

55474

Distr.: GENERAL

ECO/ICO/I/4
1 November 1980

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Inaugural Conference of Chief
Executives of ECA-Sponsored
Regional and Subregional
Institutions

Addis Ababa, Ethiopia
15-20 December 1980

THE THIRD UNDP PROGRAMMING CYCLE 1982-1986

(Preparation of UNDP's Third Regional
Programme for Africa 1982-1986)

13 November 1980

Preparation of UNDP's Third Regional Programme for Africa
(1982-1986)

..... Further to our meeting of 30th October 1980, I attach a Note on the subject of your letter of 10 July 1980, and wish to express regret that the involvement of the whole secretariat in the revision of our work programme for 1980/81, the preparation of the draft work programme for 1982/83 and the medium-term plan 1984-89 together with other heavy on-going commitments has delayed its submission a little beyond the deadline you set. As you will readily grasp we could, indeed, not send you anything meaningful until we had gone part of the way in the preparation of the work programmes and the medium-term plan. Our work on these was, of course, complicated by the problems of interpretation of and adaptation to new rules on work programme design and presentation and of programme budgeting.

You will see from the Note that we have set out in as compressed a form as could be easily comprehended a background to the Lagos Plan in order to make it easier to follow the more detailed comments on the priorities set out in ECA resolution 376 (XV) - UNDP Regional Programme for Africa, 1982-1986 and in your letter. I hope your people will not be impatient with our incurable habit of putting concrete proposals against a general background particularly as we have avoided loading the introductory part with conventional statistical calculations.

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UNDP's Third Regional Programme for Africa, 1982-1986Note by the ECA secretariatPart I: Review of economic and social conditions in Africa in the light of development objectives, targets and strategies 1/

1. The past six years have seen a striking evolution in at least three critical areas affecting economic growth and development in Africa. The first is the perception that the engine of growth, in the context of self-reliance and self-sustainment, must be internal. This perception has progressively grown clearer and more concrete as it moved from the revised framework of principles for the implementation of the New International Economic Order in Africa, 1976-1981-1986 2/ to the Development Strategy for Africa for the Third Development Decade Conference of Ministers resolution 332 (XIV) adopted in Rabat, in March 1979) which was confirmed by the sixteenth Assembly of Heads of State and Government of African Governments in Monrovia in July 1979 as the Monrovia Strategy for the Economic Development of Africa. Its degree of concreteness reached a high level when in April 1980 the sixth meeting of the Conference of Ministers of the Commission transmitted to the Assembly of Heads of State and Government devoted exclusively to the consideration of the economic problems facing Africa held in Lagos, Nigeria, in April 1980, a Plan of Action for Implementation of the Monrovia Strategy for the Economic Development of Africa which was not only confirmed but supplemented by the Final Act.
2. Associated with the evolution of this perception and of strategies and plans has been a recognition of the limits of extra-African economic relations (trade, aid, technical assistance and debt accumulation), however valuable, in bringing about a structural transformation of African economies individually and collectively.
3. A third area of advance has been the acceptance of substantial as well as formal intra-African economic co-operation as a necessary condition of the growth and development of individual African economies. This consensus is

1/ Part I is taken from Chapter I of the report of the Executive Secretary for the biennium 1979-1980 and is summarized at the beginning of Part II.

2/ E/CN.14/ECO/90/Rev.3, of 25 June 1976.

likely to be severely tested in the 1980s as alternative and apparently more attractive options, e.g. for incorporation into other dynamic advanced systems, are offered to selected African countries. In effect African States are engaged in redefining interdependence on a world scale without perhaps always being fully aware of the implications.

4. These developments were particularly assisted by the experiences of member States of the processes and outcome of the fifth session of the United Nations Conference on Trade and Development held in Manila in May, 1979, the third General Conference of the United Nations Industrial Development Organization held in New-Delhi, January/February 1980 and the eleventh special session of the General Assembly held in New York in August-September 1980, to consider and approve an International Development Strategy for the Third United Nations Development Decade, to assess the progress made in establishing the New International Economic Order and to establish a programme for the series of international negotiations to be launched early in 1981. In these as well as in many other conferences, dialogues, encounters, consultations, and so on, such as the ill-fated conference on International Economic Co-operation popularly known as North-South Dialogue and others of its type, it became clear beyond any possibility to doubt that developing Africa was on its own to swim or to sink, subject to reservations on the part of extra-African interests about the manner it might choose to swim and its effect on them.

5. It is necessary to review some of the major factors and historical causes which account for the situation of this region today and the prospects it faces as a background to an understanding of certain less obvious elements of the Lagos Plan of Action and the past and future activities of the secretariat.

6. One of many such factors was the tendency on the part of policy makers and planners in Africa to believe that viable national systems of socio-economic change (providing for higher levels of living and increasing opportunities for employment among expanding populations; for expansion and diversification of domestic production to meet the needs of the mass of the population; for the emergence of integrated and dynamic domestic markets; for the absorption of enclave-style production and infrastructures and the rationalization of dysfunctional relations; for the adaptation and absorption of imported, and the

promotion of indigenous technologies; and for deliberately engineered inter-sectoral and intrasectoral linkages) could be established on the basis of the production for export of two or three commodities to markets in developed countries which were visibly undergoing changes in life-styles and consumption patterns and subject of similar pressures to import by the rest of the developing world. This export dependence of the region, based on extremely narrow exploitation of considerable natural resources endowments (both national and regional) was matched by a tendency to neglect the non-export agricultural sector, to overlook the significance of supplies of relevant indigenous factor inputs and to subcontract production choices, processes and management to foreign private entrepreneurship. The extraordinary obsession with foreign exchange availability can clearly be seen as a concern with foreign supplies of factor inputs (skilled and semi-skilled manpower for entrepreneurial functions, management, production, marketing and distribution, research and development technologies, equipment, raw materials, institutional services and so on). Paradoxically, much effort was made, on expert advice, to mobilize domestic financial resources on the assumption that investment means the availability and use of money instead of the mobilization and application of real factor inputs to production, marketing research and development and other processes. Failure to develop indigenous factor inputs meant that domestic financial savings did not correspond to indigenous factor input availability in the same way that foreign exchange co-responded directly and immediately to foreign supplies of factor inputs. Secondly, any effort to increase growth and diversification of the national economy depended not only on imports of capital goods but also of services (whose volume and unit costs, unlike those of commodities, easily escaped notice). Thus the larger the volume (generally uncontrolled) and the higher the unit costs of services the lower the volume of foreign exchange available for imports of capital goods and other essential commodities.

7. The term 'relevant' has been used to qualify factor inputs supply. If economic growth means increases in the physical output of goods and services to meet the needs of the African masses and if this output must primarily be deprived from raw materials emanating from the region then factor inputs (whether indigenous or foreign) must clearly be relevant to the identification and evaluation of utilizable natural resources, to the extraction of raw materials from them (on a far wider

range than was required to meet export demand) and to the conversion of such raw materials into semi-finished and finished products. The state of natural resources exploration, information and inventory in Africa today, the extensive and helpless reliance on foreign entrepreneurship and investment for their extraction, processing and marketing all attest to the minimal relevance, in the past 20 years, of both technical assistance and the development of indigenous factor inputs to the process of economic growth as defined above and as now embodied in the Lagos Plan of Action.

8. Stated the other way round it is in the circumstances of the African region today, the supply of natural resources/raw materials expected to be available for economic growth and the choices of the commodity and service composition of output that would determine the pattern of skills developed, the types of technologies imported or locally promoted, the pattern of imported and domestic equipment supply and the type of institutional services organized. From this point of view the demand, for example, for transferred technology would have concentrated to some extent on what is commonly described as tropical products research and development carried out in many developed countries.

9. Again, since industrial policy would begin with a consideration of national needs to be served of existing production and marketing capacities and of the supply of domestic raw materials and other indigenous factor inputs required for expansion of output, discussions about the desirability of locating the processing of industrial raw materials in Africa would not even merit attention and appeals to foreign entrepreneurs to make greater use of local materials in their local industrial operations would, by definition, be precluded.

10. Perhaps more fundamental to the African situation today has been a persistent confusion over the meaning of markets which, in market economies, clearly meant domestic markets but which by a peculiar process of obfuscation became, in Africa, bits and pieces of the markets of individual developed (often former metropolitan) countries, the dynamics of which African policy makers and planners did not really understand, over which they had no control, and which could not in any case play the role of the relatively integrated domestic market as supposed in market economies. There thus existed, in effect, no indigenous matrix for determining the volume and composition of investment, output and employment, for developing and

propagating technology, for manipulating money supplies and managing of demand, and for protecting specific forms of national security such as food, defence industries and the like. What African countries must now turn to as the core of economic self-sustainment are anaemic domestic markets fractured by increasingly skewed income distribution (not only as between the generally unproductive urban sector and the rural sector, but also within the urban sector), by associated polarization of consumption patterns (so that leading cities in Africa really constitute components of the manufacturing and marketing complexes of developed economies), by product differentiation, and by the existence of enclave forms of production for export and ancillary infrastructures. Thus the failure of non-export agricultural production in part arose from the fact that the domestic market was not designed to send signals to producers. The study of domestic markets with a view to their restructuring and their combination to form multinational markets to accommodate economies of scale is now therefore coming to occupy a key position in the Monrovia Strategy and the Lagos Plan.

11. The Lagos Plan of Action thus implies an enormous expansion of capabilities at the national and multinational levels for the identification, evaluation, extraction and management of natural resources and the raw materials that can be derived from them primarily for processing to meet domestic needs.

12. The Lagos Plan also implies new approaches and a considerable effort at the national, multinational and regional levels in the development of relevant indigenous factor inputs spread across different but interlocking sectors. Far-reaching changes in institutional arrangements for education and training in State scholarships policies and in the composition and role of aid and technical assistance are essential.

13. Of great importance among factor inputs are entrepreneurial resources both public and private, whether inspired by prospects of private material gain or by the pursuit of inherent excellence or by concern for purposes larger than themselves. Many development plans, public sector projects apart, are usually addressed to no one in particular and not enough effort is made to identify those agents of production

and distribution on whom the bulk of implementation depends, to evaluate their capability to carry out what they implicitly or explicitly are expected to implement and to consider what system of incentives and support services are required to get them into action and the communications system needed for consultation for clearing up bottlenecks and for monitoring progress. The Lagos Plan will place unprecedented strain on entrepreneurial resources in terms of their quality, quantity, competence, motivation and sectoral spread and in terms of their capacity for intrasectoral leadership and innovation. The implications of these demands in terms of entrepreneurial capability for the range, quality and sectoral and geographical distribution of support services institutions (for business information, development finance, market research, trade promotion, materials and product testing, technology information and demonstration, etc.), particularly with respect to the dominant rural sector which comprises the bulk of African populations and of national endowments of natural resources, and where the bulk of development and economic growth potential lie, have not yet been fully explored.

14. As regards technology a number of important points need to be made. The first is that it obviously will concern the dominant rural sector where, as just pointed out, the national potential really is to be found. The second point is that technology to be really effective in Africa requires a production/teaching-learning/demonstration and extension matrix, somewhat in the way its development is organized in China. To separate R&D from production and the two from learning/teaching processes and from demonstration and extension work (i.e. from work on diffusion) would considerably weaken its immediate practical impact.

15. The third point is the confusion that arises from the belief that the technology the African region needs is already available from other parts of the world or must necessarily be advanced and modern in every respect. This belief is based on insufficient familiarity with the history of technological development in industrialized and in newly industrializing countries and on misleading concepts of techno-economic efficiency. The scope and range of detailed P&D and its organization that confronts the region is yet to be spelled out. It is not of much value to speak of increasing regional investment in R&D to 2 per cent of the gross domestic product until production possibilities are examined and broad choices of product lines made. Until these reflect

national priorities, physical resources and indigenous initiatives, technology as a factor input will continue to be determined and supplied from outside the region.

16. The question of equipment supply as a factor input is clearly closely tied to the scale of production of rural units, to the scale of natural resources to be exploited and to the markets to be served. Important considerations are the maintenance of and the local capacity to reproduce equipment. The role of spare parts, components and accessories (including implements and tools) is not often fully appreciated nor consequently is the role of design standardization. Yet the demand for these items tends to grow much faster (sometimes two or three times faster) than the demand for the equipment with which they are associated. All these require thorough understanding and positive, concrete action at the national and multinational levels if locally produced equipment is to serve as a significant factor input.
17. Attention may now be turned to some other less obvious implications of the Lagos Plan but it will have become apparent that future approaches to technical assistance must be more critically evaluated in terms of its contribution to the development of the natural resources-raw materials base and of relevant factor inputs.
18. Governments genuinely concerned with the eradication of poverty will, inevitably, be obliged to arrive at definitions of such poverty that are nationally meaningful and to commission studies on its local nature and causes including the distribution of real private income and of State-provided goods and services.
19. Policy makers, planners and community leaders concerned with employment will be involved in consideration of at least three major issues in addition to the volume and composition of growth and the effect of linkages on employment. The first is the significance of entrepreneurial and managerial resources and their sectoral distribution in the organization of production and the creation of employment. The second is the impact of capital/labour substituting technologies (and particularly of the micro-electronics revolution) on employment and on the allocation of gross industrial income between capital and labour. The third is the operational meaning of mass participation.
20. The problem of both mass poverty and unemployment will render the problem of mass participation more urgent. Distinctions and choices will be required between nominal and substantial participation and the form and scope of participation (e.g. in specifying

the composition of production, in the process of production and in the allocation of the social product) which in turn will involve choices as to the balance among small-, medium- and large-scale industries, urban-based and dispersed rural types of industrialization, the relationship of industrial development to the exploitation of relatively small volumes of natural resources, the balance of technology mixes and in general to human settlements policies and practices. Concealed among these choices will be found an answer to the debate about dynamic trade-offs between growth and distribution. Implied in them will be the need to study the structure and dynamics of domestic markets and trade and to restructure them.

21. A socio-economic system which is widely dispersed and structured on a broad-based hierarchy of cities, towns and rural communities will raise questions about the character of the transport system and of transport in relation to other costs (social as well as economic). It will involve a matching system of central, State, provincial and community administration more for development than for law enforcement, tax collection and announcements of central government fiats. The process of capital formation will be subject to local as well as national needs and is likely to be more rapid where capital equipment and spare parts are reproduced and provide greatly increased opportunities for local invention and innovation directly subject to social control than in centralized systems.
22. The pattern of economic growth is expected to affect the manner in which the staggering investment estimates for such programmes as Programme of Action for the Development of Food and Agriculture in Africa, 1980-1985, can be met. In the face of the anticipated foreign exchange crisis in the 1980s and already paralyzing external debt burdens to which reference is made later, expectations of substantial foreign financing for inflows of factor inputs for food and other agricultural production for local or intra-African consumption require sober reappraisal and revaluations of how internal factor input supplies may be accelerated for at least partial substitution of imports.
23. It was inevitable that planning concepts and processes based on neo-classical and Keynesian economic theories (which assured the existence of dynamic integrated national markets, of internal supply and mobility of factor inputs, of a minimal dependence on international economic relations, of the operation of countervailing socio-economic forces, etc.) should be gravely distorted and that the process domestic

product should gradually reveal itself as a grotesque attempt at measuring both the historical process of growth and the development of individual developing countries in Africa and at comparing growth and development performance among countries, developed and developing. A physical approach to planned growth and development would thus begin with inventories of existing production capacities, the natural resources/raw materials base and domestic factor input supplies in relation to targets derived from population analysis and evaluation of levels and forms of poverty and unemployment to be relieved. From the point of view of self-reliance and self-sustainment intrasectoral and intersectoral linkages would clearly be seen to complement the linkages between raw materials supply, factor inputs and markets.

24. Finally, new socio-economic indicators will have to be established which escape the extraordinary imperfections of the gross domestic product as a measure not only of growth but also of equitable distribution of the social product. A GDP essentially suitable under conditions in developed and semi-developed economies where factor inputs are predominantly indigenous or nationally owned conceals the enormous and increasing outflow of foreign exchange in outpayments for imported services in the invisibles account. This raises questions - to which some reference is made later - of the need for compiling and analysing national accounts data as an important component in national development policies, strategies and tactics.

25. The preceding paragraphs are no more than illustrations of some key problems of establishing self-reliant and self-sustaining economic growth and development in Africa and of programmes and projects explicitly incorporated in the Lagos Plan of Action or implicit in it but not immediately obvious from its reading.

26. The continuity of the evolution of the perceptions, concepts, strategies and programmes of ECA since the adoption of the revised framework of principles for the implementation of the New International Economic Order in Africa 3/ has been reflected in its work programmes and medium-term plans and in structural changes in the Commission's organs and secretariat.

27. Work programmes of the Natural Resources Division and of the Joint ECA/FAO Division of Agriculture reflect continuing efforts to expand African capabilities in determining the natural resources/raw materials base of economic growth whilst the work programmes and activities in agriculture and industry concentrate on the process

3/ Ibid.

of conversion of raw materials into semi-finished and finished products to raise living levels of mass of African populations as well as to lay the foundations for an increasing measure for self-reliance and self-sustainment. The supply of real factor inputs (skilled and semi-skilled manpower for entrepreneurial functions, management, production, marketing and distribution, research and development; technologies; equipment, raw materials; institutional services and so on), whilst they primarily concern work programmes in public administration, management and manpower, the integration of women in development, and science and technology and of associated institutions of the ECA such as the Regional Centre for Engineering Design and Manufacturing, and the African Regional Centre for Technology, are spread throughout other work programmes. Intersectoral linkages are clearly exhibited in practically all programmes. Similarly, whilst the spatial aspect of economic growth and development is most obvious in the work programmes and activities in human settlements, it is more generally reflected in components of the secretariat's work on integrated rural development dispersed in several work programmes.

28. The reform of domestic trade, hitherto at the periphery of the secretariat's work is now expected to move to a position where it will effectively complement the work programme on intra-African and extra-African trade and on the promotion of intra-African economic co-operation.

29. Institution building at the multinational and regional levels continued although the scope and role of this factor appears to be still underrated particularly where its benefits, although believed to be substantial have not been directly or indirectly measured.

30. The relative neglect of population in economic calculations and public policy making hitherto hindered by macro-financial approaches to economic growth is now beginning to be repaired as population studies are strengthened and as steps are taken to incorporate the results more clearly in planning techniques, along with factor inputs, material balances, spatial concepts and linkage effects. Apart from general projections, the special studies projects in work programmes in socio-economic research and planning continue to throw light on major problems confronting socio-economic policy making and planning.

31. A particular component of the expanding work on statistics is the household survey capability project whose value is perhaps as yet not fully grasped. The surveys are expected to provide the means of evaluating (along with other studies) levels, types and scope of poverty; assessing the impact of economic growth policies, programmes and projects; gaining insights into basic needs and changing demand patterns; yielding pictures of resource flows and use; and providing information and data required for planned linkages, employment trends and the means of devising more realistic socio-economic indicators. Together with programmes in environmental protection and development and in social development the surveys will contribute to evaluations of the quality of life of segments of the population.

32. Little need be said of the recognition which continues to be given to transport and communications in a region of such size, such widely dispersed concentrations of population, of 51 independent States, many of them land-locked or island States effectively isolated from each other.

33. Earlier in this chapter attention was drawn to the evolution of perceptions, policies, strategies and programmes and the effect of changing international economic relations on clarifying these elements which underlie the Monrovia Strategy and the Lagos Plan of Action. However, recent events graphically set out in the World Bank's World Development Report for 1980 and in studies made by FCA and others now make clear the great likelihood and scope of the prospects of sinking. As the World Bank report observes: 4/

"... Sub-Saharan Africa has the most disturbing outlook. Even in the High case, its growth in 1985-90 would be a meagre 1 percent per person - far below the average for the oil importers; and in the Low case average incomes would actually be lower in 1990 than they were in 1980."

"... The situation for low-income is worse. These countries face a desperately hard adjustment period - coming on top of the economic stagnation of the 1970s. Even under the comparatively optimistic assumption of the High case, their growth would be negligible in 1980-85."

4/ World Bank: World Development Report, 1980, pages 8 and 11.

ECA studies now reveal that the situation of several African economies is on the verge of becoming desperate. The factors accounting for persistent adverse terms of trade, declines in foreign exchange earnings, mounting debt service burdens, etc., are well known. The new factor is not merely their continuation and intensification in the 1980s but the greatly reduced capability of African economies to sustain and accommodate the pressures they exert. These pressures are expected to affect most adversely least developed countries, countries that are drought prone and countries that are land-locked. In some cases two or three of these characteristics are combined. The immediate causes appear to be the extreme reliance on imports of food and oil which are such that in some cases outpayments for these two items now account for 75 per cent of current export earnings. Even countries enjoying substantial earnings of foreign exchange from oil and mineral exports are unlikely to escape the squeeze entirely.

34. Declines in export volumes and values reduce public revenue from export duties. The corresponding decline in import volumes further reduces public income and attempts to compensate for this by heavier taxes on already high-cost imports of capital and other essential commodities place intolerable burdens on the domestic economy. The reduction in public revenue slows down investment in publicly provided physical and institutional infrastructures required for the operation of the economy as a whole. Problems arise as to the degree of compressibility of imports and the determination of import cuts, e.g. medical supplies and vaccines, educational supplies, building materials, basic consumer goods and spare parts. The lack of spare parts and of local capacity for their production not only brings industrial production units to a halt but may affect the transportation of material inputs for agriculture, the distribution of agricultural produce or its conveyance to export points and so on, so that adverse factors reinforce each other in a downward spiral.

35. It is possible to regard the anticipated crisis as a factor reinforcing the necessity for increased self-reliance and self-sustainment and for more effective measures for intra-African co-operation and mutual help. These would require vision and statesmanship quite out of the ordinary as they would also call for selective measures at the national level for constraining consumption and accelerating production.

36. Another option would take the form of a surreptitious surrender of the economy in return for substantial foreign aid, a temptation which might be impossible to resist. A third option would be to wait and see and hope whilst continuing with conventional measures which avoid creating antagonisms. Other options are conceivable including mixtures of the three listed above. Some will be compatible with the basic assumptions and elements of the Lagos Plan and others not. Whichever line is taken, the 1980s promise to be a decade extraordinary toughness compared to the 1970s and the 1960s.

Part II. Programme of Priorities for 1982-1986

1. In part I it was argued that: (i) economic growth means increases in the physical output of goods and services for the benefit of the mass of the African population (ii) these increases must come primarily from the exploitation of raw materials drawn from the natural resource base of African countries supplemented by trade in complementary raw materials (iii) the process of converting raw materials into semi-finished and finished products requires an expanding indigenous supply of relevant factor inputs (i.e. of skilled and semi-skilled manpower for entrepreneurial functions, management, production, marketing and distribution, research and development technologies equipment raw materials institutional services and so on) (iv) it is necessary to restructure national domestic markets as well as combine national markets to accommodate economies of scale (v) the lynchwith of these activities is indigenous entrepreneurial capabilities (public and private) appropriate support services.

2. The broad over-all priorities are, therefore, the strengthening of capabilities at the national and multinational levels for the identification, evaluation and management of the natural resource base and the planned development of relevant factor inputs for the extraction and conversion of raw materials into semi-finished and finished products.

3. However, studies prepared by the World Bank and ECA, etc. indicate foreign exchange crisis which is already beginning to take shape in the African Region

and which is expected to surpass any of those experienced in the 1960s and 1970s. Any programmes of technical assistance or aid devised today must be seen to supplement the efforts of African Governments to face up even partially to that crisis. Anything else would within a few years become irrelevant or marginal. The below recommended priorities therefore combine considerations of the over all priorities listed above and of the likely impact of the foreign exchange (i.e. factor input supply) crisis.

Food and agriculture

4. The main priorities recommended are:

- (a) Measures to reduce post-harvest food waste
- (b) Measures to promote intracountry and intra-African trade in food, both of which are aimed at evening out large surpluses and deficits at widely separated points. These measures would involve solving problems of food storage, processing, packaging transport and marketing
- (c) Evaluation of existing agricultural R&D and the effectiveness of the delivery of research results to producers. The scope of R&D required for an agricultural revolution in Africa is as yet little appreciated. As Andrew Mamarck argues, policy makers in member States have so far failed to recognize that a revolution in tropical agriculture cannot be brought about by attempts to adapt bits and pieces of temperate zone agro-biological research and the resulting technologies to tropical areas.^{1/} As will be seen below, soil research, inventory and mapping are of first importance in planning agricultural development. Measures for evaluating and strengthening capabilities in this field and in the associated field of water resources are strongly recommended.
- (d) Measures for the local production of implements, tools, soil nutrients and machinery adapted to small-scale peasant agriculture from which the bulk of first-stage output in the Regional Food Plan for Africa is to come. The term soil nutrients is used advisedly because of its

^{1/} Andrew Mamarck: The most productive agriculture in the world - CERES for review on agriculture and development, Vol. 12, No. 5, September/October, 1979.

greater scientific relevance as it is often not correct that fertilizers, as the term is used conventionally are what are required. In Japan fertilizers contributed to the virtual destruction of soils before it was realized, through soils research, that what was needed were mineral trace elements.

Assistance to river and lake basins

5. The total area of the international river basins covers approximately 40 per cent of Africa's over all surface (including the extensive desert zones of the northern part of the continent). This offers scope for increased exploitation of Africa's water resources, including the potentials for fishing, irrigation (agriculture), hydro-electric power (industries and mining), and transport.^{2/} The potential for food and energy production and for transport in this vast area must be considerable. However, it is imperative that an evaluation be made of the methodology for their exploitation. Neither the Senegal river basin nor the Lake Chad basin projects appears to be a repeatable or sustainable model and it is recommended that study visits be sponsored to the Mekong project, to India and to China to gain insight into other approaches likely to prove more viable in the light of conditions in Africa in the 1980s and probably the early 1990s. ECA firmly believes in learning by direct observation as well as by doing and this learning process may be a necessary condition of efficiently utilizing concrete resources made available for river and lake basin development.

Energy

6. Apart from soils, water, improved plant varieties, soil nutrients and equipment, an important factor for transforming the rural sector on which the Lagos Plan implicitly rests is the expansion of energy supplies for local use. This means the rapid and widespread exploitation of renewable sources of non-conventional energy: biomass, solar, wind and water. The vast network of lakes and rivers referred to above suggests that much could be accomplished in agriculture and rural

^{2/} ECA: Intra-African economic co-operation and Africa's relations with the EEC - Working Paper No. 2, December, 1972.

industrial development by exploiting small hydro power potentials which is one area in which China, among other countries, seems to be gaining an international reputation. One advantage of this approach is not only the savings in energy imports but also the local reproducibility of equipment and parts and minimum maintenance costs. This does not preclude the construction of large dams (for irrigation or hydropower generation or both) in the same country by engineering methods that combine machinery and labour in unconventional but effective ways. Here again it is felt that study visits are necessary for promoting innovative approaches that would be tolerable in the conditions of the region in the 1980s and would lead to more efficient use of scarce resources made available by UNDP. Advantage could be taken of such study visits to see the use of biomass and admittedly crude techniques of producing oil from coal.

Development of human resources

7. As human resources constitute perhaps the most important of missing factor inputs in Africa and the main source of external dependence, their development must be clearly seen to relate to (i) the identification and evaluation of the natural resource raw materials base for economic growth and (ii) the conversion of these raw materials into semi-finished and finished products. Without such an overview it is difficult to envisage any serious attempt to determine priorities or to design expansion or improvement of education and training facilities to match the Lagos Plan. The inventory suggested would also facilitate arrangements for co-operation among education and training institutions for making optimum use of existing or prospective resources.

8. However, a very large bottleneck is to be found at middle-level specialization and there is need to develop a data base relating to the output (size, composition, etc.) of middle-level technical training institutions as well as to the organization of training. In many cases the implications, when related to the natural resources raw materials base to be exploited, can best be considered at the MULPOC level and regional 'residual' action derived thereafter. There are many innovative measures which can be considered on these issues and call for examination, experimentation and evaluation.

9. One central problem which will be encountered are the supply of teachers which can to some extent be met by measures to attract back Africans who have already specialized and remain abroad by industrial fellowships and so on. Another is the local production of educational supplies (including laboratory equipment and materials and cheap text books) taking into account the expected foreign exchange resource situation of the region in the 1980s.

10. However, since the bulk of African populations, the bulk of natural resources and the bulk of potential production and markets will be found in rural areas, it is education and training for rural agriculture and industrial production that will be crucial and the organization of such training facilities will have to be tied to human settlements and largely to the natural resource raw materials base. The patterns of education characteristics in urban metropolises in Africa today has little to do with production, raw materials, national markets and marketing, etc. and unemployment of the urban educated is becoming a threat. It is possible to conceive of retraining the educated urban unemployed for use as spearheads in rural development but some evaluation of known experiments is required.

Promotion of science and technology

11. Under food and agriculture a very brief reference has been made to the role of P&D in the agricultural revolution implied in the Lagos Plan and its successors. The other priorities ECA wishes to advocate here are:

- (a) a review of the scope, quality and orientation of what is generally referred to as tropical products research carried out in many developed countries but mostly overlooked in Africa;
- (b) measures for the encouragement of such P&D in the region and for the effective commercialization of research results.

12. At present an increasing volume of reports on research on tropical products and proposals for further P&D are issued by research bodies in advanced countries but

there do not appear to be any well equipped institutions capable of taking them up.

Desertification control

13. In view of the forthcoming meeting on this subject no comments are provided or priorities recommended at this time.

Least developed land-locked and island countries

14. In the light of part I of this note it is clear that the most urgent problem confronting many least developed and land-locked countries is the determination of what UNCTAD describes as resources for transformational investment, i.e. natural resources raw materials of interest to foreign enterprises in the extractive industries. The policy trends of transnational corporations in geological exploration and mining to avoid investment (except in exceptional cases) in countries where inter-alia considerable urban and transport and communications infrastructures have to be constructed by them suggest that little hope can be placed on foreign enterprise and investment to activate economic growth in spite of the fact that many least developed and land-locked countries have a considerable but little explored and evaluated natural resources raw materials base. As such, therefore, it would appear that exceptional support for the determination and exploitation of this base by other means and for other purposes than export to the markets of developed countries is required. This support can be effectively organized only on a multinational basis. It would appear that not enough attention is yet being paid in United Nations circles in general to the implications of this factor. Land-locked countries by their very nature are isolated from traditional markets in advanced countries. But it is doubtful how promising these markets are for the traditional products involved, in the 1990s and beyond. If these are not, as is likely, promising, land-locked countries clearly must undertake a considerable reorientation of their economies involving the exploitation of new production potentials for both domestic and new markets, which could substantially alter the transport and communications patterns now desired and, of course, the pattern of manpower development,

institution services, technology, etc. It must be recalled that industrial development began in Latin America in land-locked countries mainly to overcome the problems of supply, for railways and mines, etc., of equipment, components and parts over long, difficult land routes. The problems of land-locked countries require far more fundamental thinking and far-reaching and energetic planning than they appear to have received so far. If this is not carried out and more meaningful links established with neighbouring countries, they risk deteriorating in the 1990s into conditions from which they may find it hard to retrieve themselves.

15. Island countries paradoxically fail to exploit the marine biological resources around them for continental markets in Africa and elsewhere. Special efforts are required, perhaps through joint meetings with neighbouring continental maritime States open up this and other potentials.

Industrial development

16. As suggested above the industrial programme of ECA is increasingly being brought into line with the provision of technical inputs for the development of the rural sector. One particular element calling for special attention is the need for rapid development of the metal working industries to provide implements, tools, relatively simple equipment and particularly components and parts for agriculture, rural industries, water supply and irrigation, energy, etc., in anticipation of the expected crisis of the 1990s.

Development planning and management

17. Since planning must now be concerned with physical production to meet the needs of the mass of the population, it must obviously begin with population analysis and with socio-economic indicators of levels, types and location of poverty and unemployment, as well as with demand studies based on household budget and expenditure surveys with special reference to the rural sector.

18. These will then be matched with assessments of existing production capacities and the gap will reflect the natural resources raw materials and other factor input supply requirements. In other words priority is to be given to production planning (based on an inventorial approach as is normal practice in any organization concerned with production) both at the macro and at the micro levels. Input-output techniques associated with material balances will play a central role. The change in planning techniques will make it easier to determine, in concrete quantitative and qualitative terms, the gap in supply of relevant factor inputs to be met from internal and from external sources and facilitate the planning of the external sector and of international negotiations. Accordingly, it is intended that the training courses at IDEP should be restructured. Clearly this will call for more teaching relating to, e.g. production planning at sectoral levels, to linkage planning, to planning factor inputs development, and particularly to the organization and development of the dominant rural sector intertwined with new approaches to human settlements.

19. In ECA's experience two other major areas of weakness concern national deficiencies in the preparation of project feasibility studies. At least two very serious consequences follow: a large and increasing drain of foreign exchange to pay for imported services for such studies so that funds required for the projects themselves are rapidly exhausted and the perpetuation and extension of dependence.

20. It is therefore recommended that priority should be given to projects to improve national and multinational capabilities in carrying out prefeasibility and feasibility studies. These would include (a) the deliberate attachment of nationals to feasibility project teams financed by United Nations or bilateral agency sources as well as by national Governments (b) more opportunities for technical specialists to participate in courses on feasibility studies preparation run by the World Bank, etc., tailored to meet the requirements of priority sectors and run either in Washington or, for each MLEPC, in a suitable host country; (c) the encouragement of national consultancy groups and national

and multinational consultancy associations: (4) the promotion, at the third level of education, of multidisciplinary courses relating to feasibility studies. It should be noted that the term feasibility conventionally means that project is technically and financially possible but that this definition neglects consideration of whether the Government and community can undertake it, so that there is an implicit assumption of an unspecified entrepreneur. This accounts in part for the large and growing number of expensive but useless feasibility studies in most African countries.

21. The other major weakness is similar: national capabilities in project design, planning and management. Again, enormous foreign exchange resources are being used to meet the need through imported services although it could be met by courses at IDEP, the World Bank and suitable host countries and institutions to serve the needs of each MULPOC or of participants from such institutions as river and lake basin. ECA is aware of a three-month course run by ADB at Abidjan but would like to consider not only more courses elsewhere but the impact of the ADB course on national demands for project design and planning services. This does not exclude national courses to meet national needs where these are urgent and substantial.

22. One of ECA's concerns has been the limited familiarity of policy makers and planners in Africa with corporate strategy formulation and corporate planning techniques. It is proposed to include elements of this subject into the IDEP course in view of its importance to this region.

23. National plans, as is now recognized, are usually addressed to no one and little or nothing is done to identify the different groups in the private sector, to evaluate their capabilities, orientation, etc., and to devise incentive systems, technical support services and a communications system for consultations on bottlenecks and for monitoring progress. Particular priority is recommended here for the development of technical support services especially in least developed member States. Study visits to other countries should be included in measures for developing these institutions.