Agenda presented by the Group of 77 for global negotiations;

3. Directs the OAU Secretary General to act, in collaboration with the ECA and other competent national and international institutions, to lend appropriate logistic and technical support to the African Group in international negotiations, especially by endowing the liaison offices with necessary material and human means;

4. Requests the OAU Member States and other developing countries, within the framework of dialogue and consultation, to strengthen their solidarity, with a view to obtaining, in the international market, a just remuneration for our basic commodities;

5. Further requests the OAU Secretary General to submit periodic reports to the OAU Council of Ministers and to the Assembly of Heads of State and Government on the implementation of this resolution.

ANNEX IV

Vote of thanks!

The Assembly of Heads of State and Government of the Organization of African Unity, meeting in its Second Extraordinary Summit, in Lagos, Nigeria, from 28 to 29 April 1980,

Expresses its sincere thanks and deep gratitude to President Shehu Shagari, the people and Government of the Federal Republic of Nigeria, for their warm and brotherly welcome that has facilitated expeditious and successful conduct of this Extraordinary Summit;

Expresses its gratitude, especially for all the facilities placed at the disposal of the delegates to the summit and the efficiency of organization and quality of the services rendered;

Further expresses its complete satisfaction with the brotherly and cordial atmosphere that prevailed during the Conference and the cordiality and open-mindedness with which President Sedar Senghor of Senegal has conducted the deliberations of the summit.
