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Follow-up Subregional Meeting on the Promotion of Intra-African Industrial Co-operation within the Framework of the Industrial Development Decade for Africa

Dakar, Senegal, 30 October-3 November 1989*

REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME FOR THE WEST AFRICAN SUBREGION**

Prepared by
the UNIDO Secretariat

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* This meeting is being organized by UNIDO, in co-operation with the Economic Community of West African States (ECOWAS), the Economic Commission for Africa (ECA) and the Government of the Republic of Senegal.

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INTRODUCTION

Objective of the paper

1. This document has been prepared in the light of discussions at the follow-up subregional meeting on the promotion of intra-African industrial co-operation in the West African subregion within the framework of the Industrial Development Decade for Africa (IDDA) held at Dakar, Senegal, from 30 October to 3 November 1989. The document presented to that meeting was based on consultations held with the officials responsible for industrial co-operation and development in the countries in the subregion with the secretariats of the Economic Community of West African States (ECOWAS), the West African Economic Community (CEAO), the Mano River Union (MRU), the Niger-Nigeria Joint Commission for Co-operation (NNJC), the Organization for the Development of the Senegal River Basin (OMVS), the Liptako-Gourma Region Integrated Development Authority (LGA) and other intergovernmental organizations dealing with industrial development in general.

Scope and content of the paper

2. The first chapter provides background information on industrial co-operation in the subregion. The second chapter describes the initial integrated industrial promotion programme and projects adopted at the first subregional meeting held in Abidjan, Côte d'Ivoire, in December 1983 and subsequently revised at the second subregional meeting held at Lomé, Togo, in December 1985. The third chapter assesses the implementation of the first revised programme and focuses on constraints at the national and subregional levels. The fourth chapter puts forward proposals for a second revised integrated industrial promotion programme, while a strategy for accelerating the implementation of the proposed revised programme is dealt with in chapter five.

CHAPTER I

INDUSTRIAL CO-OPERATION IN THE SUBREGION

Historical background

3. Using the definition applied in the United Nations system, the West African region consists of 16 countries: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo. In 1986 the total population of the subregion was estimated at over 174 million. The population of the member countries in that year was: Benin 4.1 million, Burkina Faso 7.3 million, Cape Verde 0.35 million, Côte d'Ivoire 10.5 million, the Gambia 0.76 million, Ghana 13.1 million, Guinea 6.2 million, Guinea-Bissau 0.88 million, Liberia 2.3 million, Mali 8.3 million, Mauritania 1.8 million, Niger 6.7 million, Nigeria 98.5 million, Senegal 6.7 million, Sierra Leone 3.7 million and Togo 3.1 million.1/

1/ Population estimates are derived from ECA Survey of Economic and Social Conditions in Africa 1986-1987.

4. The figures indicate that Nigeria alone accounts for over one half of the subregional population (56 per cent). Eight countries have populations of less than 5 million, while five have populations of less than 10 million. It is only Côte d'Ivoire and Ghana whose populations exceed 10 million. Five countries in the subregion belong to the semi-arid Sahelian zone, three of which are land-locked (Burkina Faso, Mali and Niger). The population density for the rural areas in the subregion is about 21 persons per square kilometre. This average figure, however obscures wide disparities between individual country level. For example, the population density in Mauritania and Niger is estimated at 1.7 inhabitants and five inhabitants per square kilometer, respectively. For Niger, on the other hand, 75 per cent of the population lives in the southern part occupying about 12 per cent of the total land area, leaving the northern part of the country with a population density of 0.3 inhabitants per square kilometer. These figures underscore the difficulties of bringing about physical economic integration at the national and subregional levels.

5. Agriculture, on which more than 75 per cent of the population depends for employment, income and foreign exchange, is characterized by traditional production techniques and low productivity. The major products are: cocoa, palm kernel, palm oil, groundnuts, coffee, cotton, hides and skins, tobacco, rubber, timber, plywood, sesame, millet, sorghum and karité. Some countries also depend on the mining of mineral such as: phosphate, petroleum, gold, diamond, manganese, iron ores, bauxite and uranium. Most countries therefore derive the bulk of their foreign exchange earnings from the external market over which they have no control. It therefore becomes impossible to plan any meaningful economic development on the basis of these commodities.

6. Despite the dominant role of agriculture, its overall productivity has remained disappointingly low because of its high subsistence character. This makes it extremely vulnerable to external shocks and natural disasters such as drought. The abandonment of traditional food crop production in preference to the production of cash crops has created serious food supply problems. As a result nearly all the ECOWAS countries depend on external sources for 60 per cent of their food requirements, which only adds further to the drain on foreign exchange. The weakness of the agricultural sector has in turn affected the pace of industrialization, which has to compete against food imports for the scarce foreign exchange resources.

Industrial structure of the subregion

7. The industrial sector is very small; it accounted for about 28 per cent of the subregion's gross domestic product (GDP) in 1986. The manufacturing subsector which reflects the true level of industrial development was estimated to account, on average, for 6.5 per cent of the GDP. In four countries (Côte d'Ivoire, Ghana, Nigeria and Senegal) the manufacturing subsector contributes more than 10 per cent of the GDP. Over the period 1980-1985, the West African subregion recorded negative growth rates of 0.04 per cent in the manufacturing sector. The poor performance of the manufacturing subsector is mainly attributable to the economic structure and policies which still favour externally-oriented development and accord less importance to internally and subregionally oriented development.

8. Since the advent of the post-colonial era, the industrialization process in the subregion has not been accompanied by major changes in the structure of industry. Manufacturing still concentrated on a few, simple consumer goods

such as food, beverages and textiles, which constitute the bulk of production. For example, 30 per cent of industrial production is accounted for by food-processing industries, 20 per cent by metal products, machinery and equipment and slightly less than 20 per cent by textiles and related industries. The manufacturing activities are therefore dominated by light industries and confined to last-stage type of assembly processes.

9. The industrialization process is highly import-intensive, in terms of capital, machinery, intermediate inputs, know-how and spare parts. The non-utilization of local raw materials has made capacity utilization vulnerable to shifts in foreign exchange availability. This has led to widespread underutilization of existing capacity, which for West Africa is estimated to be well above 60 per cent. The sectors in which higher levels of capacity utilization have been achieved are the food processing and beer industries. The problem of capacity utilization has also been compounded by small domestic markets, since industrial expansion has tended to outstrip the supply of inputs and the demand for its outputs, and by duplication of similar productive capacities in the neighbouring countries. Other contributory factors have been the lack of purchasing power, maintenance problems for want of spare parts, as well as the shortage of managerial and technological skills. At the same time, the subregion has made a concerted attempt to rehabilitate its industries and thus overcome some of the problems described above.

10. The paradox is that the subregion is well endowed with abundant agricultural, mineral, water, energy and human resources. These, however, remain largely underexploited because of the stronger inclination towards 'go-it-alone' policy. The enormous potential of the subregion can be quickly realized if the countries of the subregion were to give unqualified support to regional integration. The solution lies in greater collaboration within the subregion and the current trend is clearly in that direction, as evidenced in the renewed dynamism of ECOWAS and other bodies.

Industrialization strategies and policies

11. Import-substitution industrialization strategies were adopted as the quickest means of attaining development goals and objectives, because throughout the subregion: (i) they offered the possibility of acquiring experience in the modern industrial technologies; (ii) they were easy to implement through policies that protect domestic industries; and (iii) they offered visible evidence of 'modernization' and self-reliance. Unfortunately, since import-substitution never proceeded further than the replacement of the imports of consumer goods, it resulted in an unforeseen increase in imports of equipment and industrial intermediates needed to produce those goods. It soon became apparent that import substitution used rather than saved foreign exchange. Adoption of import-substitution strategies has encouraged the establishment of industries that have basically remained 'enclaves' and generated very little value-added for the countries economies. Given the need to protect their young industries, the countries in the subregion had to introduce a series of measures, including tariff-barriers, import licenses and quotas, and in some instances the State has had to intervene in order to make the industries work.

12. The adoption of import-substitution policies and strategies was largely based on the experience of the developed countries, where a close correlation exists between industrialization and economic development. The thrust of post-independence development programmes was therefore directed towards

transforming (often at rates expected to be dramatic) predominantly agricultural societies into economies in which industry would play a major role. In that role, industrialization has seen not only as a means of expanding the economic base of the individual countries, but also as a means of bringing about basic structural changes and attaining a higher standard of living in the countries of the subregion.

13. The inherent characteristics of these import-substitution strategies, which were based on a tariff structure that granted higher protection to final consumer goods than to intermediate and capital goods led to an orientation of domestic markets in favour of a small social class and a heavy dependence on imported semi-processed raw materials and intermediate goods. It has therefore become difficult to maintain a balanced production in the face of balance of payment problems that have led to a shortage of the foreign exchange needed to import the industrial inputs required. In other countries, industry has not been able to expand owing to an insufficient growth in demand, while landlocked countries continue to face the additional problem of increasingly high transport costs associated with importing the necessary inputs. All these factors have led to a gross underutilization of existing manufacturing capacity.

14. In operational terms, these industries have not, to say the least, been structurally linked with local resources, especially primary agricultural inputs. With dwindling foreign exchange earnings and little market growth owing to low incomes, most industries have suffered setbacks. Consequently, some countries have adopted a number of restrictive measures which in turn have reduced the flow of technology and capital to the industrial sector.

15. Another serious effect of all these policies and measures has been their adverse effect on the level of intra-regional trade and industrial co-operation. Furthermore, in a number of cases, projects have duplicated each other. At the national level, given the low incomes and small populations, the markets in individual countries have remained too small to sustain the initially expected rate of growth and project expansion. As a result, the role of industry in the development of the subregion has remained insignificant and, in some cases, even decreased. An even more adverse effect has been the excessive relocation of labour from the traditionally agricultural areas to the urban centres where the industries are mainly located. This has further undermined agricultural production in most countries not only in terms of food production but also in terms of producing the industrial raw materials needed for industrial development.

Institutional arrangements in the subregion

16. The West African subregion has more than fifty economic groupings of one form or another, more than any other subregion in Africa, which deal with nearly all types and aspects of economic co-operation. At present, no less than fourteen deal with the general issues of industry and energy in the subregion[2/]. While some of these organizations are multisectoral, others are single-purpose organizations that focus on industrial projects[3/]. For the purposes of this review, reference will be made only to the most important multilateral organizations: the Economic Community for West African States

2/ See ECA/MULPOC, Directory of Intergovernmental Organizations in West Africa, IGO/NIA/IX/15 December 1985.

3/ Proposals for the rationalization of West African integration efforts, ECA Publication, May 1987.

(ECOWAS), the West African Economic Community (CEAO) and the Mano River Union (MRU)4/.

17. Irrespective of their areas of specialization, these economic integration schemes are intended to provide the framework for structural transformation and development, by encouraging the harmonization of production structures with those of demand. The transformation of structure of production is understood to be planned to bring them in line with the utilization of local resources and maximize forward and backward linkages between related industrial activities. Since these schemes are aimed at accelerating the process of industrialization, they are in essence expected to focus attention on the promotion of basic industries that exert growth-generating effects on other industries and economic sectors.

Economic Community for West African States (ECOWAS)5/

18. ECOWAS which consists of 16 countries came into existence on 28 May 1975. The treaty establishing the Community is all-embracing and seeks "... to promote co-operation and development in all fields of economic activity particulary in the fields of industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions and in social and cultural matters for the purposes of raising the standard of living of its peoples, of increasing and maintaining economic stability, of fostering closer relations among its members and of contributing ot progress and development of the African continent."6/. In order to achieve these objectives, the measures proposed are: the elimination of trade barriers both quantitative and administrative; the establishment of a common customs tariff and commerical policy with respect to third countries; the free movement of persons, services and capital; the harmonization of agricultural, industrial and monetary policies; and the joint development of transport, communications, energy and other infrastructural facilities.

19. In the field of industry, Articles 29, 30 and 31 offer broad guidelines for the harmonization and promotion of industrial development in the

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4/ The full list would comprise: Economic Community of West African States (ECOWAS), West African Economic Community (CEAO), Mano River Union (MRU), Organization for the Development of the Senegal River Basin (OMVS), Liptako-Gourma Region Integrated Development Authority (LGA), Niger-Nigeria Joint Commission for Co-operation (NNJC), Société du Développement de l'Industrie Alimentaire du Millet et du Sorgho (SADIAMIL), Organization for the Development of the Gambia River (OMVG), Niger Basin Authority, Union Africaine et Mauritanienne des Banques de Développement (UAMBD), CIMAO, Cattle and Livestock Economic Community (CEBV), Lake Chad Basin and Conseil de l'Entente.

5/ The Member States of ECOWAS are: Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.

6/ Article 2(1) of the Treaty of the Economic Community for West African States.

subregion. Article 29 specifically encourages Member States to finance jointly the transfer of technology and development of new products through the utilization of raw materials common to all or to some Member States. Article 30 outlines the harmonization of measures for promoting industrial development and development plans, while Article 31 requires the exchange of personnel to undertake the implementation of specific projects as well as joint project preparation in those areas that involve complementarity with other members of the Community. By implementating these measures, the Community would take steps to reduce gradually their members' economic dependence on the outside world and to strengthen economic relation among themselves.

20. In order to stimulate industrial development in the subregion, ECOWAS has adopted a multifaceted approach that will lead to the implementation of: the Trade Liberation Scheme; the ECOWAS Transport Programme, the agricultural pricing policy; and an ECOWAS industrial master plan. The effective implementation of these measures will lead to the creation of a wider market that, in turn, would stimulate production by encouraging the establishment of new industries and allowing for the expansion of existing industries. By implementing these programmes, intra-ECOWAS co-operation will be greatly increased, thus stimulating more industrial activity. Studies on implementing the ECOWAS Trade Liberalization Scheme have been carried out and presented to the various legislative organs of the secretariat. It only remains to put these studies into effect.

21. In recognition of the crucial role of transport and communications as a basis for bringing about greater integration as well as facilitating the movement of people, goods and services with the subregion, and in fulfilment of Articles 40 to 47 of the Treaty, the ECOWAS Authority of Heads of State and Government by decision A/Dec.20/5/80 approved a transport programme for the Community. The transport programme aims at establishing effective links between Member States with a view to facilitating intra-ECOWAS economic and social activities. The strategy adopted called for[7/]:

- The development and modernization of transport infrastructures (road, harbour installations, railways, etc.);
- Making land-locked countries accessible as rapidly as possible;
- Harmonization of transport legislation in order to facilitate the movement of goods, services and persons;
- Adoption of standard equipment;
- Encouragement of the establishment of industries to produce transport equipment; and
- Establishment of transport training centres.

7/ See Economic Community of West African States. Activity Report. July 1987 - March 1988, Department of Transport, Communications and Energy, April 1988.

22. In the area of agriculture, a study on agricultural pricing policy has been completed and presented to the legislative bodies of the ECOWAS secretariat. The document outlines policy guidelines that should be followed by the Member States with regard to their agricultural pricing policy. The harmonization of agricultural policies should lead to standardization of prices, thereby minimizing one of the causes of smuggling. The agricultural pricing policy study was one step towards the realization of Article 2(ii) of the Treaty.

23. In an attempt to implement Articles 29 and 31 of the Treaty, the ECOWAS secretariat drew up a supplementary Protocol relating to Community Enterprises[8/], the objectives of which include the development of industrially less developed Member States, promotion and development of indigenous technology and the transfer and adaptation of imported technologies, and the creation and expansion of employment within the Community. These means are also aimed at easing unemployment when the customs union becomes fully operational in 1990, especially when the provision pertaining to free movement of labour is fully implemented.

24. At its last meeting held at Lomé in May 1989, the Industry Agriculture and Natural Resources Commission of ECOWAS, considered the draft terms of reference of the study to be undertaken in connection with the implementation of an ECOWAS industrial master plan. The industrial master plan aims at enhancing integrated development of the human resources, institutional mechanisms and technological capabilities necessary for the efficient utilization of the raw materials and natural resources of the region and their local processing. The implementation of an industrial master plan would obiously assist in intensifying industrial co-operation in general and industrial policy co-ordination in particular. Lack of co-ordination has been recognized as leading to expensive duplication and capacity underutilization. Consequently, contacts had been established with other organizations in the subregion, such as MRU, OMVS and CEAO. Co-operation would be facilitated through collaboration within the context of the Industrial Development Committee of the Association of Intergovernmental Organizations in West Africa.

25. While the objectives and goals of these measures remain valid, tangible success remains as elusive as ever. For example, it has been remarked that: "Since the founding fathers of ECOWAS ennunciated the needs for and benefits of regional integration, interstate experiences and contact in commerce and manufacturing in the subregion have not been much, inspite of the efforts, over the years, to bring the activities and protocols of ECOWAS into the wide and popular arena of international conferences"[9/]. Indeed, liberalization of trade without the accompanying measures, and within the context of an industrial structure that is highly dependent on extra-African factor inputs, will only lead to the disintegration of national economies. It is against this background that no effort should be spared in implementing these measures, the difficulties notwithstanding.

8/ See Official Journal of the Economic Community of West African States, ECOWAS Vol.6, December 1984.

9/ An Address to the Inaugural Meeting of the Federation of West African Manufacturers Association, by General Ibrahim B. Babagida, President and Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria, 20 October 1988.

West African Economic Community (Communauté Economique de l'Afrique de l'Ouest - CEAO)

26. The West African Economic Community (CEAO) comprises six countries: Benin, Burkina Faso, Côte d'Ivoire, Mali, Mauritania, Niger and Senegal. The treaty establishing the Community was signed on 17 April 1973, and came into effect on 1 January 1974. The general objectives of the Treaty were to achieve an economic integration, to create a free-trading zone among the Member States and to harmonize economic activities. In pursuance of these objectives, emphasis has been placed on the expansion of trade between the members, especially in the agricultural and industrial sectors, the joint promotion of agricultural and industrial development, and the co-ordination of transport and communications. Special protocols on livestock production and fishing have also been included.

27. In order to promote intra-CEAO trade in manufactured goods and industrial development in particular, a regional co-operation tax was created to compensate for the less industrialized partners' loss of revenue by importing manufactured goods from the more industrialized partners. Under the scheme an exporting country pays tax on products which it exports to other countries in the Community, provided that such tax is less than the customs duty which would have been levied by the importing country on the same product had it been imported from outside the Community. Experience has, however, shown that the scheme is not operating smoothly.

28. In its effort to intensify industrial development, CEAO, under its programme for industrial co-operation during the period 1988-1992, has pinpointed such industrial sectors as agro-industries, fertilizers, agricultural implements and pumps and building materials (cement, bitumen, steel) as the core of its regional industrialization programme[10/]. The implementation of the new programme should lead to the generation of intra- and inter-sectorial industrial linkages.

Mano River Union (MRU)

29. The Declaration establishing the Mano River Union as an economic co-operation entity was signed by Liberia and Sierra Leone on 3 October 1973. Guinea acceeded to the Union in 1980. The main objective of the Union was to intensify economic co-operation and accelerate economic growth, social progress and cultural advancement. The objective was to be achieved by expanding trade and eliminating all trade barriers, creating favourable conditions conducive to trade expansion, establishing new productive capacities to be protected under a common policy, and guaranteeing fair distribution of benefits from economic co-operation.

30. In the specific area of industrial development, the Union has endeavoured to promote a number of what it terms "Union" industries, especially in the areas of pharmaceuticals, pulp and paper, wood, glass, fertilizers, food, animal feed, tyres, salt-based chemicals and spare parts. A number of support programmes have also been initiated in order to contribute to the industrial development activities. These support activites include a feasibility study on the creation of the Mano River Basin Development Project, the aim of which

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10/ Strategie de Coopération et Programme Quinquennal 1988-1992, en matière de Promotion Industrielle, CEAO, October 1987.

is to meet the Basin's energy requirements, as well as provide irrigation for agricultural improvement. Road and air links within the Union are also undergoing improvement.

31. The proliferation of many economic groupings in the subregion should be viewed as a desire by the countries of West Africa to minimize their heavy reliance on foreign markets, which cannot provide a sound basis for the development of industries in the region. It is in this context that the activities of all existing organizations should be seen as part of a series of complementary efforts in the subregion, and measures should be taken to minimize any conflict that might arise in the course of implementing the various activities. It is for this reason that steps should be taken to improve co-ordination of the various intergovernmental organizations' activities through the Niamey-based Multinational Programming and Operational Centre (MULPOC). In fact, a framework has already been established for effective subregional industrial co-operation. Furthermore, the Union had organized seminars with the assistance of UNIDO on the harmonization of industrial plans and strategies.

The Industrial Development Decade for Africa (IDDA)

32. The Lagos Plan of Action[11/] points out in its preamble that, over the past 25 years, Africa has failed to achieve a significant rate of growth or a satisfactory standard of general welfare. Indeed, 28 African countries are classified by the United Nations as being among the "least developed", out of a world total of 41, and 20 of the 33 countries classified by the World Bank as "low-income" developing countries are in Africa. It is therefore necessary for the African countries to join forces and apply themselves to the development of intra-African economic co-operation, especially in the industrial sector. The will to do so is amply expressed in the Monrovia Declaration by the Heads of State and Government of OAU as well as in the Lagos Plan of Action and the Final Act of Lagos.

33. Industry is given a major role in the Lagos Plan of Action, confirming the commitment to changing the existing economic structure, to meeting the basic needs of the African peoples through the exploitation of their own natural resources and to establishing an industrial base for the development of other economic sectors. The Lagos Plan of Action sets both qualitative and quantitative targets, such as a share for Africa of at least 1.4 per cent of world industrial production by the year 1990 (as opposed to a current level of less than 1 per cent) and self-sufficency in the area of food, building materials, clothing and energy. Furthermore, under the Final Act of Lagos, the industrial sector has been selected as one of the priority sectors for subregional and regional integration during the current decade.

34. With the proclamation of the 1980s as the Industrial Development Decade for Africa, both the United Nations and the OAU Heads of State and Government wished to emphasize the importance of industrial development as a means of attaining rapid economic growth, overall development and a better standard of living in Africa. The Programme for the Decade, adopted by the African Ministers of Industry and endorsed by the OAU Heads of State and the

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11/ OAU - Lagos Plan of Action for the Economic Development of Africa (1980-2000).

legislative bodies of the ECA and UNIDO, is based on the principle of self-reliance and self-sustained development. It presumes that the necessary intitative and stimuli must emanate, first and foremost, from within each country of subregion so as to form a solid base on which self-reliant and self-sustaining economic growth can be fostered through an integrated development strategy.

35. The main features of the programme include the identification of key requirements at both the national and subregional levels, and the effective exploitation, processing and use of local natural resources on the basis of subregional co-operation and an integrated development strategy. Emphasis is also accorded to the methodical planning of development activities, integrating them into a subregional and regional approach and strengthening links between industry and the other sectors. Intra-African co-operation being indispensable to the self-sufficient and self-sustained development of Africa, emphasis is placed on the need to define sectoral policies and programmes covering strategic branches of industry; identify major industrial projects of interest to the countries of the region or subregion; and to strengthen or establish institutions in the subregion or region aimed at promoting industrial integration.

36. The complexity of the challenge inherent in such a programme demands determination, especially at the national level, as the degree of success depends ultimately on the countries themselves. It also depends on an integrated industrial development strategy that is linked to other sectors of the economy and in concert with national development plans and aspirations. Implementation of the programme presumes greater and effective mobilization of the countries' resources, closer subregional and regional co-operation, especially in matters relating to trade, transportation, technology and skills, and substantial bilateral or multilateral assistance from countries outside the region.

37. At the national level, the programme urges the countries to identify core industrial and support projects as defined in the programme for the Decade, and to pay attention to the development of physical infrastructure, institutional mechanisms, skills, technology and raw materials, as well as other local inputs. Other priority actions include detailed assessment of the financial requirements and the establishment of sectoral linkages. At the subregional level, it calls for the preparation of a programme of industrial complementarity of core projects based on resource endowment factors and joint participation in order to optimize limited investment resources and benefit from enlarged markets.

38. In order to attain this objective, initial steps have been taken to identify core industrial projects which can lead to the establishment of multinational industrial enterprises involving two or more countries. Thus, initial industrial promotion programmes were drawn up for each of the subregions, that for West Africa being adopted at the meeting held at Abidjan, Côte d'Ivoire, in December 1983. The programmes also called for the establishment of an information system which would facilitate intra-African co-operation, especially in the fields of training, energy, trade harmonization and the elimination of trade barriers. They also stressed the need to strengthen relevant existing subregional institutions so as to foster industrial co-operation at the subregional level and enhance the industrial activities of the national institutions.

CHAPTER II

THE FIRST REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME FOR WEST AFRICA

39. The follow-up meeting on the promotion of intra-African industrial co-operation in the West African subregion within the framework of the Industrial Development Decade for Africa was held in Lomé, Togo, from 2 - 6 December 1985[12/]. The meeting reviewed the implementation of the integrated industrial promotion programme that had been drawn up two years earlier at the subregional meeting held at Abidjan, Côte d'Ivoire, in December 1983.

40. The follow-up meeting was attended by experts/representatives from the following countries: Burkina Faso, Ghana, Guinea, Guinea-Bissau, Côte d'Ivoire, Liberia, Senegal and Togo. The representatives of the following organizations also participated: the West African Development Bank (BOAD), the West African Economic Community (CEAO), the Nigeria-Niger Joint Commission for Co-operation (NNJC), the Economic Community of West African States (ECOWAS), the Liptako-Gourma Region Integrated Development Authority (LGA), the Mano River Union (MRU), the Organization for the Development of the Senegal River (OMVS), the African Regional Centre for Technology (ARCT) and the African Centre for Engineering Design and Manufacturing (ARCEDEM). The meeting was organized by UNIDO in co-operation with OAU, ECA, ECOWAS and the Government of Togo. The meeting reviewed the status of implementation of the core and support projects in tne programme and set priorities for their implementation. In an effort to ensure the acceleration of the successful implementation process, the meeting agreed to classify the projects in three categories: (i) first priority: implementation in the short term (0-5 years); (ii) second priority: implementation in the medium term (5-10 years); and (iii) third priority: implementation in the long term (more than 10 years). The meeting also indicated the policy, institutional and other measures essential to the realization of the programme.

Priority core subsectors

41. In selecting the projects to be included in the subregional programme, the meeting accorded priority to projects that contributed, either directly or indirectly, to the subregion's self-sufficiency in food production, as well as to those projects with upstream and downstream linkages. Thus, in order to secure greater political support, emphasis was placed on a subregional strategy that focused on agro-based and agro-related industrial projects that had already been developed by the intergovernmental organizations in the subregion. That strategy placed equal priority on certain complementary subsectors that provided inputs to agro-based projects. Consequently, the main priority subsectors identified in the initial integrated industrial promotion programme were:

(a) Agro- and agro-based industries

This subsector was to be given priority when allocating resources so that the basic needs of the people could be met and the degree of

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12/ See UNIDO document ID/WG.455/4, 17 December 1985.

self-reliance increased by reducing the import content and supplying locally available inputs in adequate quantities. The initial subregional programme called for increased processing of agricultural produce as well as greater production and use of fertilizers, pesticides and agricultural machinery (in order to enhance agricultural production). It also emphasized the need to establish suitable processing, storage and preservation facilities. In the light of developments since the meeting four years ago, attention will also have to be given to quality control, frontier and new technologies as well as training in the food-processing sector. This could be facilitated by subregional co-operation in the establishment of quality control laboratories and the harmonization of standards and technology transfer.

(b) Metallurgical industry

The subregion is endowed with large quantities of valuable metallic and other minerals which are not fully exploited. At best, the few minerals exploited are being exported with little or no processing. This subsector could become a major foreign exchange earner and save the subregion a considerable amount of money at present being spent on importing a wide range of processed metal products. It could also become the foundation on which to build a wide range of industries producing goods for local consumption and export. It is not surprising therefore that the initial subregional programme placed high priority on the development of this subsector, in particular the development of the iron and steel, copper and aluminium industries. Great importance was also attached to co-operation in their development in view of the high cost of the technology involved and the need to secure adequate markets.

(c) Chemical industry

The initial subregional programme stressed the need to develop production facilities for certain priority chemicals such as fertilizers and pesticides, which are essential to improving agricultural yields, and other chemicals and pharmaceuticals, especially those which can be extracted from local resources and medicinal plants. Here again, the need for co-operation and the formation of multinational corporations was emphasized as a means of mobilizing resources on a subregional basis.

(d) Engineering industry

The development of the engineering industry was seen to be essential as it offered a means of enhancing the development of technology and providing the requisite machinery, equipment, spare parts and components for all economic and social activities, especially in the development of energy, transport and communications.

(e) Building materials industry

Basic needs such as shelter and infrastructural development are closely linked with other subsectors of the economy. The initial subregional programme therefore called for the intensified production of certain strategic materials such as cement and emphasized the need for research into the greater use of local raw materials.

42. The identification and selection of core projects in these priority sectors are based on the principle of attaining self-reliance and self-sustained industrialization. Consequently, any projects selected must meet basic domestic needs, act as stimuli to other sectors of the economy and enhance the development of the requisite local capabilities. In short, the projects must ensure the full and effective utilization of local natural resources, have strong linkages with established industries, create employment and disseminate technological know-how. The linkage and complementarity factors need to be projected at both the national and subregional levels. In the long term, it is expected that this policy will not only enhance industrialization, but also accelerate the local production of inputs for other sectors and lead to the gradual development of capital goods industries in the subregion. The criteria governing the selection of subregional projects, which were discussed and adopted at the Abidjan meeting and endorsed by the African Ministers of Industry at their seventh meeting are attached as Annex I.

43. The core industry concept developed in the Programme for the Decade was also examined in some detail and incorporated into the basic strategy of the initial programme. Consideration was given to factors such as availability of markets, raw materials, training facilities, equity participation and management cadres - all at the community level. It was also decided to evaluate the projects selected within the context of the changing priorities and requirements of the subregion, as well as within the framework of the Programme for the Decade.

Areas and services supporting industrial development

Agriculture

44. Even though agriculture still remains the major source of employment, food and industrial raw materials, efforts directed at increasing its performance have not yielded the desired results. Productivity has been declining and is susceptible to the climatic changes that are characteristic of the West African subregion, in particular, the Sahelian countries. The development of the agricultural sector contributes to industrial development in two ways: first, as a supplier of raw materials it stimulates the establishment of agro-based industries which in turn induce the growth of associated engineering industries and advances in food technology, packaging and canning; and secondly, as a user of industrial products, it contributes to the creation and expansion of industrial enterprises that produce the requisite inputs for agriculture. Such a development fosters the establishment of inter-sectoral linkage and the process of integration that form the basis for self-sustaining industrialization.

Mineral resources

45. Mining and quarrying activities are important factors in the development of certain industries in some countries of the subregion. For example, the extraction of iron ore could enable countries such as Mauritania, Guinea, Liberia and Nigeria to establish integrated steel works which are essential to development in general. Although Nigeria has already established an iron and steel industry, setting up an integrated steel works would further the subregion's development through the extraction, conversion and utilization of local mineral resources. It would also ensure a local supply of intermediate products, in addition to laying the basis for the local manufacture of

machinery and equipment required by the mining and quarrying companies. In the ultimate analysis, mineral resource development will set in motion the development of metallurgical, engineering, chemical, building materials and agro- and agro-based industries. The mineral resource endowment of the subregion is large enough for this to become reality.

Energy

46. Most countries in the subregion depend on oil to meet their energy needs, particularly in the transport and industrial sectors. So far only Nigeria is exploiting its oil reserves effectively, although countries such as Côte d'Ivoire and Ghana are reported to have oil reserves. Hydro-electric power is widely used, albeit not to the fullest extent, although Ghana exploits its hydro-electric resources well. Given this situation, it is likely that the subregion will continue to depend on oil as a major source of energy for some time, since the development of new and renewable sources of energy will require huge investment outlay that are far beyond the scope of individual countries. The subregion should thus take steps to intensify co-operation in the development and utilization of its energy resources.

47. Practically all countries in the subregion rely on wood as a source of energy for domestic use, in both rural and urban areas. In a subregion that has large desert areas and suffers from frequent droughts, the use of fuel should be curbed as it leads to indiscriminate felling of trees which only leads to further desertification. The development of alternative sources of energy would help to conserve the environment and enhance industrial development.

Transport and communications

48. Although the subregion has achieved commendable progress in the transport and communications sector, much remains to be done. Although it provides the most efficent and cheapest means of transport, the railway system remains largely neglected. Just over 10,000 km of permanent way have been laid, i.e. a ratio of one kilometre for every 614 square kilometres of surface area. Furthermore, only two railway lines in the subregion cross State boundaries: Senegal/Mali and Côte d'Ivoire/Burkina Faso. Maritime transport and inland water transport still play marginal roles as modes of transport. The road network is still not well integrated. A major feature is the low number of vehicles, especially the heavy trucks which account for only 12 per cent of the total subregion's vehicle park. Air transport services still tend to follow routes along the North-South axis, and air freight accounts for a minimal share of air transport services in the subregion. Telecommunications have greatly improved, even though some countries still do not have direct links with each other and have to route their traffic via Europe.

49. Long-term development calls for the establishment of a more rational and integrated transport system that will have to respond adequately to both current and future demand. Industrialization can only benefit from improvements in transporting the raw materials that present and emerging industries require from a reduction in price differentials for similar commodities, and from a marked increase in intra-subregional trade. As stated in the the Lagos Plan of Action: "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".[13] All these benefits cited above are among the priority objectives of the Transport and Communications Decade in Africa.

Human resources

50. The implementation of any integrated industrial promotion programme, such as the programme for the Decade, depends on the development of human resources at various levels in the industrialization process, ranging from policy-makers and industrial entrepreneurs through technologies and technicians to skilled labourers. The subregion disposes of a significant reservoir of human resources which needs to be better trained. In this regard, university courses and industrial needs need to be better matched with vocational training opportunities. Greater priority should be given to meeting the requirements of the priority core subsectors, support areas and services. This would help to reduce and eliminate eventually the current reliance on expatriate technicians in the subregion.

51. Although the educational infrastructure must be expanded, more immediate improvements could be obtained by rationalizing current programmes and strengthening their links with industry. New forms of education involving the rural population and women, as well as teaching/learning processes need to be introduced. Education in science and technology, which is a fundamental component in self-reliant and self-sustained industrialization, should be expanded. All these are essential to the effective development of human resources required for industrial development in the subregion.

Mobilization of financial resources

52. Implementation of the projects retained in the subregional programme will call for major investments - a basic factor determining the complete programme process, the transfer and choice of technology, product selection, corporate form and, above all, the negotiating position vis-à-vis the outside world. In most countries in the subregion, this problem is aggravated by the often precarious state of the balance of payments, public finances and budgets, as well as by the low level of transactions, particularly in the industrial sector. It would therefore be desirable for Governments and financial institutions in the subregion to mobilize internal and external financial resources and optimize their use through a variety of measures, including fiscal and other policies designed to stimulate savings and investment. These could be supported by such institutional arrangements as the African Development Bank (ADB), the West African Development Bank (BOAD), the ECOWAS Fund and FOSIDEC, to mention only a few.

Technology

53. Establishing the core industries contained in the initial programme would call for major technological inputs. Consequently, three major considerations apply. First, linking technology to the industrial development of the subregion. This will be successful only if relevant measures are adopted by

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13/ See Lagos Plan of Action for the Economic Development of Africa, 1980-2000.

Governments: thus, technology policy and planning become important elements. Secondly, the development of technological capabilities in each country. This is a prerequisite for the selection, acquisition, adaptation, absorption or development and diffusion of industrial technology and involves, inter alia, the establishment of technological institutions and the training of industrial and technological manpower. Thirdly, the appropriate choice of technology. This is of crucial importance, since an inappropriate choice will not only incur unnecessary major expenditures, but it will also distort the pattern of development.

54. It should be noted that most countries in the subregion do not possess the expertise, in quantity or quality,to evaluate, acquire, adapt, diffuse and absorb foreign technologies, which is a highly technical and sophisticated discipline. Only very few countries have taken steps to develop the institutional machinery needed to promote the development and upgrading of local technology or the acquisition and regulation of foreign technologies. In many countries, Government agencies and private enterprises have been left to their own devices or given biased advice when deciding whether to invest in technology. As a result, they have purchased defective products or plants that were reconditioned or overpriced, technologies that were inappropriate in terms of labour, capital or resource endowments, or processes unsuited to local raw materials or environment. Action should thus need to be taken to control such deficiencies as: (i) inadequate purchasing and procurement policies; (ii) lack of information on sources and prices of major factor inputs and technologies; and (iii) disorganized negotiating and contractual practices. Consequently, particular emphasis must be placed on mastering the process of assessing and selecting technology and its acquisition through appropriate policies and practices.

55. One of the causes of economic underperformance in many developing countries has been the failure to respond to the growing importance of industrial and technological information. Ignorance of the sources and volume of information or the absence of an effective information base lies at the heart of failure in many instances. Information is crucial to selecting appropriate technologies, negotiating equitable terms with suppliers of equipment and services, achieving effective technology transfer and strengthening positions in world markets as well as responding to good investment opportunities. No nation, however, is self-sufficient in terms of information: international networking, the effective collection and exchange of information, offer a means of overcoming that deficiency. Through access to appropriate information, industries in the subregion could face the mounting technological challenges and achieve international competitiveness. Planning the industrial development and technology policies of each country in the subregion must be based on objective data. For example, in the food-processing sector, essential data on such aspects as agricultural production, livestock, poultry and fisheries has to be as up-to-date as possible. It is also necessary to have equally current data on industrial aspects. Import and export statistics reveal to a large extent the nature of a country's industry and its international orientation. The collection and dissemination of information on investment openings, the terms and conditions as well as the policies governing industrial investment should be among the activities supporting the development and promotion of industry in each country.

Industrial institutional infrastructure

56. Successful implementation of the subregional programme will require the development of an effective industrial institutional infrastructure which, at present, is inadequate in most countries. Certain institutions exist at the national level, but they rarely suffice to cover all the critical functions essential to a major forward thrust. A distinction needs to be made between: (i) those institutions primarily responsible for such activities as the organization of raw material supplies, including energy, and the development of factor inputs for production and marketing; and (ii) those providing services, such as information, banking and insurance, material and product testing, standardization and quality control, and project preparation and negotiations, industrial consultancy and engineering services, industrial training, technology regulation promotion, support to small- and medium-scale industries, investment promotion and the assessment of the environmental impact of industrial projects.

Strategy for implementation

57. It is pertinent at this juncture to re-state some of the clearly stressed modalities adopted at the Abidjan meeting for the implementation of the programme. These include:

- The need to identify clearly priority subsectors or branches. Given the limited amount of available resources, the selection process and the establishment of priorities constitute a sine qua non;

- The need for detailed pre-investment studies and investment promotion activities to enable the mobilization of requisite investment financing for the implementation of the projects. In this regard, the role of financial institutions in the funding and/or mobilization of such resources is emphasized;

- The need to accord priority to projects developed by the intergovernmental organizations in the subregion in view of their greater political support;

- The need for an agreed integrated, realistic and well articulated programme to be matched with concrete proposals for implementation;

- The need for national Governments to incorporate relevant aspects of the programme in their national development plans and to establish National Co-ordinating Committees, as well as operational focal points to be provided with adequate staff and funds;

- The adoption of a short- and long-term approach to the preparation and implementation of the programme;

- The need for those countries selected to host projects to play an effective leadership role;

- The need for intensified consultations between countries, intergovernmental organizations and other relevant subregional institutions leading to firm negotiations on each project;

- The involvement of the private sector to the maximum degree possible and the greater participation of entrepreneurs in the subregional meetings;

- The need to establish subregional machinery (subregional and subsectoral committees) to monitor and evaluate the implementation of the programme and projects at every stage; and

- The crucial co-ordinating role of the intergovernmental organizations and, in particular, the Association of Intergovernmental Organizations of West Africa and ECOWAS.

CHAPTER III

ASSESSMENT OF THE IMPLEMENTATION OF THE PROJECTS IN THE FIRST REVISED INTEGRATED INDUSTRIAL PROGRAMME FOR WEST AFRICA

58. The revised integrated industrial promotion programme for the West African subregion adopted at the subregional follow-up meeting held at Lomé, Togo, in December 1985, comprised 40 core projects and 20 support projects. Annex II provides details on the status of implementation of the revised programme and the recommendations made to the meeting at Dakar.

Core projects

Engineering industry

Agricultural machinery and equipment subprogramme

First priority

(1) Manufacture of agricultural tools and implements, Sierra Leone
(2) Manufacture of agricultural implements and equipment, Nigeria
(3) Production of mobile mini palm-oil mills, Mano River Union

Second priority

(4) Manufacture of four-wheeled tractors, Senegal and Nigeria

Third priority

(5) Manufacture of diesel engines for irrigation pumps and generators, Guinea

Road and rail transport equipment subprogramme

First priority

(6) Manufacture of railway wagons, Burkina Faso with a subsidiary plant in Senegal
(7) Establishment of a central press workshop, Oshogbo, Nigeria

Third priority

(8) Manufacture of diesel engines for tractors, trucks, lorries and buses, Nigeria

(9) Manufacture of diesel engine-mounted chassis for lorries, trucks and buses, Nigeria
(10) Manufacture of low-cost, standard, multipurpose vehicles, Guinea

Energy equipment

First priority

(11) Manufacture of hurricane lamps, Senegal

Third priority

(12) Manufacture of aluminium conductors and cables, Ghana and Guinea
(13) Manufacture of power transformers, Togo
(14) Manufacture of steel towers, Nigeria

Chemical industry

Fertilizer subprogramme

First priority

(15) Establishment of a phosphoric acid plant, Togo

Second priority

(16) Subregional ammonia and urea project
(17) Establishment of a phosphate fertilizer plant, Niger

Pharmaceutical subprogramme

First priority

(18) Establishment of a pharmaceutical plant, Guinea (UFM)
(19) Rehabilitation and extension of the Sereddu station, Guinea

Second priority

(20) Establishment of a pharmaceutical plant, Nigeria

Pesticides subprogramme

First priority

(21) Plan: for phytosanitary products, Burkina Faso

Basic chemical subprogramme

First priority

(22) Tidekelt salt project, Niger

Second priority

(23) Establishment of salt/soda production plant, Mano River Union

Agro- and agro-based industries

Food-processing subprogramme

First priority

(24) Integrated complex for poultry production, Liberia
(25) Plants for the industrial processing of millet and sorghum, Niger and Nigeria
(26) Manufacture of village mills for millet and sorghum, Niger and Nigeria

Second priority

(27) Food-processing plant, Guinea
(28) Fruit-processing plant, Guinea

Forest industries subprogramme

First priority

(29) Establishment of pulp and paper board factory, Côte d'Ivoire

Other projects

First priority

(30) Surgical/medical cotton project, Senegal

Building materials industry

Cement and ceramics subprogramme

First priority

(31) Establishment of a subregional cement factory in the Liptako-Gourma region
(32) Establishment of a ceramics factory, Togo

Non-metallic mineral products subprogramme

First priority

(33) Manufacture of glass containers, Liberia

Second priority

(34) Manufacture of glass containers, CEAO Member States

Metallurgical industry

Iron and steel subprogramme

Third priority

(35) Establishment of a sponge iron plant
(36) Installation of electric arc furnace plants in the subregion

(37) Installation and expansion cf re-rolling mills in the subregion
(38) Establishment of an integrated iron and steel plant for flat and tubular products
(39) Establishment of foundries

Non-ferrous metals subprogramme

Third priority

(40) Processing of bauxite and alumina, Ghana

59. At the meeting in December 1985, it was recommended that the projects in the iron and steel subprogramme should be studied as a whole with a view to developing a long-term subsectoral programme. A sub-committee should be set up to develop a master plan for the subprogramme. Similarly, the projects identified in the agricultural machinery and equipment subprogramme should also be studied as a composite whole and a sub-committee established for that purpose. It was further recommended that the above studies should be completed at the earliest possible juncture so that the various measures to be taken could be identified and a master plan elaborated.

SUPPORT PROJECTS

ARCEDEM

(S1) Assistance to ARCEDEM

ARCT

(S2) Assistance to ARCT

Burkina Faso

(S3) Development of meat-processing and allied industries

CEAO

(S4) Assistance to CEAO

ECA

(S5) Development of local industrial entrepreneurship (Directory of small-scale industrial project profiles)

ECA/UNIDO

(S6) Development of the cotton textile industry

ECOWAS

(S7) Assistance to ECOWAS
(S8) Assistance to ECOWAS in the development of an industrial training programme
(S9) Development of industrial consultancy and management capabilities

LGA

(S10) Assistance in integrated industrial development planning for the Liptako-Gourma region

MRU

(S11) Establishment of a Mano River Union technology centre
(S12) Establishment of a Mano River Union coastal shipping enterprise
(S13) Establishment of an industrial and technology fair serving the Member States of the Mano River Union
(S14) Establishment of a Mano River Union financing institution
(S15) Processing of fish and other seafoods

Nigeria

(S16) Pharmaceutical industry development centre, Nigeria
(S17) Subregional development centre for hides, skins, leather and leather products (Leather Research Institute, Zaria, Nigeria)

Nigeria-Niger Joint Commission for Co-operation

(S18) Assistance to NNJC

OMVS

(S19) Assistance to OMVS

Togo

(S20) Togo National Centre for Technology Development

60. At the meeting in December 1985, it was recommended that the implementation of the projects contained in the revised programme be approached on a priority basis. The core projects were thus classified in three categories: (i) first priority, (ii) second priority and (iii) third priority, while all support projects were included in the first priority category. Nineteen core projects were included in the first category, eight in the second and 13 in the third, and all 20 support projects in the first category. While it was understood that particular attention would be paid to implementing projects in the first priority category, it was nonetheless implicit that this categorization should in no way prejudice action that sponsors might wish to take with respect to projects in the other two categories.

Status of the projects

61. As at September 1989, nine of the 19 core projects in the first category, had not gone beyond the level reached in 1985, while action had been suspended on one project and another had been dropped completely. In other words, no action had been taken on 11 projects, almost 58 per cent. Some of the projects had been scaled down to national projects. Feasibility studies on two projects had been revised or updated, while another had not moved beyond pre-feasibility study stage. Funds were being sought for the implementation of one project and a graduated rehabilitation process was underway with

respect to another. In the ultimate analysis only one project, which had been included in the national development plan before the start of the Decade, had gone into operation during that p. riod.

62. The support projects registered better progress. This was partly due to the support given by the international organizations, and partly due to the active role played by the intergovernmental organizations. Despite the lack of firm data on three support projects 55 per cent of the support projects had been implemented as at September 1989. Of the 20 support projects, only six had failed to make any tangible progress.

63. Of the eight core projects in the second category, none had made any significant progress. In the subregional project related to the production of salt and soda, the individual countries were more inclined to implement their own national programmes at the expense of the subregional programme. In the case of non-metallic minerals subprogramme, where two projects were to be implemented (one under Liberia as first category and the other in CEAO member states in the second category), CEAO might seek to benefit from the Liberian experience in order to diversify into a different line of products and thus ensu. greater complementarity to be achieved. Guinea is currently rehabilitating its food and fruit processing industries with a view to achieving greater efficiency.

64. Of the 13 core projects in the third category, no substantive investment-oriented work had been done either by the intergovernmental organizations or by member states towards implementing any of these projects other than work completed prior to 1985 and promotional work undertaken by ECA up to 1988. As a result no less than six core projects in this category have had to be dropped.

65. In summary, it would appear that at the previous meeting undue emphasis was placed on the immedate and short-term gains at the expense of laying a firm foundation for longer-term industrialization in the region. A large number of projects in the first priority, were in the light industries sector, whereas the legal and organizational machinery required to launch and finance large-scale projects have within the context of the Decade not progressed beyond global protocols and declarations on subregional co-operation. For example, no entrepreneurs have taken risk of exploiting the potential of the enlarged subregional market created by the ECOWAS protocols on co-operation.

Constraints upon the implementation of the revised initial programme

66. Despite the efforts made by member states and intergovernmental organizations in the subregion, progress towards the implementation of revised integrated industrial programme for West Africa has, on the whole, been very limited. Some comfort might, however, be derived from the progress achieved in the broader areas of multinational markets; human resources; institutional infrastructure; natv al resources; and transport and communications.14/ Empirical evidence, however, shows that owing to a number of obstacles, Member States have been forced to focus production on national markets. There is also a tendency for countries to be increasingly introspective thereby making it more difficult to achieve the objectives of subregional economic

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14/ See Report on the Independent Mid-Term Evaluation of the Industrial Development Decade for Africa (IDDA) and the Proclamation of the Second Decade, CAMI.9/20/Add.1, ICE/1989/20/Add.1, 12 April 1989.

integration.[15] The promotion of core and strategic industries that constitute the main engine of growth envisaged by the Lagos Plan of Action and the Final Act of Lagos has largely been neglected.

67. While the beginning of the Decade coincided with a critical period in the world economy which had devastating effects on the economies of Africa, thus diverting the region's attention away from long-term development to crisis management, Africa was also somehow being made to pay the price for the weaknesses of its own economic policies and development strategy that had put too little emphasis on efforts to become part of the contemporary international economic trends.[16] The independent mid-term evaluation of the Industrial Development Decade for Africa (IDDA) and the proclamation of a second IDDA also confirms as much. It observes that the main weakness in the implementation of the IDDA projects "derives from the fact that OAU member Governments cannot be expected to change and adjust existing development plans, industrial policies or institutional structures in response to recommendations adopted or regional conferences that lack the legislative power to oblige them, or even incentives to offer them, to do so...and because of the broadness and vagueness of its objectives, the IDDA programme had not had sufficient appeal for bilateral donors looking for specific and much defined projects...hence the gap between the IDDA objectives and their practical implementation remains large".[17] It is only towards the end of the first Decade that some countries are beginning to put in place national structures in the wake of IDDA projects, or starting to include some Decade projects in their own national development.[18] It can therefore be observed that lack of progress in the implementation of projects was partly due to failure to put in place mechanisms for effective project monitoring, and partly due to the fact that only lip service was being paid to the programmes of the Decade, compounded by the fact that it was difficult to ensure that Governments respected decisions adopted at various subregional meetings.

68. The apparent "project-approach" to IDDA was based on the hope, albeit unfounded, that additional financial resources would be available to implement projects. With the identification and selection of projects was based on this false premise, the process of selecting multinational/subregional industrial core projects lacked vigour or was insufficiently thought through, since no prior consultations were carried out nor had the implications and problems inherent in implementing such projects been adequately considered, such as the

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15/ Etude sur l'Harmonisation des Plans de Développement des Pays de l'UMOA et Programme Commun d'Actions, Banque Ouest Africaine de Développement (BOAD), Juin 1988.

16/ Stajner, R. "African Industrialization: Crisis and Perspectives", Razvoj Development, page 20, Vol. III, No. 1-2, January-December 1988.

17/ Op. cit., Report on The Independent Mid-Term Evaluation of the IDDA and the Proclamation of the Second IDDA, paras. 64 and 65.

18/ Schéma Directeur du Développement Industriel de la Côte d'Ivoire, Mars, 1988.

all-important factor of human resources and their availability. This is borne out by the fact that some of the projects that started out as subregional/ multinational projects are now being redesigned as national projects. The strict application of the selection criteria agreed upon at the first subregional meeting in Abidjan would have obviated some of these difficulties, while the effective involvement of other Governments and the private sector was essential to success. Furthermore, in some instances, the wrong option had been taken up or operation had been under-dimensioned.

69. At the first meeting on the initial integrated industrial promotion for Africa held in Abidjan in December 1983, nine of the core projects were sponsored by the meeting of the MULPOC Policy organ and the Intergovernmental Organization Committee of Experts on Engineering. These were: establishment of foundries; manufacture of four-wheeled tractors; manufacture of diesel-engine for irrigation pumps and generators; manufacture of diesel-engines for tractors, trucks, lorries and buses; manufacture of engine-mounted chassis for lorries, trucks and buses; manufacture of low-cost standard multipurpose vehicles; establishment of integrated iron and steel plant for flat and tubular products; manufacture of aluminium conductors and cables; and subregional ammonia and urea products. Although most countries at the Lomé meeting had agreed to sponsor these projects, some countries have now indicated that the projects should be deleted, while others have not fully integrated them within their own national plans: the net result is that they cannot be given any priority. From the nature of the projects, it is obvious that proper sponsors should have been identified from the very outset. In some instances, project sponsors had been absent from the outset of a project and in other instances, they had not been fully committed at the pre-feasibility stage. It is for this reason that Guinea requested the deletion of the project on manufacture of aluminium conductors and cables, while in Ghana the project had not yet passed through the Ghana Investment Centre.

70. The failure to undertake firm pre-feasibility or feasibility studies in order to ascertain the financial implication of projects was also a major factor contributing to the low rate of progress. One the enormous financial requirement of certain projects became apparent, mobilizing funds of the same magnitude posed major problems that could not easily be surmounted given the dwindling and international financial assistance being accorded to Africa. Consequently, full use should be made of local consultancy services and other skills rather than hiring expertise from outside the region which entailed major financial outlays. Since the benefits to be derived from the subregional/multinational projects are uncertain, most of them have been placed in abeyance, to await better days.

Constraints at the national level

71. Even though the implementation of projects had not been a resounding success, the Decade has had a positive effect in that it has helped some countries to focus attention on the problems of industrialization in general and to define new policies and strategies. At the level of ECOWAS, plans are underway to draw up an industrial master plan for the subregion, while at national level a number of countries, most notably Nigeria, have established national committees drawn from both the public and private sectors to be responsible for designing an industrial policy for the country. These few positive developments notwithstanding, economic performance in Africa has declined in general, a reflection of the underlying weakness in the national

economies. The crisis of the past few years has merely aggravated an already precarious economic situation characterized by: drastic declines in foreign exchange; inadequate and often inoperative infrastructure facilities such as power, water and transport; high interest rates that impinge negatively on manufacturing and lead to capacity underutilization; and a drop in food and agricultural production leading to overreliance on food imports. Under the circumstances it became difficult to implement the projects contained in the revised integrated industrial promotion programme.

72. The constraints at the national level also arose from the lack of clear industrial policy and co-ordinating mechanism. This was further exacerbated by lack of publicity. In some countries, the mission found that the Decade was completely unknown to the very institutions engaged in the training of manpower required for industrial development. In another country, for want of effective evaluation and feed-back system at the national level, the incoming administration had no information on the Decade. The government departments, ministries and indstitutions not directly involved in IDDA activities are for the most part not fully informed of the IDDA programme. In some instances, there was no clear policy as to which ministry should in fact be responsible for the Decade programme. Some of these factors account for the conspicuous absence of IDDA programmes and projects in most national development plans in the subregion.

73. While the failure to integrate IDDA projects in the national development plans might be indicative of the low priority attached to those projects, it is also indicative of a lack of sufficient trained manpower in the area of industrial development, which could otherwise formulate these projects into a coherent and integrated programme and projects for inclusion in the national development plans. This shortcoming is also reflected in the disjointed character of most of the industrial projects elaborated at national level that bear no relevance to the intra- and inter-sectoral linkages. Unless the public perception of industrialization improves, it will be difficult to formulate policies and strategies for the implementation of national industrial development programmes in particular and subregional industrial development programme in general. Further constraints were the lack of national sponsors and the failure to involve the private sector more closely.

Constraints at the subregional level

74. It has been pointed out that the existence of numerous economic groupings in the subregion poses some problems for the process of economic integration in West Africa. This difficulty was being compounded by the emergence of larger and stronger economic groupings in other parts of the world that paid a major challenge for Africa on a whole. Indeed despite the many resolutions and declarations adopted by the intergovernmental organizations in the subregion at their various meetings, the implementation of IDDA projects has been hampered by the absence of a subregional mechanism that could co-ordinate policies, strategies and modalities for implementing subregional projects, especially those that require the establishment of multinational enterprises. ECOWAS, CEAO and MRU have all adopted some of the core projects in their respective work programmes, while other bodies such as the Liptako-Gourma Authority have subregional projects in their work programmes. The thorny problem is the degree of commitment among member states to the implementation of these subregional/multinational projects, while some of the setbacks suffered by the subregional programme were attributable in part to the systemic, structural and other weaknesses on the economies of the subregion.

75. The second difficult aspect is the availibility of financial resources. It is much more difficult to secure financial resources for subregional projects than for national projects. The BOAD study cited above confirms that it is very difficult to finance multinational/subregional projects. They are rarely mentioned in the national development plans which, as a matter of policy, rarely refer to co-operation issues. Apart from the financial difficulties, the subregional organizations entrusted with the task of promoting these projects do not always have budgetary allocations adequate to carry out pre-feasibility or feasibility studies, and have to resort to external sources for financial and technical assistance. These organizations need to be strengthened by providing them with the resources they need to carry out their duties effectively.

76. The lack of co-ordination among bilateral donors, international and regional organizations has contributed immensely to the prevailing confusion and is not conducive to instituting strict co-ordination among the countries. In one country it was reported that three UN agencies were involved in promoting different aspects of one project. The country in question pointed out that apart from dissipating resources, it was also time-consuming for the officials that had to deal with the three agencies on the same project. The need for co-ordination cannot therefore be overemphasized, as failure to co-ordinate conveys the impression to the governments affected that international organizations are not really interested in helping out, but merely in promoting their own "pet projects" at the expense of the countries concerned.

CHAPTER IV

PROPOSALS FOR A REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME

77. The revised programme presented in this chapter has been prepared on the basis of information obtained during missions fielded by UNIDO to nearly all the 16 countries in the subregion, in the course of which close consultations with ECOWAS, MRU and other intergovernmental organizations, such as LGA and OMVS. A visit was also paid to CEAO whose officials, however, were involved in the meetings of the organization's policy-making organs thus precluding any possibility of discussion. On the basis of information obtained during the missions, supplemented by the information obtained from those responsible for industrial activities in the various intergovernmental organizations and from the CEAO work programme, it became clear that the initial integrated industrial programme that had been revised at the meeting in December 1985 should be revised yet again so as to reflect the new realities in the individual countries and the developments that had taken place in the subregion as a whole.

78. At the subregion level, certain shifts have taken place within the various intergovernmental organizations whose work programmes derive from the priorities set by Member States. At its meeting at Lomé in May 1989, the ECOWAS Commission on Agriculture, Industry and Natural Resources proposed that the secretariat should draw up an ECOWAS Industrial Master Plan, involving all the major industrial subsectors. On the other hand, under its industrial co-operation programme for the period 1988-1992, CEAO identified agro-industries, fertilizers, agricultural implements and pumps, building materials as the core sectors for its regional industrialization

programme.[19] At the same time, MRU had set about updating pre-feasibility studies of projects that had been approved by its legislative organ so as to bring the projects into line with the industrial rationalization process taking place in member countries. It was thus reviewing studies on: pharmaceutical industry, woodworking industries, animal feed, food processing industries, chemical (salt based), fertilizers, pulp and paper, and mechanical and spare parts.

79. Some of the projects contained in the first revised programme which were no longer accorded priority by the sponsors were deleted, and new projects were introduced in their stead.

80. The presentation used in the revised programme has been retained, and the projects are grouped in the same subsectors and subprogrammes. It will be noted, however, that for some projects currently information may be lacking on such factors as market, production and cost.

81. Furthermore, some of the countries visited were unable to provide information on the status of implementation of projects in the revised programme. Others were unable to propose new projects, but indicated their interest in submitting new proposals. It is therefore expected that the representatives of those countries will propose new projects and submit new project profiles to the meeting at Dakar in December.

82. In the light of the above, the listing of projects carried over from the previous programme and the new projects proposed for inclusion in the revised programme were regarded as an indicative listing drawn up for the purposes of discussion and further refinement at the subregional meeting. At that meeting each project was presented by the sponsoring country, reviewed by the meeting and final decision taken on its inclusion in the revised programme. The final listing of projects is given on the next page.

Selection of core subsectors and core investment projects

83. The priority subsectors identified in the initial integrated industrial promotion programme and reconfirmed at the first follow-up subregional meeting comprise: agro- and agro-based industries; building materials industry; metallurgical industry; chemical industry; and engineering industry. In line with the Lagos Plan of Action, the ECOWAS Heads of State and Government adopted an industrial co-operation policy that covered almost the same industrial subsectors: food industries; agro-chemical industries; farm equipment industries; building materials industries; wood industries; telecommunications and electronic industries; petrochemical industries; pharmaceutical industries; iron and steel industries; and motor vehicles and related industries.

84. In the light of the assessment in Chapter III, it is recommended that the implementation of the projects contained in this revised programme be approached on the basis of the priorities adopted for the Lomé meeting. The core projects should be classified in three categories: (i) first priority: implementation in the short term (0-5 years); (ii) second priority: implementation in the medium term (5-10 years); and (iii) third priority: implementation in the long term (more than 10 years). All support projects should be included in the first priority category.

19/ Op. cit., Stratégie de Coopération et Programme Quinquennal 1988-1992.

85. The programme proposed in this document contains 36 core projects and 14 support projects carried over from the revised programme adopted at Lomé, as well as seven new core and three new support projects. The profiles of all these projects are given in Annex III.

CORE PROJECTS

Metallurgical industry

Iron and steel subprogramme

1. Establishment of a sponge iron plant (long term)
2. Installation of electric arc furnace plants in the subregion (long term)
3. Installation and expansion of re-rolling mills in the subregion (long term)
4. Establishment of an integrated iron and steel plant for flat and tubular products (long term)
5. Exploitation of the Nimba mountains, Guinea and Liberia (short term) (new)

Non-ferrous metals subprogramme

6. Processing of bauxite and alumina, Ghana (medium term)

Engineering industry

Agricultural machinery and equipment subprogramme

7. Manufacture of agricultural tools and implements, Sierra Leone (short term)
8. Manufacture of agricultural implements and equipment, Nigeria (long term)
9. Production of mobile mini palm-oil mills, Mano River Union (short term)
10. Manufacture of four-wheeled tractors, Senegal (medium term)
11. Manufacture of diesel engines for irrigation pumps and generators, Guinea (medium term)
12. Manufacture of irrigation pumps, Senegal (medium term) (new)

Road and rail transport equipment subprogramme

13. Manufacture of railway wagons, Burkina Faso with a subsidiary plant in Senegal (medium term)
14. Establishment of a central press workshop, Oshogbo, Nigeria (short term)
15. Manufacture of diesel-engines for tractors, trucks, lorries and buses, Nigeria (long term)
16. Manufacture of diesel engine-mounted chassis for lorries, trucks and buses, Nigeria (short term)

Energy equipment

17. Manufacture of hurricane lamps, Senegal (short term)
18. Manufacture of aluminium conductors and cables, Ghana (long term)
19. Manufacture of steel towers, Nigeria (long term)

Chemical industry

Fertilizer subprogramme

20. Establishment of a phosphoric acid plant, Togo (short term)
21. Subregional ammonia and urea project, Côte d'Ivoire (long term)
22. Establishment of a subregional phosphate fertilizer industry, Liptako-Gourma (short term)
23. Extension and rehabilitation of the phosphoric acid and fertilizer plants, Senegal (short term) (new)

Pharmaceuticals subprogramme

24. Reactivation of the Matoto pharmaceutical plant, Guinea (short term)
25. Rehabilitation of the Seredu station, Guinea (short term)
26. Establishment of a pharmaceutical plant, Nigeria (short term)

Basic chemical subprogramme

27. Tidekelt salt project, Niger (short term)
28. Expansion of salt/soda production plant, Mano River Union (short term)

Agro- and agro-based industries

Food-processing subprogramme

29. Integrated complex for poultry production, Liberia (short term)
30. Plants for the industrial processing of millet and sorghum, Niger and Nigeria (short term)
31. Manufacture of village mills for millet and sorghum, Niger and Nigeria (short term)
32. Food-processing plant, Guinea (short term)
33. Rehabilitation and expansion of Mamou agro-industrial company (SAIG), Guinea (short term)
34. Establishment of a plant for processing kinkelibah and other similar plants, Senegal (short term) (new)
35. Exo-pulp (frozen fruit), Guinea (medium term) (new)

Forest industries subprogramme

36. Establishment of pulp and paperboard factory, Côte d'Ivoire (medium term)
37. Manufacture of cotton wool, dressings and sanitary products, Senegal (short term)
38. Promotion of pulp and paper industry in MRU, Sierra Leone (medium term) (new)

Building materials industry

Cement and ceramics subprogramme

39. Establishment of a subregional cement factory in the Liptako-Gourma region (short term)
40. Establishment of a ceramics factory, Togo (short term)

Non-metallic mineral products subprogramme

41. Manufacture of glass containers, Liberia (short term)
42. Manufacture of glass containers, CEAO Member States (medium term)
43. Wassou glassworks, Guinea (long term) (new)

SUPPORT PROJECTS

ARCEDEM

S1. Assistance to ARCEDEM

ARCT

S2. Assistance to ARCT

CEAO

S3. Assistance to CEAO

ECOWAS

S4. Assistance to ECOWAS
S5. Assistance to ECOWAS in the development of an industrial training programme
S6. Development of industrial consultancy and management capabilities, ECOWAS

LGA

S7. Assistance in the promotion of an integrated industrial development plan for the Liptako-Gourma region

MRU

S8. Establishment of an industrial and technology fair serving the Member States of the Mano River Union
S9. Establishment of a Mano River Union financing institution
S10. Processing of fish and other sea foods

Nigeria

S11. Subregional development centre for hides, skins, leather and leather products (Leather Research Institute, Zaria, Nigeria)

NNJC

S12. Assistance to NNJC

OMVS

S13. Assistance to OMVS

Togo

S14. Togolese National Centre for Technology Development

Benin

S15. Industrial maintenance centre, Benin (new)

Guinea

S16. Guinea pilot centre (new)

S17. Use of plant material in the building sector, Togo (new)

CHAPTER V

STRATEGY TO BE ADOPTED TO ACCELERATE IMPLEMENTATION OF THE SECOND REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME FOR WEST AFRICA

Measures to be adopted

86. In the plan for the implementation of the initial integrated industrial promotion programme for West Africa, the measures outlined below were recommended for adoption at the national and subregional levels. Moreover, the strategy for accelerating the implementation of the revised programme should take into consideration all those constraints which have prevented the initial as well as the previously programme from achieving a high rate of implementation. Since those constraints are the responsibility of both the countries themselves and the subregional organizations, the successful fulfilment of the programme will require a series of measures at those two levels. In addition, such co-ordinating organizations as UNIDO, ECOWAS and the ECA MULPOC Office for West Africa, which have a catalytic role to play in subregional industrial co-operation, need to intensify their assistance at both the national and subregional levels so as to bring about the effective implementation of the second revised programme.

At the national level

87. It is important to emphasize that the success of the programme will be determined by the actions taken at the national level and by the policies and operational mechanisms adopted by Governments. The actions, most of which are already being carried out by many countries in the subregion, include the following:

(a) Formal endorsement of the programme and its projects by Government;

(b) Incorporation of the salient features of the subregional programme and its projects in national industrial development plans, possibly incurring the need to adjust ongoing national industrial development plans;

(c) Allocation of the human, financial and physical resources needed to implement the projects;

(d) Strengthening or introducing operational mechanisms (e.g. corporations, companies, commissions) responsible for follow-up, including project definition, pre-investment studies, investment promotion, and project-related consultations with other countries in the subregion;

(e) Promotion of projects among potential investors and financial institutions;

(f) If designated lead country, official submission of the project to financing institutions;

(g) On the basis of profiles for core investment projects, elaboration of detailed pre-investment studies, assisted by ADB, UNIDO and competent local industrial consultancy organizations;

(h) Improvement of domestic manpower capabilities and institutional capacities needed for the identification, preparation and implementation of projects;

(i) Creation of an environment favourable to investment and conducive to securing the full co-operation of the private sector.

88. The endorsement of programmes and projects by the legislative authorities of subregional organizations requires the full support of the countries concerned. Governments, thus, need to ensure internal co-ordination among the ministries and organizations concerned in respect of the projects being promoted and maintain, as far as possible, consistency in terms of attendance and representation at meetings of the subregional organizations dealing with industrial co-operation.

89. In the light of the above, the following measures, some of which are already being implemented by the countries of the subregion, are listed hereunder, simply as a reminder to those countries that have not yet adopted them:

(a) Any project prepared by a national Government should be jointly endorsed and promoted by the ministries responsible both for industry and planning and for the submission of official requests to funding agencies;

(b) A complete file, including the necessary feasibility studies as well as a status report on implementation should be maintained on each project and regularly updated. This would facilitate the provision of information to potential investors and financial institutions interested in the project.

90. The Governments of the subregion also need to involve the private sector, as necessary, as well as industrial consultancy and engineering organizations more extensively in the formulation and implementation of the projects retained in the subregional programme. A programme for the greater involvement of the private sector, especially national agents of production, planners and financial institutions, with appropriate incentives to be adopted. It is therefore essential that the support projects included in the revised subregional programme are accorded appropriate priority when implementing the programme.

91. Policies and programmes should be adopted with due regard to local conditions on matters relating to:

(a) The development of local industrial entrepreneurship and indigenization;

(b) The energy problem as it affects industrialization;

(c) The current constraints facing the public sector enterprises in most countries of the subregion and their linkage and complementarity with private sector enterprises.

92. A major constraint on effective project implementation is also the communications gap that exists between the various bodies within a country concerned with project preparation, promotion and implementation. It was often difficult to secure compatible and consistent data on industrial projects. This problem is compounded, in many instances, by the lack of identifiable focal points and national co-ordinating committees. It is strongly recommended that National Co-ordinating Committees for the IDDA or UNIDO as well as the Operational Focal Points for the IDDA should be strengthened or established, where they do not exist. Active working contacts should be maintained between these committees and operational focal points and the secretariats of the relevant subregional organizations and joint committees in order to ensure the successful implementation of the subregional programme. It would be useful if the focal points were established along functional, rather than personal lines, and steps were taken to establish an effective institutional memory. The lack of continuity and consistency highlighted in paragraph 89 also explains the lack of familiarity with procedures for obtaining technical and financial assistance from external organizations.

At the subregional level

93. The priority activities identified for the implementation of the second revised integrated industrial promotion programme at the subregional level are in line with the industrial priorities established by ECOWAS, CEAO, MRU and the ECA/MULPOC Office for the subregion. These activities include:

(a) Formal endorsement and implementation of the revised integrated industrial promotion programme by the intergovernmental organizations in the subregion, and inclusion thereof in their subregional development plans and programmes;

(b) Establishment and/or strengthening of subregional technical and subsectoral committees on a branch-by-branch basis to co-ordinate, monitor and advise Governments on the selection and implementation of subregional projects in each subsector;

(c) Provision by those intergovernmental committees of advice to Governments on the preparation, implementation, management and monitoring of the subregional industrial projects, including the definition of:

- The broad principles governing the relationship among the parties and specifying the co-operation arrangements in the areas of industrial production, and trade in industrial raw materials and products;

- The policies and supporting measures which the Governments concerned should pursue;

- Operational principles and measures, including mutual benefits or equitable treatment;

- Joint ventures involving such bodies as subregional corporations in the countries of the subregion, or member countries of the subregion and other subregions and regions, or statutory corporations and other enterprises;

- Co-production and specialization, including subcontracting and marketing, as an arrangement of particular importance to engineering-based core industries;

- Joint acquisition of technology and the mobilization of financing resources;

- Standardization and quality control.

(d) Preparation by the subregional intergovernmental organizations of the subsectoral studies included in the revised programme with a view to identifying clusters of economically viable projects integrated with other industrial branches and the remainder of the economy;

(e) Preparation by subregional intergovernmental organizations of rehabilitation studies on priority projects whose reactivation in the context of the subregional programme might prove economically and financially viable;

(f) Agreement among the countries in the subregion on the host country for each subregional core project and the respective roles of the others in implementing the core projects. This would include agreement on:

- Supply of the requisite raw materials and energy;

- Purchase of intermediate and final products;

- Equity shareholding, majority of which should be owned by African countries;

- Training and allocation of manpower to the project;

- Conducting R & D related to the project;

- Exchange of information;

- Management of the enterprise;

- Subcontracts, where feasible.

(g) Assistance by intergovernmental organizations and development banks in the subregion in the mobilization of financial and other resources, including investment promotion for the implementation of the subregional core projects;

(h) Strengthening or establishment of operational arrangements, such as subregional corporations or enterprises linked with corresponding national corporations, for the implementation of specific project or complex of projects. In this regard, it should be noted that in establishing subregional enterprises aimed at a lasting and effective economic relationship, it may be necessary for each partner, particularly the Governments, to share in the risks and rewards of the enterprises and participate fully in the decision-making at the highest managerial level;

(i) Involvement of African chambers of commerce and industry or manufacturers and their associations as well as competent local consulting firms from the outset of the project, increasing their participation/involvement as the project develops, with a view to establishing a closer relationship with the private sector.

94. In order to implement the measures proposed above, a number of policy actions will be required. These are predicated on the assumption that unless the productive capacity of the subregion is enhanced, the volume of trade will suffer. Since the promotion of trade between countries in the subregion bears implications for the currency arrangements between Member States, it would be desirable to ensure convergence in the compensation mechanisms among the countries of the subregion: a matter that should be considered by the subregional organizations concerned. It would also be desirable to harmonize fiscal and legislative procedures throughout the subregion which currently acted as disincentives.

95. Institutional measures to effect changes and implement policies and programmes should therefore include strengthening the secretariats of the relevant intergovernmental organizations, especially ECOWAS, CEAO and the ECA MULPOC Office for West Africa, in order to enhance their capabilities in carrying out their various functions, including the following:

(a) To gather, analyse and disseminate relevant industrial data and information from and to all Member States, the private sector, associations, institutions and other bodies in the subregion;

(b) To develop and promote an effective working relationship among the member countries and co-operating organizations;

(c) To serve as a resource unit for the promotion of subregional industrial projects, providing advice on and assistance in securing investment, expansion of markets, acquisition of technology and know-how, and project negotiations within the subregion and without;

(d) Formulation and development of subregional industrial policies and strategies to complement those at national level;

(e) Preparation of priority subsectoral studies;

(f) Identification, preparation, implementation and follow-up of projects.

96. These institutions will need to be properly staffed with competent personnel so as to enable them to monitor and co-ordinate effectively the various activities relating to the formulation and implementation of the subregional programme and projects, especially those in the priority industrial core subsectors and support areas. They should maintain a dynamic working relationship with the relevant intergovernmental organizations, with national, subregional and regional organizations, as well as with UNIDO. They should also keep themselves fully informed of all major technical assistance proposals and programmes relating to industrial projects in the subregion.

97. As at the national level, communication also present a problem; however, the flow of information between countries in the subregion could be improved by using the channels of communication established by ECOWAS and CEAO. It could also be improved through a formalized process of consultation and be further enhanced by establishing an effective monitoring system, including a subregional data bank. In this regard it is pleasing to note that, as recommended in the IDDA programme and in the guidelines for priority actions during the preparatory phase of the Decade, an Industrial Development Committee has been established to contribute to existing subregional industrial co-ordination and monitor the implementation of the industrial programme in general and IDDA projects in particular. The Industrial Development Decade for Africa could become a permanent item on its agenda. Although co-ordination is now maintained among the various subregional bodies (notably ECOWAS, CEAO and ECA/MULPOC Office), such co-ordination also needs to be established between them and UNIDO in order to avoid undue duplication and to ensure effective implementation of the programme, once endorsed by the competent legislative authorities of the subregion.

Promotion of the programme

98. In order to facilitate the implementation of the programme and to create greater awareness in the subregion, it is recommended that the programme be widely circulated among all relevant economic agents in the subregion, especially at the national level. They should be asked how they, the Government or business communities, can best promote the programme. The importance of involving the private sector has already been stressed. The successful mobilization of local resources can serve as an inspiration to genuine foreign investors, encouraging them to participate in viable joint venture projects. All these activities also require the full use of the information media, as well as careful monitoring and co-ordination. It is recommended that the relevant subregional organizations, especially ECOWAS, CEAO and the ECA MULPOC Office should collaborate with the project sponsors and through the auspices of the Training and Information Committee and the Industrial Development Committee should assist in carrying out that co-ordination.

Mobilization of financial resources

99. Implementation of the projects contained in the proposed programme will require considerable financial resources which the various countries will have to mobilize for themselves or acquire on the financial markets. The main sources of financing which the majority of countries in the subregion are already using include: the World Bank, the African Development Bank (ADB), BOAD, the Arab Bank for Economic Development in Africa (ABEDA), and the OPEC Fund. These and other financing institutions should give priority in their lending policies to the projects in the subregional programme.

100. Although the countries in the subregion are expected to use all the economic and diplomatic channels at their disposal to promote the projects identified, UNIDO could be requested to provide assistance through its investment promotion programme, including the use of its Investment Promotion Services. Although it disposes of only limited resources itself, UNIDO could intensify its endeavours to help Governments to submit requests to various bilateral and multilateral agencies and thus tap funds available to those agencies. Over and above its investment fora and related promotional activities and apart from evolving innovative ways and means of involving major financial institutions and assisting countries in the subregion to secure their co-operation, UNIDO could use its entire system to strengthen national capabilities.

Role of the co-ordinating and other agencies

101. As stated in the initial programme, the successful implementation of core industries calls for the development of human and technological capabilities, the mobilization of financial resources as well as the establishment or strengthening of capabilities to service and augment the industrialization process in the subregion. The agencies and organizations of the United Nations system, in particular UNIDO and ECA, in close co-operation with the ADB and other specialized African organizations can contribute to meeting those requirements and thus help to overcome the acute developmental problems of the subregion.

102. For the most part, these organizations could provide technical assistance in the following areas:

(a) Updating the subregional industrial promotion programme;

(b) Preparing of pre-investment studies, including investment profiles on selected projects in the subregion, providing information on such items as: consumption; plant size; raw materials; utilities; technology; investment; manpower and training; probable production cost; project/programme profitability; and potential market(s);

(c) Identifying specific areas and modes of co-operation between countries, as well as between producers and R & D facilities, in implementing the programme for the Decade;

(d) Strengthening existing subregional committees of experts, such as the Industrial Development Committee, to review and update the regional integrated industrial promotion programme, monitor its implementation and co-ordinate the activities of the technical committees described in paragraph 94(b);

(e) Developing capabilities related to: industrial planning; industrial consultancy; project preparation; procurement of supplies; and support of local entrepreneurs and manufacturers including the creation of associations related to core programmes;

(f) Organizing technical consultations, negotiations and investment promotion meetings in specific core subsectors. These will include consultation and negotiations between:

- African countries, involving both State finance institutions and local agents of production and distribution;

- African States and potential partners from other developing countries through ECDC, involving potential investors from those countries as well as financial institutions;

- African States and potential partners from developed countries.

103. Annex IV contains a schematic diagram of the interlinkages between the various co-ordination and follow-up mechanisms.

ANNEX I

Criteria for selection multinational/ subregional industrial core projects

For an industrial project to qualify as a multinational/subregional core project, it should meet all requirements in group I and one or more additional requirements in group II.

I. Basic requirements

The project:

(a) Provides inputs into the priority sectors selected in the Lagos Plan of Action and the Final Act of Lagos, i.e. food, transport and communications and energy;

(b) Provides effective integration and linkages with other industrial and economic activities and infrastructures in the subregion;

(c) Utilizes and upgrades, to the maximum extent possible, African natural resources (raw materials and energy) so as to benefit first the subregion, secondly other African countries and thirdly non-African countries;

(d) Produces intermediates for further processing or fabricating in an increasing number of established or planned industries or engineering goods, particularly those related to food production and processing, building materials, textiles, energy, transport and mining;

(e) Caters, first and foremost, directly or indirectly, to the basic needs of the people in the subregion and, if required, in other African countries;

(f) Involves (i) economies of scale, (ii) complex technology or upgrading of technology, (iii) large investment; and (iv) market(s) beyond the reach of individual countries in the subregion;

(g) Offers scope for co-operation, especially among the African countries, in long-term supply/purchase arrangements for raw materials, intermediates and final products; subcontracting; barter, equity shareholding; etc.;

(h) Contributes to reducing the region's heavy reliance on external factor inputs.

II. Additional requirements

The project:

(a) Offers comparative advantage(s) over similar project(s) - actual or potential - in other groups of countries (African and non-African), particularly in respect of raw materials, energy and the infrastructure required;

(b) Complements related project(s) or existing production unit(s) in the subregion;

(c) Earns foreign exchange through the export of its products, including upgrading of raw materials;

(d) Results in rehabilitation and rationalization of existing production unit(s);

(e) Replaces, whenever practical, synthetic materials by natural materials, particularly those that are renewable.

ANNEX II

Status of implementation as at 30 September 1989 of projects included in the first revised integrated industrial promotion programme for ECOWAS countries

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
		CORE PROJECTS		
ENGINEERING INDUSTRY				
Agricultural machinery and equipment subprogramme				
1. Manufacture of agricultural tools and implements Location: Sierra Leone	MRU	Recommended that it be implemented in the short term, and findings of related UNIDO studies made available. It was also suggested that projects 1, 2, 4 and 5 should be studied as a composite whole.	Existing facilities in Sierra Leone have been privatized. Activities are no longer limited to the manufacture of agricultural tools and equipment. Strategy for implementing the project broadened somewhat and manufacturing range extended in all three countries.	Each MRU country has facilities for manufacturing agricultural tools and equipment. A study oriented towards promoting complementarity should be undertaken. It is thus recommended that the project be retained.
2. Manufacture of agricultural implements and equipment Location: Nigeria	Nigeria	Nigeria should be contacted for further details on the project.	No information available	In view of the importance of the project to agricultural development, it is recommended that it be retained.
3. Production of mobile mini palm-oil mills Location: countries of the Mano River Union	MRU	Terms of reference had been drawn up, mobilization of funds initiated and positive response received from ADB. A comprehensive survey of the subsector should be undertaken.	Being undertaken in co-operation with ADB and ARCEDEM. A draft pre-feasibility report containing the market study and the design of a suitable prototype was prepared in 1989. Recently promoted at meeting of MRU Chambers of Commerce.	It is recommended that the project be retained, and commercial production should start as soon as the prototype is accepted.
4. Manufacture of four-wheeled tractors Location: Senegal and Nigeria	Senegal and Nigeria	It was agreed that the project could not be initiated at that time. However, BOAD was undertaking a study for a similar project for WAMU Member States.	No specific information available, but it is known that Nigeria has gone ahead and established a project in Bauchi (STEYR NIG. LTD.)	Pending receipt of information on the current status of the project, it is recommended that the project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
5. Manufacture of diesel engines for irrigation pumps and generators Location: Guinea	MULPOC Council of Ministers and MRU	It was noted that the project was still at the pre-feasibility study stage. Consideration should also be given to possibly locating the project in Mauritania. It was also recommended that the study should also consider substituting electric-powered pumps for diesel-powered pumps.	In common with all other projects sponsored by the MULPOC Council of Ministers, the project had been taken over by individual Member States.	Guinea is no longer interested in implementing the project. Given the importance of the project, however, Sahelian countries might consider implementing it. Since other countries might be interested in the project, it is recommended that it be retained.
<u>Road and rail transport equipment subprogramme</u>				
6. Manufacture of railway wagons Location: Burkina Faso and Senegal	CEAO	It had been hoped to find a partner in 1986, following the call for tenders the year before. BOAD was ready to finance the necessary studies.	The feasibility study has been revised so as to take into account the economic realities in member countries.	It is recommended that the project be retained.
7. Establishment of a central press workshop Location: Oshogbo, Nigeria	Nigeria	The project was at a standstill and ECOWAS was requested to undertake the requisite follow-up action.	No information available	In the absence of any further information, the information provided at the Lomé meeting remains unchanged. It is also recommended that pending receipt of updated information, the project be retained.
8. Manufacture of diesel-engines for tractors, trucks, lorries and buses Location: Nigeria	MULPOC and IGO Committee of Experts on Engineering	Consultant had established that the project had been executed.	No further information available.	It is recommended that pending the receipt of updated information, the project be retained.
9. Manufacture of diesel engine-mounted chassis for lorries, trucks and buses Location: Nigeria	"	It was noted that it had been difficult to assess the exact status of the project.	No further information available	In the absence of any further information, the information provided at the Lomé meeting remains unchanged. Pending receipt of further information, it is recommended that the project be retained.
10. Manufacture of low-cost, standard multi-purpose vehicles Location: Guinea	"	Côte d'Ivoire requested that it be deleted from the list of possible project locations while Guinea reaffirmed its interest in the project.	No action taken.	Since Guinea is no longer interested in the project, it is recommended that the project be deleted.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
Energy equipment subprogramme				
11. Manufacture of hurricane lamps Location: Senegal	BOAD	The meeting noted that technical partners were being sought for the project and it was agreed that the project be implemented in the short term.	Assistance of UNIDO being sought by the industrial freezone of Dakar in financing updating of feasibility study.	Senegal is no longer interested in the project. It is therefore recommended that it be deleted.
12. Manufacture of aluminium conductors and cables Location: Ghana and Guinea	MULPOC and IGO Committee of Experts on Engineering	Ghana expressed interest in implementing the project on a subregional basis, and related project could provide the necessary input (aluminium ingots).	Minerals Commission in Ghana confirmed need to update earlier studies and expressed continued interest.	Energy required for the implementation of this project in Guinea is currently not available. Co-operation with OMVS countries could be considered a solution to the energy problem. Ghana is also experiencing similar energy problems as present energy capacity is being used to process other products. It is none the less recommended that the project be retained.
13. Manufacture of power transformers Location: Togo	MULPOC and IGO Committee of Experts on Engineering	Considered a low priority project, yet Niamey-based MULPOC was urged to take necessary follow-up action on this and other projects.	No action taken.	Since Togo is no longer interested in the project, it is recommended that it be deleted.
14. Manufacture of steel towers Location: Nigeria	Nigeria	No project information was available at the meeting.	No information available.	In the absence of any further information, the information provided at the Lomé meeting remains unchanged It is recommended that pending the receipt of updated information, the project be retained.
CHEMICAL INDUSTRIES				
Fertilizer subprogramme				
15. Establishment of a phosphoric acid plant Location: Togo	Togo	Technical partners were being sought and the mobilization of funds was being studied (short-term). Togo was requested to update project profile and take due account of Senegal's experience when selecting partner.	Project in abeyance because of high investment costs and sharp drop (30 per cent) in phosphate fertilizer prices.	Realization of all three projects (15, 16 and 17) would accelerate the achievement by the subregion of self-sufficiency in fertilizers essential to the development of agriculture. These projects should be fully supported by Member States in the subregion so as to accelerate implementation. It is thus recommended that all three projects (15, 16 and 17) be retained.
16. Subregional ammonia and urea project Location: To be determined	MULPOC Council of Ministers	Detailed survey was being undertaken by Canadian firm with a view to launching the project in the medium term.	Côte d'Ivoire interested in implementing the project.	

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
17. Establishment of a phosphate fertilizer plant Location: Niger	Niger	Further studies to determine the final location of the plant were envisaged by UNIDO, and the ECOWAS Fund has been approached for financial assistance that had been approved.	Project related to another subregional project being promoted by Liptako-Gourma authority that involved three countries: Burkina Faso, Niger and Mali.	
<u>Pharmaceuticals subprogramme</u>				
18. Establishment of a pharmaceutical plant Location: Guinea (UFM)	MRU	The meeting considered two projects (18 and 19) together since both related to rehabilitation of existing plants. MRU was requested to make available to Member States the studies undertaken on the projects, while UNIDO was requested to assist Guinea in undertaking market studies. BOAD expressed readiness to finance the necessary feasibility studies.	Production of drugs has started. Market study being undertaken.	MRU were co-ordinating the development of pharmaceutical industries within the Union, based on the existing facilities and the needs of Member States. Chief pharmacists were meeting to draw up list of essential drugs and Member States would receive exclusive rights to produce certain drugs which would then be traded within the Union.
19. Rehabilitation and extension of the Seredu station Location: Guinea	Guinea	It was noted that raw materials, labour and energy needed for the project were available in Guinea.	Step-by-step rehabilitation with sale of raw material for the purchase of equipment being undertaken. MRU was undertaking study on producing drugs from local medicinal plants. Co-operation of a group of Guinean businessmen already secured, co-operation from others from other MRU countries being sought.	The Mano River Union countries should support the rehabilitation process. It is recommended that the project be retained.
20. Establishment of a pharmaceutical plant Location: Nigeria	Nigeria	It was recommended that the project should be considered in the survey which UNIDO was called upon to undertake in collaboration with the relevant intergovernmental organizations.	No information available.	In the absence of any further information, the information provided at the Lomé meeting remains unchanged. It is recommended that pending the receipt of updated information, the project be retained.
<u>Pesticides subprogramme</u>				
21. Plant for phytosanitary products Location: Burkina Faso	Burkina Faso	The project enjoyed the support of the Government of Burkina Faso which had included it in its five-year development plan (short-term) after updating earlier studies.	Because of difficulties in implementation with Niger, the project has become a national project.	The project is a national project and enjoys top priority in the five-year development plant of Burkina Faso. However, since the project is no longer subregional, it is recommended that it be deleted.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
__Basic chemical subprogramme__				
22. Tidekelt salt project Location: Niger	Niger	It was agreed that the project should be included in the first priority category (short-term)	Under implementation.	This project is more national than subregional in character. However, since Niger intends to have other countries in the subregion participate in extending the unit so as to meet the needs of the subregion by 1991, it is recommended that the project be retained.
23. Establishment of salt/soda production plant Location: countries of the Mano River Union	MRU	The studies had been completed, but project location and selection of a technical partner were still under consideration.	Project being implemented in Sierra Leone using solar energy. Project sponsor in need of capital.	The project needs co-investors so as to accelerate the pace of implementation. It is thus recommended that it be retained.
AGRO AND AGRO-BASED INDUSTRIES				
__Food-processing subprogramme__				
24. Integrated complex for poultry production Location: Liberia	Liberia	Funds had been secured under Danish financial assistance.	No action taken for want of agreement of sponsor on a crucial aspect of the project.	The potential investors have since indicated their preference for financing only certain components of the project and not the integrated project as a whole. Whereas agreement had been reached on the production of eggs and poultry meat, no agreement had been reached on the production of poultry feed. This project could perhaps be considered a national project. It is none the less recommended that it be retained.
25. Plant for the industrial processing of millet and sorghum Location: Niger and Nigeria	NNJC	It was agreed to include these two projects (25 and 26) in the first priority category. They had not been included in the initial subregional programme, but had already reached a more advanced	Further pre-feasibility study conducted by UNIDO and UNDP in 1989.	The sponsors have locakted a technical partner and additional financial resources were being sought. It is thus recommended that the project be retained.
26. Manufacture of village mills for millet and sorghum Location: Niger and Nigeria	NNJC	stage. In respect of the first project (25), prefeasibility and feasibility studies had been completed, sites had been selected and financial resources were being sought. In respect of the second project (26), a prefeasibility study had been completed, a site selected and the participation of ARCEDEM, UNIDO and UNDP was sought.	No action taken since	BOAD is interested in the project. NNJC is looking for additional investors and national promotors. Since the project is aimed at relieving women of their traditional method of pounding millet and sorhum, it is recommended that the project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
27. Food-processing plant Location: Guinea	Guinea	Projects 27 and 28 were considered together. Studies on expanding and modernizing the plants had been initiated, but had been interrupted to allow for restructuring. Guinea was requested to contact ECOWAS on conducting a study for the subsector.	Rehabilitation process has started and both plants would be operational in 1990.	These two projects have been reorganized (i.e. privatized) in order to achieve greater efficiency. It is recommended that both projects (27 and 28) be retained.
28. Fruit-processing plant Location: Guinea	Guinea			
<u>Forest industries subprogramme</u>				
29. Establishment of a pulp and paper-board factory Location: Côte d'Ivoire	Côte d'Ivoire	ECOWAS and UNIDO were requested to undertake further studies with a view to re-launching the project.	No further action has been taken.	The Government of Côte d'Ivoire is still interested in the project and has indicated that once it has overcome the present economic difficulties, the project will be actively promoted. It is recommended that the project be retained.
30. Surgical/medical cotton project Location: Senegal	Senegal	It was agreed that the project should be included in the first category (short-term)	Updating of feasibility study and supplementary market study.	ECOWAS Fund prepared in princile to fund the project. A supplementary market study had been requested (and completed) as well as a guarantee from the Government or community fund (which was being sought). Investment capital had been secured and a technical partner identified.
BUILDING MATERIALS INDUSTRY				
<u>Cement and ceramics subprogramme</u>				
31. Establishment of a subregional cement factory in the Liptako-Gourma region Location: To be determined	Liptako-Gourma	The need for a market survey prior to the feasibility study was recognized. It was suggested that existing cement plants be rehabilitated before embarking upon the establishment of new units. Consideration should also be given to the development of mini-cement plants.	No action taken as this was contingent upon completion of railway line.	Pending receipt of updated information, it is recommended that the project be retained.
32. Establishment of a ceramics factory Location: Lomé, Togo	Togo	Studies had been completed by BOAD. Technical partners and local sponsors being sought and UNIDO was requested to assist in the identification of foreign partners	No action taken.	No progress made, but Government continues to support the project. It is thus recommended that it be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
<u>Non-metallic mineral products subprogramme</u>				
33. Manufacture of glass containers Location: Monrovia, Liberia	Liberia	The construction was nearing completion and production was scheduled to start in 1986.	Successfully implemented, and shares being issued for equity participation.	The unit is operational and is exporting its products to neighbouring states. However, it is experiencing some difficulties with regard to imported inputs. It is thus recommended that the project be retained.
34. Manufacture of glass containers Location: To be determined	CEAO	Considering the number of activities related to the project that had already been undertaken by NNJC and CEAO, both organizations were called upon to co-ordinate action related to this project.	No action taken.	Given the existence of the glass factory in Liberia, it is recommended that CEAO take this facto into account. It might possibly consider establishing a different line of production in order to benefit from the complementarity of the two projects. It is none the less recommended that the project be retained.
METALLURGICAL INDUSTRY				
<u>Iron and steel subprogramme</u>				
35. Establishment of a sponge iron plant Location: To be determined	MRU, CEAO	The five projects in the iron and steel subsector were retained in the programme for implementation in the long term. It was also suggested that the projects be studied together with a view to developing a long-term subsectoral programme.	Other than work done prior to 1985 and follow-up promotional work by ECA up to 1988. ECOWAS currently exploring ways and means of deriving maximum benefit from study. No substantive investment oriented work was done by the IGOs or Member States concerned towards the implementation of the five selected metallurgical projects.	Member States have not yet harmonized their national objectives with those of the subregion, particularly in terms of developing basic industries. Entrepreneurs should take the risk of exploiting the large subregional market potential arising out of the protocols on co-operation. The legal and organizational machinery should be set in motion so as to finance large-scale IDDA projects and set up mechanisms for the estabilshment, ownership, management and marketing of subregional joint ventures. In view of the strategic importance of iron and steel to economic development, it is recommended that four (35, 36, 37 and 38) of the projects be retained and accorded high priority.
36. Installation of electric arc furnaces in the subregion Location: To be determined	ECOWAS and CEAO			
37. Installation and expansion of re-rolling mills in the subregion Location: to be determined	ECOWAS, MRU and CEAO			
38. Establishment of integrated iron and steel plant for flat and tubular products Location: To be determined	Govt. of Nigeria			
39. Establishment of foundries Location: To be determined	Proposed by MULPOC			

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
<u>Non-ferrous metals subprogramme</u>				
40. Processing of bauxite and alumina Location: Ghana	Ghana	Was seen to be closely linked to project 12 (Manufacture of aluminium conductors and cables) and hence to be implemented in the long term.	No information available	In the absence of any further information other than that it is proving difficult to find investors, the information provided at the Lomé meeting remains unchanged. It is recommended that pending the receipt of further information, the project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
		SUPPORT PROJECTS		
S1. Assistance to the African Regional Centre for Engineering Design and Manufacture Location: Ibadan, Nigeria	ARCEDEM	The Centre had not received any assistance within the framework of the proposed support project. ARCEDEM had requested UNIDO assistance in securing equipment, of which it was anticipated that it might receive equipment under a special-purpose contribution equivalent to the value of $100,000, which UNIDO had hoped to match with a convertible currency input. The need for equipment in ARCEDEM was acknowledged as being critical.	$4,787,200 had been requested from UNDP but $3,297,000 had been provided which excluded foundry component in the project.	Since foundry is an important aspect of the Centre's activities, it should still be given support, and every effort should be made to secure funding. It is recommended that the support project be retained.
S2. Assistance to African Regional Centre for Technology Location: Dakar, Senegal	ARCT	UNIDO had assisted ARCT in strengthening its technological information capability in connection with the Technological Information Exchange System (TIES).	Setting up an industrial and technology information network; training nationals from Member States; acquiring and introducing application of modern equipment; enhancing regional capability and production.	UNIDO has provided integrated assistance to ARCT in the field of technology transfer and acquisition, as well as industrial and technological information through the promotion of industrial information networking, training and exchange of publications among selected African countries. Through two major programmes TIES and INTIB, UNIDO has provided financial and material support, in the form of computer hardware and software, to a number of countries in Africa. It has followed this up with appropriate human resource development, thereby creating the necessary capability for the application of new information technology to industrial and technological development. The TIES programme has enchanced the technology contract negotiating power of several African countries. At the same time, the co-operation provided by UNIDO has enabled ARCT to promote the exchange of knowledge and experience among African countries with the overall objective of ensuring the transfer of technology from the industrialized countries to the continent, and promoting South-South technology transfer and co-operation. It is recommended that the support project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
S3. Development of meat-processing and allied industries Location: Burkina Faso and Mali	Burkina Faso Mali	Since the project was still at the study stage, it was decided to retain it as a support project.	No information available	Mali has indicated that it is already implementing a project in the frozen meat sector. No information was available in Burkina Faso. It is recommended that the support project be deleted.
S4. Assistance to CEAO Location: Ouagadougou	CEAO	Three specific Community market studies had been undertaken in the field of fertilizers, iron and steel and glass production. The support project valued at $1.31 million had still to be funded.	No information available	Pending receipt of further information, it is recommended that the support project be retained.
S5. Development of local industrial entrepreneurship (directory of small-scale industrial project profiles) Location: Addis Ababa	ECA	The first issue of the directory was printed and distributed by ECA to member countries at the end of 1985.	Completed.	Based on ECA and ILO directories of management and training facilities in the West African subregion, it is recommended that the centres most suitable for subregionalization be selected in order to strengthen and harmonize their training programmes. The team of local consultants to be set up within the secretariat could be supported by locally available consultancy services. Since the project is completed, it is not recommended that it be retained in the programme.
S6. Development of the cotton textile industry Location: Kano, Nigeria	Nigeria	Action on the project had been initiated at the textile institute in Kano, Nigeria. BOAD had launched a diagnostic sectoral study of textile plants operating in the WAMU/CEAO countries.	No information.	It is recommended that the support project be deleted.
S7. Assistance to ECOWAS Location: Lagos	ECOWAS	UNIDO had assisted in the revision of the subregional programme and in strengthening the institution's industrial planning capacities. Funds were still being sought for the support project.	Preparation of terms of reference for the elaboration of an industrial master plant for the subregion.	ECA has assisted in the finalization of the terms of reference for proposed industrial master plan for the West African subregion. It is planned to finance the plan during the fourth programming cycle of UNDP. It is thus recommended that the support project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
S8. Assistance to ECOWAS in the development of an industrial training programme Location: ECOWAS, Nigeria	ECOWAS	All support projects were considered first priority. However, given certain current structural constraints, ECOWAS proposed at the meeting in Lomé dropping both projects (S8 and S9) from the programme.	No action taken.	It is recommended that the support project be deleted.
S9. Development of industrial consultancy and management capabilities Location: ECOWAS, Nigeria	ECOWAS		No action taken.	It is recommended that the support project be deleted.
S10. Assistance in integrated industrial development planning for the Liptako-Gourma area Location: Ouagadougou	Liptako-Gourma Authority	In 1981, UNIDO had delivered, in a first phase, assistance of the order of $1 million. Liptako Gourma sought further assistance in order to undertake pre-feasibility studies on the projects identified.	UNIDO had been requested in 1986 to continue its assistance in implementing the feasibility study.	It is recommended that the support project be retained.
S11. Establishment of a Mano River Union technology centre Location: to be determined	MRU	UNIDO had initiated action with respect to the project.	Feasibility study on Sierra Leone National Workshop.	One of the recommendations of the feasibility study on the Sierra Leone National Workshop is that ECA develop the workshop into a design centre. It is recommended that the support project be deleted.
S12. Establishment of Mano River Union coastal shipping enterprise Location: to be determined	MRU	A similar project had also been launched by ECOWAS. Initial studies had been completed by both organizations. MRU was looking for technical partner, while the findings of the ECOWAS study oriented towards coastal shipping had not led to implementation. A related maritime transport (long-haul) project being undertaken by CEAO was at an advanced stage.	Being implemented.	A local entrepreneur has already acquired a cargo ship. It is expected that coastal shipping between the three member states will commence soon. MRU, which is currently endeavouring to acquire a passenger ship, is liasing with the local sponsor to give the project Union status. It is suggested that the support project be deleted.
S13. Establishment of an industrial and technology fair serving the member states of MRU Location: Member States of MRU	MRU	MRU had applied to UNIDO and other sources of finance for assistance.	No action.	The feasibility study undertaken in 1983 contained detailed recommendations as to how the fair could be organized. Those recommendations have not yet been implemented for want of resources. It is none the less recommended that the support project be retained.

Project number, title and location	Sponsors	Conclusion and recommendations of the Lomé meeting Dec. 1985	Action taken since December 1985	Observations and recommendations
S14. Establishment of a MRU financing institution Location: to be determined	MRU	No information available	No information available	Pending the receipt of further information, it is recommended that the support project be retained.
S15. Processing of fish and other sea foods Location: Freetown, Sierra Leone	MRU	No action had been taken as the initial studies had been completed prior to the meeting in Abidjan.	No action taken.	Given its potential, it is recommended that the support project be retained.
S16. Pharmaceutical industrial development centre Location: Nigeria	ECOWAS	Though retained as a support project based in Nigeria in the programme drawn up at Lomé, ECOWAS had requested its deletion in view of the complexity of the subsector.	No action taken.	It is recommended that the support project be deleted.
S17. Subregional development centre for hides, skins, leather and leather products Location: Zaria, Nigeria	ECOWAS	The project was more in the nature of a core project initiated by Nigeria and not by ECOWAS.	A project document was being promoted among potential donors within the context of the UNIDO integrated leather programme for Africa.	This support project should be considered a core project to be sponsored by Nigeria. It is recommended that it be retained in ore of the two categories.
S18. Assistance to NNJC Location: Niamey, Niger	NNJC	The Commission had received assistance funded by non Member States and UNIDO in the field of institutional infrastructure development, in the form of expert services and pre-feasibility/feasibility studies. It was proposed that further assistance be sought from UNDP/UNIDO.	No subsequent action taken	Pending receipt of further information, it is recommended that the support project be retained.
S19. Assistance to OMVS for the development of the Senegal River Basin Location: Dakar	OMVS High Commission	It was considered essential for OMVS to promote the project within the context of the Decade. With the assistance of UNIDO, OMVS was to secure funding from multilateral sources such as UNDP and EEC or bilateral sources such as FRG.	Preparation of terms of reference for a macro-economic study for an integrated development programme of OMVS countries.	Owing to the lack of funds for the implementation of the initial programme, OMVS decided on the preparation of new terms of reference for a study which is estimated to cost 245 million FCFA. It is thus recommended that the support project be retained.
S20. Togolese National Centre for Technology Development Location: Togo	Togo	A feasibility study on the centre was to be undertaken shortly after the meeting in Lomé.	Feasibility study updated by SOTED in 1988	This project should be given subregional status, whereafter the feasibility study should be completed and the subregionalization of the Centre considered. It is thus recommended that the support project be retained.

Annex III

Project profiles retained in the revised programme

PROJECT PROFILE NO. 1 PRIORITY: Third (long term)

SUBSECTOR: Metallurgical industry (iron and steel) SUBREGION: West Africa

1. Project title: Establishment of a sponge iron plant

2. Objective: To produce sponge iron for use in electric arc furnaces in the subregion

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Mano River Union in co-operation with CEAO 4. Possible locations include: Liberia, Guinea Sierra Leone and Mauritania	5. Conceptual stage. This project has not been implemented owing mainly to the closure of the iron ore mining industries in Sierra Leone and Liberia. Guinea has not yet started the exploitation of its huge deposits of iron ore in co-operation with Liberia 6. Pre-feasibility studies	7. A reserve of approximately 22,000 million tons of iron ore available in Liberia, Guinea, Sierra Leone and Mauritania. 8. Hydro-electricity: 51,200 MW; Natural gas: 1,200 billion cubic metres; Petroleum: 2,500 million tons; 9. Infrastructure partially available	10. The demand for sponge iron in the subregion: 1.5-2.0 million tons/year 11. Countries in the subregion	12. Initial capacity: 0.8 million tons of sponge iron per year with possibility of expansion to 1,5 million tons by the year 2000. 13. To be determined	14. (a) This project was initially conceived as three separate projects which were presented to the Sixth Meeting of the Council of Ministers of Niamey MULPOC held at Cotonou, Benin, 21-26 March 1983 (b) In common with all the projects in this subsector, studies were carried out by ECOWAS, CEAO and NNJC. The CEAO study was examined by CEAO experts prior to being submitted to CEAO Ministers of Industry. (c) NNJC also undertook a preliminary study of the iron-ore deposits in Say, Niger, in 1984.

PROJECT PROFILE NO. 2 | **PRIORITY:** Third (long term)

SUBSECTOR: Metallurgical industry (iron and steel) | **SUBREGION:** West Africa

1. **Project title:** Installation of electric arc furnace plants in the subregion

2. **Objective:** To install electric arc furnaces, based on sponge iron from sponge iron units in the subregion to supply billets to merchant product re-rolling mills in the subregion

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. ECOWAS and CEAO 4. To be determined	5. Conceptual stage 6. Prefeasibility studies	7. Sponge iron from project described in profile No.35 8. Electricity 9. Infrastructure partially available	10. 1.5-2.0 million tons of billets in 2000 11. Countries in the subregion	12. Estimated at 1.5 to 2.0 million tons of billets 13. To be determined	14. (a) This project was initially conceived as two separate projects which were presented to the Sixth Meeting of the Council of Ministers of the Niamey MULPOC held at Cotonou, Benin, 21-26 March 1983. (b) Assistance from ECA sought to carry out the studies; pre-feasibility study already available

N.B. Project profiles No. 2 and 3 will be taken into account in the preparation of a global study on an industrial master plan for the subregion which ECOWAS will be undertaking. With the assistance of ECA, a preliminary study of the metallurgical sector was carried out in 1988. This study will also be taken into consideration in the industrial master plan for West Africa.

PROJECT PROFILE NO. 3 **PRIORITY:** Third (long term)

SUBSECTOR: Metallurgical industry (iron and steel) **SUBREGION:** West Africa

1. **Project title:** Installation and expansion of re-rolling mills in the subregion

2. **Objective:** To install and expand rolling mill capacity for merchant products and to supply the subregion with requisite merchant products up to the year 2000.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. ECOWAS, MRU and CEAO 4. Countries with relatively high demand for merchant products	5. It was decided that this project should be considered together with the sponge iron plant so as to establish their degree of inter-relationship. This linkage stems from the fact that the output of one project (sponge iron) would be processed in another (arc furnaces) to provide input for further processing in another (rolling mills). This degree of complementarity has meant that the sponge iron project provides inputs to the electric arc furnaces further processed in rolling mills in the same cr yet another. This project has not been implemented as it has also been subject to the same as the sponge iron plant (see reasons cited in project No. 1). 6. Prefeasibility study.	7. Billets from electric arc furnace plants within the subregion 8. Electricity 9. Plants will be preferably located in areas where infrastructure already exists	10. 1.5-2.0 million tons per year in 2000 11. Countries in the subregion	12. Estimated at 1.5 to 2.0 million tons per year by 2000 13. To be determined	14. (a) This project was initially conceived as two separate projects which were presented to the Sixth Meeting of the Council of Ministers of the Niamey MULPOC held at Cotonou, Benin, 21-26 March 1983. (b) Assistance from ECA sought in carrying out the studies; prefeasibility study already available

PROJECT PROFILE NO. 4 | **PRIORITY:** Third (long term)

SUBSECTOR: Metallurgical industry (iron and steel) | **SUBREGION:** West Africa

1. **Project title:** Establishment of integrated iron and steel plant for flat and tubular products

2. **Objective:** To install an integrated plant to meet the demand for flat and tubular products in the West African subregional market (oxcluding Nigeria)

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Federal Government of Nigeria 4. Nigeria	5. Conceptual stage 6. Pre-feasibility studies	7. Subregional iron ore resources: 22,200 million tons 8. Subregional fuel and energy resources. Petroleum: 2,500 tons; Natural gas: 1,200 billion cubic metres; Hydro-electric potential: 51,200 MW 9. Physical infrastructure will be created.	10. Subregional demand (thousand tons) Product / Year 2000 Flat 2,300 Tubular 2,000 5,300 11. Countries in the subregion (except Nigeria)	12. Total crude steel capacity will be 2 million tons 13. To be determined	14. This project was presented to the sixth meeting of the Council of Ministers of the Niamey-based MULPOC held at Cotonou, Benin, 21-26 March 1983, and was referred to the Intergovernmental Committee on Metals of the Niamey-based MULPOC

PROJECT PROFILE NO. 5 (new) PRIORITY: First (short term)

SUBSECTOR: Metallurgical industry SUBREGION: West Africa

1. Project title: Exploitation of the Nimba Mountains, Guinea and Liberia

2. Objective: To develop and exploit the iron ore deposits in the Nimba Mountains in Guinea

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. MIFERGUI-NIMBA (Guinea) and LAMCO joint-venture (LJV) (Liberia). 4. Guinea	5. Guinea to carry out exploratory work and studies at a cost of $5 million; Establishment of MIFERGUI-NIMBA company; Partners have financed the feasibility study and several subsequent revisions. 6. Establishment of the Nimba Mining Company (NIMCO); Organization of financial arrangements and choice of an agent by the group implementing the project.	7. Iron ore 8. Available, to be improved. 9. Use of LAMCO's existing infrastructure is planned.	10. Open-cast exploitation 315 million tons proved in Guinea. 11. Customers of LAMCO and others	12. 12 million tons of iron ore annually, of which 10 million in Guinea and 2 million in Liberia. 6 to 9 million tons of ore immediately marketable. 13. $190 million.	14. In order to get round the difficulties (cost of using the existing infrastructure, sharing investment and income) to which the project's initial structure gave rise, the Guinea-Liberia interdepartmental committee and the group for the implementation of the project have opted for a single structure which will make the project a multinational one and render it attractive to investors and financial backers.

PROJECT PROFILE NO. 6

PRIORITY: Second (medium term)

SUBSECTOR: Metallurgical industry (non-ferrous metals)

SUBREGION: West Africa

1. Project title: Processing of bauxite and aluminia, Ghana

2. Objective: To develop and utilize fully the bauxite resources of the country

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Ghana 4. Ghana	5. Pre-feasibility studies already conducted 6. Further in-depth studies, including a fully fledged feasibility study.	7. Available locally 8. Available, primarily electrical power from Akosambo dam. Additional energy will be required and this implies the expansion of the Akosambo dam 9. Already well developed	10. Information not available and to be determined in subsequent studies 11. Ghana, Nigeria and other countries in the subregion	12. See point 10. 13. $460 million	14. Difficulties in finding investors willing to invest in the development of bauxite. Final aim is to have a fully integrated process from raw material to final product. Closely linked to project No.16.

PROJECT PROFILE NO. 7 PRIORITY: First (short term)

SUBSECTOR: Engineering industry (agricultural machinery and equipment) SUBREGION: West Africa

1. Project title: Manufacture of agricultural tools and implements, Sierra Leone

2. Objective: To develop (i) manufacture of foundry products and metal-forming tools particularly for the agricultural sector; (ii) production of corrugated iron sheet roofing; and (iii) repair jobbing and metal fabrication facilities.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Sierra Leone 4. Freetown, Sierra Leone	5. Feasibility study available 6. Indentification of potential investors	7. Grey iron scrap, steel scrap, timber and charcoal are locally available. Other materials and inputs such as steel have to be imported. 8. Available, primarily electric energy and a standby 800 kVA generator 9. Very good	10. (Units/yr for local export markets) Mincers/maize mills: 4,000/4,000 Charcoal iron: 5,000/4,500 Cooking pot: 6,000/7,000 Rakes: 12,000/ 14,000; Palmoil presses: 350; Semi-rotary pumps: 250/350; Palmnut crackers: 375; Rice hullers: 250; Wheelbarrows: 4,000/4,000; Rice winnowers: 350; Corrugated iron sheets: 2,000/1,200; 11. Construction and agricultural sectors as well as local consumers	12. (Units/yr) Mincers/maize mills 7,500; Charcoal irons: 43,420; Cooking pot castings: 14,400; Rakes 6,420; Palmoil presses: 350; Pumps: 550; Palmnut crackers: 330; Rice hullers: 220; Wheelbarrows: 6,600; Rice winnowers: 350 Corrugated iron sheets: 3,000. 13. $2.9 million	14. Government of Sierra Leone has 40 per cent equity. Three foreign currency loans of $2.44 million are assumed. A local currency loan of $250,000 is envisaged. The project has been privatized. It is located at the former national railway company and is supported by the Centre Pilote in Guinea. Production is no longer limited to the manuture of agricultural tools but to a variety of tools and implements. In Guinea, the Centre Pilote equipped with the assistance of UNDP is now manufacturing a range of tools and equipment with emphasis on agricultural equipment. In Liberia, Agro-Machines Company manufactures a wide range of agricultural tools and equipment. The Sierra Leone project has not yet been developed into a subregional facility, but each of the three countries has its own centre manufacturing simple agricultural tools and equipment.

PROJECT PROFILE NO. 8 PRIORITY: Third (long term)

SUBSECTOR: Engineering industries (agricultural machinery and equipment) SUBREGION: West Africa

1. Project title: Manufacture of agricultural implements and equipment, Nigeria

2. Objective: To establish a plant to manufacture agricultural implements and equipment

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Nigeria 4. Nigeria. Information about the exact site not available	5. Feasibility study conducted in 1980 is available 6. Information not available	7. No information available on whether the steel required will be produced locally or imported. 8. No information available about project requirements 9. Information not available.	10. Information not available. However, present subregional demand amounts to : 10,000 tractors; 30,000 hand-held implements; and 10,000 various other implements 11. Subregional.	12. Information not available 13. Estimated at N 31.2 million including pre-investment costs, fixed capital and working capital.	14. (a) It is not known whether Nigeria has invited other countries in the subregion to participate in the project. (b) Potential problems during implementation might include the lack of investment funds.

PROJECT PROFILE NO. 9 PRIORITY: First (short term)

SUBSECTOR: Engineering industry (agricultural machinery and equipment) SUBRFGION: West Africa

1. Project title: Production of mobile mini palm-oil mills, Mano River Union

2. Objective: To reduce the degree of fresh fruit wastage by using mobile processing units which can travel to the plantations

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Mano River Union 4. Mano River Union countries	5. MRU countries obtained a loan from ADB to conduct pre-feasibility study. A draft report which contained a market report and design of suitable prototype has been received and reviewed. The final report is expected in September 1989. 6. 2nd phase of the project: construction of the prototype will commence in 1990. If prototype is accepted, commercial production will begin for the subregion and even beyond.	7. Nearly all raw materials will have to be imported: - Appropriate lorry bodies and accessories for assembly; - Iron sheets and profiles and accessories for assembly; - Welding material and fittings for mounting; 8. Energy supply system for units (generators of about 40 kVA) 9. No special requirements	10. 50 to 80 units may be absorbed by the Union market 11. Mobile units can also be produced for export to ECOWAS Member States as in many countries similar conditions prevail in respect of palm-oil production	12. Mobile unit will have an input capacity of about 3,000 tons/year 13. Will cost about $250,000 which can be paid back in about two years	14. 51 % nationals or institutions of MRU Member States, 49 % free distribution. Preferential treatment to be given to the import of mobile units so as to enlarge the sales prospects of this venture.

PROJECT PROFILE NO. 10 PRIORITY: Second (medium term)

SUBSECTOR: Engineering industry (agricultural machinery and equipment) SUBREGION: West Africa

1. Project title: Manufacture of four-wheeled tractors, Senegal

2. Objective: To develop the manufacture of a variety of agricultural machinery by the SISMAR industrial unit and to introduce intermediate agricultural mechanization (medium-sized tractor and accompanying series of agricultural equipment)

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Senegal and SISMAR. 4. Pout, Senegal.	5. At the prototype design stage. 6. Studies in agricultural mechanization carried out by ISRA and agricultural development bodies.	7. To be imported pending the supply of grey iron/ malleable iron, forging, steel, sheet metal and sections by the metallurgical projects proposed for the subregion. 8. Available. Essentially electrical energy (Manantali dam). 9. Available and in good condition.	10. 23,000 units/ annum (1990). 50,000 units/ annum (2000). 11. Agricultural sector in the subregion.	12. 5,000 units/annum 13. Pre-investment studies: 25 million FCFA Supplementary investment: 100,000,000 FCFA (excluding the investments necessary for the production of engines and for ancillary industries).	14. (a) 50 per cent of the basic investment is to be financed by equity sharing and the balance by loans. (b) Ancillary industries are to be set up at the national level to supply parts and and components. (c) SISMAR has a large plant at Pout for the manufacture of agricultural equipment, comprising cutting shop, general machine shop, stamping and hot and cold setting shops, welding and boiler making, joinery and paint shops. The industrial plant at Pout is still the largest and longest established in its particular field in the whole West African subregion. SISMAR, which has taken over the work of the former SISCOMA, has something like 100 years' experience in the design, manufacture and distribution of a wide range of animal-drawn implements and a variety of motorized or tractor-drawn equipment for post-harvest processing.

PROJECT PROFILE NO. 11 — PRIORITY: Second (medium term)

SUBSECTOR: Engineering industry (agricultural machinery and equipment) — SUBREGION: West Africa

1. Project title: Manufacture of diesel-engines for irrigation pumps and generators, Guinea

2. Objective: To develop agricultural machinery and energy equipment manufacture

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Guinea/MRU This proposal was examined by 6th meeting of the Niamey-based MULPOC Council of Ministers which referred it to the first mtg. of the Inter-governmental Committee of Experts on Engineering Industries for West Africa 4. Guinea. Site and size of production yet to be determined.	5. Pre-feasibility study stage 6. Further indepth studies. Consideration of possible linkage between the work-shop in Freetown and the Centre Pilote of Guinea for the production of diesel engines for use in irrigation pumps and generators. Officials of the two Centres should meet to draw up an implementation plan.	7. To be imported pending supplies from the metallurgical projects proposed for the sub-region. 8. Available, primarily electric energy 9. Adequate	10. 100,000 units p.a. (1990) and 200,000 units p.a (2000); 11. Units manufacturing irrigation equipment and small generators in the subregion	12. 100,000 units p.a. 13. $50 million (including investment on national pump and generator assembly plants)	14. (a) 50 per cent of basic investment to be provided by equity share-holding and balance by loans. (b) National pump and generator assembly plants to be set up. (c) Given Mauritania's experience, geographic location and major iron-ore deposits, possible location of the project in that country might be considered. (d) Further studies are required as are trials in various countries.

PROJECT PROFILE NO. 12 (new) PRIORITY: Second (medium term)

SUBSECTOR: Engineering industry SUBREGION: West Africa

1. Project title: Manufactu of irrigation pumps, Senegal

2. Objective: To produce irrigation pumps for the market of the Sahelian countries in the subregion

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Senegal/ Indian firm HMT and other foreign partners 4. Dakar, export processing zone (Senegal)	5. National market study completed. 6. Feasibility study in progress, covering the market of the Sahelian countries. Being undertaken in co-operation with an Indian firm that had access to a credit line.	7. To be imported 8. Available 9. To be improved	10. To be determined by the market study. 11. National and the Sahelian countries in the subregion.	12. To be determined by the study. 13. Being estimated by the current study.	14. Participation in this project by Member States in the subregion is being sought.

PROJECT PROFILE NO. 13 PRIORITY: Second (medium term)

SUBSECTOR: Metallurgical industry (road and rail transport) SUBREGION: West Africa

1. Project title: Manufacture of railway wagons, Burkina Faso (with a subsidiary at Dakar)

2. Objective: To develop the manufacture of transport equipment

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. West African Economic Community (CEAO). 4. Headquarters, Burkina Faso, subsidiary at Dakar. Purpose of the subsidiary: trade presentation reception of wagon kits manufactured at Bobo Dioulasso; parts from Europe for wagons manufactured for Senegal and Mali.	5. Feasibility study available. 6. The feasibility study has been updated. Further in-depth studies are being carried out in order to take subregional demand into account. Re-scaling of the project in agreement with the State railways of the member countries. Drafting of the standard terms concerning the use of the railway workshops at Bobo Dioulasso and drafting of the user agreement. Investigation of new sources of application.	7. To be imported pending their supply by the metallurgical plants proposed for the subregion. 8. Adequate supply of electricity. 9. The railway workshops at Bobo Dioulasso are large enough to combine manufacturing for the Community with the maintenance requirements of Burkino Fasso's railway network.	10. 103 wagons a year according to the study updated in September 1988 by Transport Urbain. 11. Railway authorities in the subregion and private operators owning rolling stock.	12. 103 wagons, comprising 94 in kit form and 9 additional wagons for the connected systems. 13. Total investment: 4,118,699,000 CFA francs according to the study updated in September 1988.	14. (a) Togo and Benin have expressed interest in the project. (b) Ancillary industries need to be set up at the national level to provide parts and components. (c) Sub-contracting agreements are needed to take full advantage of the existing railway workshops in the subregion for the supply of parts and components. (d) In order to reduce investment, more particularly for civil engineering, agreements with the railway authorities of the member networks will need to be studied.

PROJECT PROFILE NO. 14 PRIORITY: First (short term)

SUBSECTOR: Engineering industry (road and rail transport equipment) SUBREGION: West Africa

1. Project title: Establishment of a central press workshop (Oshogbo, Nigeria)

2. Objective: To establish a factory to manufacture machine tools

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. The Nigerian Government 4. Oshogbo, Nigeria	5. Feasibility study conducted between 1978 and 1979 is available 6. P.E. International operations (A consulting group) appointed in 1980 to monitor the project and prepare a market survey for the products. NIDB Evaluation Report (1984). Reviewed by World Bank in 1985.	7. Essential moulds to be imported. Basic raw materials available locally 8. Available: primarily electric energy 9. Very good	10. Not available 11. Subregional and local market. Woodworking, engineering and other industries.	12. (Units/year) Power hacksaws: 110; Centre lathes - I: 270, Centre lathes - II: 220 Milling machines: 200, Bench drills: 320, Pillar drills: 40, Radial drills: 320, Pedestal grinders: 260, Tool and cutter-grinders:70 13. N74.57* million ($80.83 million) * N1 = $1.084 as at 27.11.85	14. Federal Government of Nigeria has majority equity, while the foreign technical partner Hindustani Machine Tool, is contributing 10 per cent. The balance of the financing plan of N61.74 ($66.93) to be provided by loans or further equity participation. (Debt/equity ratio is 1.058 : 1)

PROJECT PROFILE NO. 15 PRIORITY: Third (long term)

SUBSECTOR: Engineering industry (road and rail transport equipment) SUBREGION: West Africa

1. Project title: Manufacture of diesel engines for tractors, trucks, lorries and buses, Nigeria

2. Objective: To develop manufacture of agricultural machinery and transport equipment

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. This proposal was examined by the sixth meeting of the Niamey-based MULPOC Council of Ministers which referred it to the first meeting of Inter-governmental Committee of Experts on Engineering Industries for West Africa 4. Nigeria	5. Project has been launched 6. No information available	7. (i) To be imported pending supplies from the metallurgical projects proposed for the subregion or supplies from the Nigerial steel projects (ii) Aluminium to be imported from Ghana/Guinea 8. Available, primarily electric energy 9. Adequate	10. 154,000 units p.a. (1990), 387,000 units p.a. (2000) 11. Supplies to tractor factories and lorries/trucks/chassis factories proposed for the subregion	12. 100,000 units p.a. 13. $150 million (excluding investment for ancillary industries)	14. (a) 50 per cent of basic investment to be provided by equity shareholding and balance by loans. (b) Ancillary industries to be set up at national level to provide parts and components (c) Supply/purchase arrangements to be worked out in respect of raw materials and engines.

PROJECT PROFILE NO. 16 — PRIORITY: First (short term)

SUBSECTOR: Engineering industry (road and rail transport equipment) — SUBREGION: West Africa

1. Project title: Manufacture of diesel engine-mounted chassis for lorries, trucks and buses, Nigeria

2. Objective: To develop manufacture of transport equipment

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. This proposal was examined by the sixth meeting of the Niamey-based MULPOC Council of Ministers which referred it to the first meeting of the Inter-governmental Committee of Experts on Engineering Industries for West Africa 4. Nigeria	5. Exact current status unknown 6. Further in-depth studies	7. To be imported pending supplies from local projects or the metallurgical projects proposed for the subregion 8. Available, primarily electric energy 9. Adequate	10. 131,000 units p.a. (1990) 337,000 units p.a. (2000) 11. All countries in the subregion for vehicle body building at the national level	12. 30,000 units p.a. (1 ton chassis), 25,000 units p.a. (2-5 ton chassis) 20,000 units p.a. (6-10 ton chassis) 13. $40 million for each chassis type, i.e. 120 million for all three types	14. (a) 50 per cent of basic investment to be provided by equity shareholding and balance by loans (b) Ancillary industries to be set up at national level to provide parts and components

PROJECT PROFILE NO. 17 PRIORITY: First (short term)

SUBSECTOR: Engineering industry (energy equipment) SUBREGION: West Africa

1. Project title: Manufacture of hurricane lamps, Senegal

2. Objective: To meet the needs of the West African Monetary Union (UMOA) and the West African Econonic Community (CEAO) in this field.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. The Dakar industrial free zone in collaboration with BOAD 4. Dakar (Senegal)	5. Regional project 6. Update the feasibility studies, prior to which project sponsors should be identified	7. From the subregion. 8. Available. 9. Satisfactory	10. Demand estimated at more than 200,000 lamps a year. 11. UMOA/CEAO market and possibly ECOWAS	12. Capacity: 600,000 to 1,200,000 lamps a year. 13. Estimated cost: 1,000 million FCFA (1980 value to be re-updated)	14. (a) Technical partners being sought Given the new BOAD policy for funding studies, assistance of UNIDO being sought by industrial free zone in financing the up-dating of feasibility study. (b) Participation by ECOWAS countries recommended. (d) Due consideration to be paid to plant in Burkina Faso that was being rehabilitated.

PROJECT PROFILE NO. 18

PRIORITY: Third (long term)

SUBSECTOR: Engineering industry (energy equipement)

SUBREGION: West Africa

1. Project title: Manufacture of aluminium conductors and cables, Ghana

2. Objective: To develop manufacture of energy supply equipment

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Ghana 4. Ghana	5. Conceptual stage 6. Further in-depth studies	7. Aluminium available in both countries 8. Electricity available primarily electric energy 9. Physical infrastructure adequate in both locations	10. 50,000 tons p.a. (1990) 100,000 tons p.a. (2000) 11. Electricity enterprises in the subregion	12. 25,000 tons p.a. in each location 13. $25 million (for rod rolling mill and cables and conductors manufacturing units)	14. (a) 50 % of basic investment to be provided by equity shareholding and balance by loans. (b) This area cannot be developed until the processing of bauxite and aluminia has been established.

PROJECT PROFILE NO. 19 PRIORITY: Third (long term)

SUBSECTOR: Engineering industry (energy equipement) SUBREGION: West Africa

1. Project title: Manufacture of steel towers, Nigeria

2. Objective: To develop manufacture of energy supply equipment

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. This proposal was examined by the sixth meeting of the Niamey-based Council of Ministers which referred it to the first meeting of the Inter-governmental Committee of Experts on Engineering Industries for West Africa 4. Nigeria	5. Conceptual stage 6. Further in-depth studies	7. Available 8. Available primarily electric energy 9. Adequate	10. 50,000 tons p.a. (1990) 100,000 tons p.a. (2000) 11. Electricity enterprises in the subregion	12. One 50,000 tons, p.a. rolling mill served by up to five 10,000 tons p.a. manufacturing plants 13. $100 million (for one rolling mill and five manufacturing plants)	14. (a) 50 per cent of basic investment to be provided by equity shareholding and balance by loans (b) The manufacturing unit could start by installing a plant with an annual capacity of 10,000 tons which could be expanded at a later juncture

PROJECT PROFILE NO. 20 **PRIORITY: First (short term)**

SUBSECTOR: Chemical industry (fertilizers) **SUBREGION: West Africa**

1. Project title: Establishment of a phosphoric acid plant, Togo

2. Objective: To exploit phosphate deposits for the production of phosphoric acid and meet the multicountry/subregional requirements

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Togo 4. Hanotoe, Togo	5. Preliminary study completed 6. Feasibility study is nearing completion and mobilization of funds being studied	7. Phosphate deposits at Dagbati and Kopgame 8. No information available 9. Adequate.	10. Demand in the subregion is estimated at 1 - 1.2 million tons P_2O_5 by 2000 11. Countries of the subregion and Central Africa	12. Phosphoric acid: 1,000 tons/day 13. 70 billion CFA	14. (a) The sixth meeting of the Council of Ministers of the Niamey-based MULPOC urged all Member States to lend support to the Togolese phosphoric acid project in matters relating to equity participation, supply and consumption (b) Technical partner being sought

PROJECT PROFILE NO. 21 PRIORITY: Third (long term)

SUBSECTOR: Chemical industry (fertilizers) SUBREGION: West Africa

1. Project title: Subregional ammonia and urea project, Côte d'Ivoire

2. Objective: Using natural gas reserves to produce ammonia/urea and meet multicountry/subregional requirements

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Côte d'Ivoire 4. Jacqueville, Côte d'Ivoire	5. Preliminary study completed 6. Detailed studies being undertaken by Canadian firm	7. Natural gas available in the Côte d'Ivoire 8. Available 9. Needs to be developed	10. Based on subregional trends it is estimated that the demand gap will be 1.6 million tons in 2000 11. Subregional market.	12. Ammonia: 1,000 tons per day; Urea: 1,500 tons per day 13. US$500 million	14. The sixth meeting of the Council of Ministers of the Niamey-based MULPOC endorsed the proposal for a preliminary study on the feasibility of a second ammonia project in the subregion; the first being in Nigeria, the output of which will be completely absorbed by the Nigerian market. This project will be included in the national development plan.

PROJECT PROFILE NO. 22 | PRIORITY: First (short term)

SUBSECTOR: Chemical industry (fertilizers) | SUBREGION: West Africa

1. Project title: Establishment of a subregional phosphate fertilizer industry, Liptako-Gourma

2. Objective: To produce and commercialize phosphate fertilizers for agricultural purposes.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. LGA, CEAO, BOAD ECOWAS Fund, Burkina Faso, Mali, Niger 4. Ouagadougou (Burkina Faso) Segou (Mali) Say (Niger)	5. Technical and feasibility study completed in August 1989 with the financial assistance of ECOWAS Fund and LGA. 6. LGA Ministerial Council decision on findings of study and research conducted by private promoters. Establishment of a pilot plant for the processing of nitrous gas. Decision on final form of the community structure.	7. Phosphate deposits in Burkina, Mali and Niger 8. Energy from the electric network for Ouagadougou and Segou and Say Thermal Power Station pending availability of hydro-electric power. 9. Development of existing highways and further rehabilitation of roads leading to the deposits.	10. On the average: In 1990: BKF=6850 t P_2O_5 MLI=11200 t P_2O_5 NER=3800 t P_2O_5 In 2000: BKF=13,500 MLI=15,350 NER=6,250 11. Market for the three countries	12. In 1990: BKF=3000 t P_2O_5 1100 t N_2 MLI=3000 t P_2O_5 1100 t N_2 NER=2000 t P_2O_5 In 2000: BKF=6000 t P_2O_5 2200 t N_2 MLI=6000 t P_2O_5 2200 t N_2 NER=4000 t P_2O_5 13. Total = 8180 million FCFA including: (CFA) BKF Unit=2,875,542,000 MLI Unit=2,796,414,000 NER Unit=2,508,034,000 For the first 3 plants.	14. Assistance sought from UNIDO and ECOWAS Fund, BOAD and ADB towards: - the search for promoters and technical partners - the setting up of a pilot plan - the financing of production units.

PROJECT PROFILE NO. 23 (new) | **PRIORITY: First (short term)**

SUBSECTOR: Chemical industry | **SUBREGION:** West Africa

1. Project title: Extension and rehabilitation of phosphoric acid and fertilizer plants, Senegal

2. Objective:
   (a) Doubling the pilot unit for treatment of tailings so as to increase its capacity to 40 t/hour of enriched tailings;
   (b) Installing a compaction unit at Mbao so as to reduce production costs and increase national and subregional sales;
   (c) Unblocking and rehabilitating the Dakou plant in order to increase capacity.

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. ICS of Senegal, Côte d'Ivoire, Nigeria, INDIA. 4. Darou Khou, Doss and Mbao, Senegal.	5. (a) Preparation of studies and efforts to secure funding; (b) A pilot unit producing 20 t/h of enriched tailings is in existence. Its extension is under consideration and efforts are being made to obtain funding for that extension; (c) Feasibility study completed and contract for implementation signed. 6. For (a) and (b) finalization of studies and efforts to secure funding; (c) work in progress.	7. (a) Tailings; (b) Crude TSP, MAP sulphuric acid and ammonium sulphate; (c) sulphur, tailings and phosphates. 8. Available for (a), (b) and (c). 9. Available and can be expanded.	10. Extension and rehabilitation are intended to meet demand already expressed. 11. National, subregional and foreign.	12. (a) Production of 40 t/h of enriched tailings; (b) 50,000 t/annum of fertilizer. After five years the installation of a second production line is planned with the object of producing 70,000 t/annum; (c) H_2SO_4 will increase from 1,900 t/d to 2,600 t/d and H_3PO_4 from 720 t/d to 1,015 t/d. 13. (a) 3 thousand million CFA francs. (b) 2.5 thousand million CFA francs. (c) 7.2 thousand million CFA francs.	14. CCCE has provided 8,000 million CFA francs to finance the unblocking and rehabilitation portion of the work. BUE, BNP and BICIS have provided credit to the amount of approximately 1,600 million CFA francs. Efforts are being made to secure the remaining funds, and the participation of countries in the subregion is sought. The project had been submitted for funding to BOAD.

PROJECT PROFILE NO. 24 PRIORITY: First (short term)

SUBSECTOR: Chemical industries (pharmaceuticals) SUBREGION: West Africa

1. Project title: Reactivation of the Matoto pharmaceutical plant, Guinea

2. Objective: To manufacture basic drugs in the Mano River Union

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. MRU and Government of Guinea through SOGIP* 4. Matoto (near Conakry), Guinea	5. Pilot production plant already established with buildings, quality control and trained staff 6. Implementation of UNIDO assistance for rehabilitation of existing facilities.	7. Locally available but active ingredients being imported. 8. Locally available 9. Already developed but also being improved	10. Minimum of 3 million packets of ORS and 750,000 intravenous fluid containers 11. MRU countries and other countries in the subregion	12. 3 million packets of ORS and 750,000 intravenous fluid containers 13. $5 million including infrastructure	14. Amongst the steps taken to satisfy the pharmaceutical needs of the population, the ENIPHARGUI was established under the Decree No.53 of 1979 to take up local production of pharmaceuticals. The Government also approached UNDP/UNIDO for assistance in this connection. Project DP/GUI/78/008 "Rehabilitation et création des unités de fabrication locale de medicaments" was approved in 1980 and implemented 1980-84 at Matoto near Conakry. The plant is currently producing pharmaceutical dosage forms such as tablets, syrups and ointments. In order to meet the growing demand of the country and of the MRU, the Government decided to request UNIDO's assistance in rehabilitating and diversifying the production programme of the plant as well as utilizing it for demonstration and training of personnel from Africa and the MRU in particular. Plant has been privatized and interested shareholders identified.

* SOGIP = Société Guinéenne d'Industrie Pharmaceutique.

PROJECT PROFILE NO. 25 PRIORITY: First (short term)

SUBSECTOR: Chemical industries (pharmaceuticals) SUBREGION: West Africa

1. Project title: Rehabilitation of the Seredu station, Guinea

2. Objective: To develop the production of quinine salts in Guinea to meet the demand of the subregion

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Guinea, SEQUINA, MRU 4. Seredu (MACENTA) Guinea	5. Feasibility study to be updated 6. Further detailed studies. World Bank appraisal report to be updated.	7. 300 hectares of cinchona should provide a sufficient and regular supply of raw materials; 200 hectares mature. 8. Available: existing lines and a stand-by generator of 250 kVA. Hydroelectric station (June 1990) in operation. 9. Available but the equipment needs to be replaced, modernized and developed; gradual rehabilitation.	10. Not available quinine, quinidine, totaquina (depending on market). 11. Local market and export to other countries in the subregion; Export to the MRU and ECOWAS countries and other foreign countries.	12. 22.5 tons of quinine salts; gradual utilization. 13. $1 million	14. (a) Financing for gradual rehabilitation sought; (b) Participation by countries in the subregion needed. MRU and foreign investors interested in the rehabilitation project. (c) Foreign partners would purchase the quinine as raw material for their pharmaceutical industries.

PROJECT PROFILE NO. 26 PRIORITY: First (short term)

SUBSECTOR: Chemical industry (pharmaceuticals) SUBREGION: West Africa

1. Project title: Establishment of a pharmaceutical plant, Nigeria

2. Objective: To set up a plant to manufacture a variety of pharmaceutical products, including antibiotics

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Nigeria 4. Nigeria Information about the exact site in Nigeria is not available	5. Feasibility study conducted in 1982 is available 6. Information not available	7. Information not available 8. Information not available 9. Information not available. Probably the infrastructure required still needs to be developed	10. Information not available 11. Information not available	12. Proposed as follows: 3,000 million tablets p.a.; 2 million litres p.a. of oral liquids; 500,000 kg p.a. of ointment; and 125 million capsules of antibiotics 13. Estimated N63.1 million, including pre-investment costs, fixed capital and working capital	14. (a) It is not known whether Nigeria has invited other countries in the subregion to participate in the project (b) Potential problems during implementation might include lack of investment funds

PROJECT PROFILE NO. 27 | PRIORITY: First (short term)

SUBSECTOR: Chemical industries (basic chemicals) | SUBREGION: West Africa

1. Project title: Tidekelt salt project, Niger

2. Objective: To produce salt for industrial and domestic use

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Niger 4. Tidekelt, Niger	5. New project with a feasibility study available. Economic and financial study carried out from 1986 to 1988. 6. Mining and infrastructural improvement starting shortly; establishment of the mining company and instructions concerning the initial delivery of industrial engineering equipment for TRACTE-BEL.	7. There are large salt mines not yet exploited in Niger; they are considered to be practically inexhaustible. 8. An electrical generator will be needed to supply the energy required. 9. Being established.	10. 5,000 t/year of industrial salt and 15,000 t/year of domestic salt (Niger). 11. National and possibly subregional.	12. Initial capacity of 12,000 t/year comprising: industrial salt 5,000 t/annum; kitchen salt 7,000 t/annum; extension of drilling and basin planned to bring production up to 25,000 t/annum. 13. 2,200,000 CFA francs; 764 million by way of interest-free Belgian loans (30 years) to the State for the purchase of equipment and study and development; 390 million by way of a Belgian grant for staff training and technical assistance, fresh water installation and other social investments; 530 million by way of private participation; 865 million by way of State participation.	14. The Government needs outside financial assistance; funding sought for extension with a view to meeting the needs of the countries of the subregion. Subregionalization will be effective under the planned 1991 extension.

PROJECT PROFILE NO. 28 PRIORITY: First (short term)

SUBSECTOR: Chemical industries (basic chemicals) SUBREGION: West Africa

1. Project title: Expansion of salt/soda production plant, Mano River Union

2. Objective: To set up a salt refinery and the installation of salt works to meet multi-country subregional requirements.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Mano River Union 4. Location still under review	5. A full scale investigation was undertaken not only of the human consumption of salt but also the use of raw salt in supplementary industries 6. Feasibility study	7. Sea water and raw salt 8. Solar energy and large amount of electric energy 9. To be determined by new feasibility study	10. To be determined in feasibility study 11. Three member countries and others	12. See 10 above 13. To be determined in pre-investment study	14. (a) Salt already being produced for animal and human consumption. Emphasis currently lay on expansion (b) Technical partners for the Federal Republic of Germany were to conduct topographic survey of site.

PROJECT PROFILE NO. 29 PRIORITY: First (short term)

SUBSECTOR: Agro- and agro-related industries (food-processing) SUBREGION: West Africa

1. Project title: Integrated complex for poultry production, Liberia

2. Objective: To establish a new enterprise to produce poultry, eggs, poultry feed and associated by-products (including organic fertilizers).

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Liberia: National Investment Commission (NIC) 4. Bensonville, Liberia	5. Feasibility study completed on behalf of NIC in 1982 by MULTICON of Brazil and funds secured under Danish financial assistance programme. 6. No information available	7. To be imported 8. Available, but supplies need to be developed 9. Transport and communications available. However, installations directly related to production need to be developed	10. Information not available 11. Countries of the Mano River Union and other countries in the subregion	12. In 1984: 3,866 t poultry; over 5.4 million eggs; 1,959 t poultry feed; 1,964 t organic fertilizer; and 480 tons by-products. 13. Estimated at $16 million. As a result of escalating costs, the project is to be implemented separately and not as an integrated complex since would-be investors have expressed such a desire	14. (a) Participation by other countries outside the subregion sought in terms of equity sharing, loans, technology, know-how and management. (b) No information is available about Liberia having invited other countries in the subregion to participate in the project (c) Information about project manpower requirements is available

PROJECT PROFILE NO. 30 PRIORITY: First (short term)

SUBSECTOR: Agro- and agro-related industries (food-processing) SUBREGION: West Africa

1. Project title: Plants for the industrial processing of millet and sorghum, Niger and Nigeria

2. Objective: To set up two units so as to permit the industrial processing of millet and sorghum, the aim being to meet the demand in urban centres for millet and sorghum flour. Furthermore, action will be taken to produce composite flour, thereby reducing wheat imports.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. NNJC 4. Zinder (SOTRAMIL) Niger and Kano, Nigeria. Northern Nigeria Flour Mills (NNFM).	5. Pre-feasibility study carried out in 1981 under the SI/RAF/77/801 project; feasibility study completed in April 1984 under the RAF/77/020 project Cost of the study $44,380. At the request of BOAD, new prefeasibility study was conducted by UNIDO and UNDP for SOTRAMIL in 1989 to update the feasibility study conducted in 1984. 6. Preparation of request for financing considered at meeting of experts from Niger in Nov. 1985. Search for financing has reached advanced stage with BOAD.	7. Niger and Northern Nigeria are major producers of millet and sorghum. The first phase of the project will involve only 6,000 tons for each of the two units in Zinder and Kano. 8. Energy is available in both towns where the two units are to be located. 9. The mill foreseen at Zinder will take into consideration the installations existing at SOTRAMIL. There is already a corn-mill in Kano. The road network throughout the subregion is good, as well as parts of the railway system in Northern Nigeria.	10. Demand is very high because millet and sorghum, especially the flour thereof, are basic foodstuffs. 11. Niger and Nigeria	12. 12,000 tons of millet and sorghum flour per annum 13. Contacts have been established with BOAD with a view to financing SOTRAMIL as well as with technical partners in Nigeria.	14. The two countries are committed to this project which is part of the programme for self-sufficiency in food. Additional investors needed to team up with BOAD. Partners with technological know-how for milling millet are also required.

PROJECT PROFILE NO. 31 PRIORITY: First (short term)

SUBSECTOR: Agro- and agro-related industries (food-processing) SUBREGION: West Africa

1. Project title: Manufacture of village mills for millet and sorghum, Niger and Nigeria

2. Objective: (i) To provide the rural areas with the means to process millet and sorghum, the basic food of the rural population; (ii) To lessen the hardship of rural women; (iii) To avoid losses incurred during the transportation of these foodstuffs; (iv) To introduce an appropriate technology; and (v) to decentralize economic and social development

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. NNJC 4. Maradi, Niger	5. Pre-feasibility study conducted in Feb. 1983 under project RAF/77/020. Cost of study: $40,000 $15,000 obtained from the OPEC Fund for the realization of the study. 6. BOAD is interested in project. NNJC is looking for additional investors and national promoters to carry out the feasibility study and implement the project.	7. At first, the plant equipment and raw materials will be imported. Gradually, the importation of raw materials will be reduced as local production starts, especially in Nigeria. 8. Maradi has the necessary installations and it is planned that the plant generators will supply the energy. Another source of energy could be the planned electricity link from Katsina (Nigeria) to Maradi (Niger). 9. Existence of a good road network in Nigeria and Niger.	10. Annual demand for mills in Niger and Northern Nigeria: 2,020. Annual demand for hullers estimated at 600 units for the two countries 11. Niger, Nigeria and even other West African countries	12. Planned unit will have production capacity of 5,000 mills. 13. 560,155,000 CFA or 1,140,226 Naira as reflected in the pre-feasibility study.	14. UNDP requires NNJC to contact ARCEDEM for technical advice. Feasibility study shall consider the possibility of producing small pumps. The project will relieve women of the traditional method of pounding millet and sorghum, thus enabling them to take up other more meaningful roles.

PROJECT PROFILE NO. 32 | PRIORITY: First (short term)

SUBSECTOR: Agro- and agro-based industries (food processing) | SUBREGION: West Africa

1. Project title: Food-processing plant, Guinea

2. Objective: To rehabilitate plant manufacturing agro-products such as chocolate and expand its programme to include the processing of oranges and other fruit

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Ministry of Industry, Guinea 4. Kindia, Guinea	5. Pre-feasibility study available 6. Study on expanding and modernizing the plant was initiated but currently in abeyance	7. Available 8. Available 9. Available, but requires expansion/modernization	10. Information not available 11. Local market and export to other countries in the subregion as well as to Europe	12. Proposed: 7,200 tons p.a. 13. Estimated at $25 million	14. (a) Participation by countries outside the subregion in terms of equity sharing and loans is sought (b) Information is not available about Guinea having invited other countries in the subregion to participate in the project (c) Manpower available (d) Plant has been privatized

PROJECT PROFILE NO. 33 PRIORITY: First (short term)

SUBSECTOR: Agro- and agro-based industries SUBREGION: West Africa

1. Project title: Rehabilitation and expansion of Mamou agro-industrial company (SAIG), Guinea

2. Objective: To process tropical fruits destined for national, subregional and foreign markets

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Guinea/ SAIG 4. Mamou, Guinea	5. Feasibility study available 6. Compliance with the recommendations of the feasibility study; Rehabilitation, distribution network, installations, new equipment; production and distribution of fruits and utilities.	7. Passionfruit, mangoes, guavas and strawberries available. The existing factories use locally available fruit for production of jam, purée, juice and tomato concentrate. 8. Thermal power available. 9. Available, but in process of rehabilitation.	10. 1,100 t/year of tomatoes. 11. Local and subregional (MRU, ECOWAS) and European (ECE) markets	12. 6,600 t/year of tomatoes; 2,600 t per year of mangoes; 1,700 t per year of guava; 2,000 t per year of passionfruit. 13. 2,280 thousand million GF	14. Technical partners being sought for marketing and product promotion. Turnover: 3.6 thousand million GF, estimated annual profit: 1.1 thousand million GF. Assistance to peasants in the production of raw materials also sought. Plant has been privatized.

PROJECT PROFILE NO. 34 (new) PRIORITY: First (short term)

SUBSECTOR: Agro-industry (food industry) SUBREGION: West Africa

1. Project title: Establishment of a plant for processing kinkelibah and other similar plants, Senegal

2. Objective: To promote local processing of kinkelibah and other similar plants

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Senegalese Vegetable Product Processing Enterprise (ESTPV). 4. Sebikhotane, Senegal.	5. At present ESTPV contracts the chopping up of the vegetable raw materials out to a German industry and the making up of sachets to a Belgian enterprise. 6. Efforts to secure funding for setting up the plant.	7. Kinkelibah, rath, lungue, bissap and citronnella. 8. SENELEC supplies the necessary energy. 9. Premises to be built.	10. 25 million sachets (demand can be met at present) 11. National, subregional and European.	12. Sixth year fully operational 72 tons to be processed, representing 40 million sachets of kinkelibah, rath, lungue, citronnella and bissap, or 90 per cent capacity. 13. 782,802,000 CFA francs, of which 482,624,000 CFA francs represent production equipment and 34,180,000 CFA francs working capital.	14. Subregional co-operation is sought (financial partners with a view to the establishment of a joint venture company); the backing of a local or subregional agency is also sought. The ECOWAS Fund had been approached in respect of the project. The company that was to market products derived from kinkelibah had already been set up.

PROJECT PROFILE NO. 35 (new) PRIORITY: Second (medium term)

SUBSECTOR: Agro- and agro-related industries SUBREGION: West Africa

1. Project title: Exo-pulp (frozen fruit), Guinea

2. Objective: Manufacture of frozen fruit pulp to meet the needs of the subregion

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Guinea and EXO-PULPES. 4. The fruit-growing area of Guinea: Forécariah.	5. Feasibility study completed. 6. Technical and economic study.	7. Local: mangoes, bananas, pineapples and papaws. 8. Generator and national grid. 9. To be established.	10. 12,000 t/year of fresh fruit. 11. National and foreign market.	12. 6 to 7,000 t/annum of processed products. 13. About 2,000 million GF (1985): Infrastructure: 250,750,000 GF Industrial plant and miscellaneous equipment: 1,763,750,000 GF Vehicles: 75,000,000 GF Local financing: 25 per cent External: 75 per cent (to be sought).	14. Participation in funding by countries in the subregion or other countries is sought (equity sharing and loans). The private sponsor of the project was undertaking an opportunity study of the project in association with an external partner. The project enjoyed the support of the Government.

PROJECT PROFILE NO. 36

PRIORITY: Second (medium term)

SUBSECTOR: Agro- and agro-related industries (forest industries)

SUBREGION: West Africa

1. Project title: Establishment of pulp and paper board factory, Côte d'Ivoire

2. Objective: To use local products so as to avoid importing paper.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Côte d'Ivoire 4. San Pedro, Côte d'Ivoire	5. Conceptual stage 6. Further pre-feasibility studies have resulted in enlargement of capacity requirement and selection of technology.	7. Available: various tropical leaves, pines and eucalyptus plantations of more than 200,000 ha established in San Pedro region; sawmill waste of about 50,000 t/yr; recycled paper of 5-10,000 t/yr. 8. Existing power: major hydro-electric potential 9. To be determined after feasibility studies	10. Domestic demand: numerous package manufacturing companies; manufacture of school and office artiles; many ivoirian printing presses; Demand in neighbouring countries: volume to be determined. 11. National and sub-regional market to be determined after feasibility studies.	12. Capacity: 120,000 t/yr 13. Total cost to be estimated after feasibility studies and the selection of technology	14. (a) Project might be granted priority status (b) Industrial site might be secured and experimental plantations set up (c) Some infrastructure available (d) Lack of financial resources has not permitted the project to advance beyond pre-feasibility stage (e) Technical and financial partners being sought

PROJECT PROFILE NO. 37 PRIORITY: First (short term)

SUBSECTOR: Agro-industry SUBREGION: West Africa

1. Project title: Manufacture of cotton wool, dressings and sanitary products, Senegal

2. Objective: The project is to supply the market in the ECOWAS countries and to put the cotton production of the countries in the subregion to good use.

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Senegal/ Economic interest grouping (EIG SUNNA) 4. Industrial area, Dakar (Senegal)	5. Feasibility study, study updating project and additional subregional market study all completed. 6. Funding sought; the ECOWAS Fund is awaiting the endorsement of the State of Senegal or the joint guarantee of the banks or a sub-regional institution to finance the project	7. Available in the countries in the sub-region. 8. SENELEC supplies the necessary energy 9. Premises to be built	10. Demand in Senegal is estimated at 90 t/year 11. Market of the ECOWAS countries	12. Production by fifth and sixth year of operation: cotton wool: 150 t, representing 75% of capacity; dressings and compresses: 450,000 metres, representing 90% of capacity; sanitary towels and panties: 4,742,000 packets, representing 65% of capacity 13. Total investment 1,559,542,000 CFA francs Production equipment: 1,009,500,000 CFA francs Working capital: 63,172,000 CFA francs Capital amounting to 100,000,000 FCFA already freed.	14. Subregional co-operation sought (financial partners with equity investment, trading partners and guarantee by a local or subregional institution for external financing). The State of Senegal has just sent a letter of indemnity to the Fund.

PROJECT PROFILE NO. 38 (new)

PRIORITY: Second (medium term)

SUBSECTOR: Agro- and agro-related industry

REGION: West Africa

1. Project title: Promotion of pulp and paper mill in the Mano River Union, Sierra Leone

2. Objective: To set up a pulp and paper industry using locally available fibrous raw materials

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. MRU, Sierra Leone 4. Sierra Leone	5. Feasibility study conducted 1985 6. Updating feasibility study after identifying local sponsor	7. Rice straw and other fibrous raw materials 8. To be determined 9. Not available	10. Projected 1990 markets: newsprint 500; printing and writing bonds and offset 3,300; board 1,000; packaging and industrial paperboard 1,700; fluting 800; 11. MRU countries	12. See 10 above 13. Not given in the summary of the feasibility study	14. Sponsor for the project has not been identified. UNIDO insisted that a local sponsor must first be identified. The demand for paper and paperboard is now higher than it was when the feasibility study was undertaken. The viability of the project is assured in both financial and economic terms.

PROJECT PROFILE NO. 39 PRIORITY: First (short term)

SUBSECTOR: Building materials (cement and ceramics) SUBREGION: West Africa

1. Project title: Establishment of a subregional cement factory in the Liptako-Gourma region

2. Objective: To meet the needs of Liptako-Gourma region

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Liptako-Gourma Authority (Burkina Faso, Mali, Niger) 4. To be determined based on the pre-feasibility studies	5. At the design stage 6. Pre-feasibility studies and market survey	7. Limestone: 166,000 tons/annum; Marl: 200,000 tons/annum; Sand: 11,000 tons/annum; Gypsum: 10,500 tons/annum; Pozzolana: 21,000 tons/annum. These deposits are to be found in Liptako-Gourma area. 8. Energy: Potential for use of hydro-electric power is high; construction of dams on the Niger at Kandadji, Tossaye and Labezanga: 458 MW 9. Physical infrastructure needs to be developed. Rail link must be completed before plant can be operational.	10. It is estimated that demand for cement in the subregion will be more than 400,000 tons/annum in 1990 11. Countries of the Liptako-Gourma Authority	12. Capacity: 250,000 tons/year. This can be increased 500,000 tons/year. The cement factory will produce 250,000 tons of cement per year and 200,000 tons of clinker per year 13. To be determined on the basis of a pre-feasibility study	14. (a) The project was submitted and adopted by the Council of Ministers of the Liptako-Gourma Authority (19th session) which met at Ouagadougou, 28-30 November 1983. (b) Consideration might be given to the establishment of mini-cement plants.

PROJECT PROFILE NO. 40 PRIORITY: First (short term)

SUBSECTOR: Building materials (cement and ceramics) SUBREGION: West Africa

1. Project title: Establishment of a ceramics factory, Togo

2. Objective: To meet the demand for ceramics products in Togo and the subregion

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. The Togolese Government 4. Lomé, Togo	5. Feasibility studies available and evaluation studies undertaken by BOAD. 6. Technical partners and local sponsors to be sought	7. Clay deposits at Lidjoblibo, Kpodji and Nyitoe have been identified as local sources of raw materials, the reserves being 1.4 million, 2.5-3.5 million and 3 million tons, respectively. 8. Available 9. Adequate	10. The residual market of the WAMU in 1985 estimates that 1,222,000 sq. m. of floor stoneware will be needed. The market of the FRG is also interested in the project. Demand in 1985 will be 1,530,000 sq. m. 11. Market of the WAMU countries and Western Europe	12. Non-enamel mosaic tiles: 2x2cm) 150,000 5x5cm) sq. m. Non-enamel floor tiles: 10x10 cm) 100,000 10x20 cm) sq. m. Enamel floor tiles: 10x10 cm) 100,000 10x20 cm) sq. m. 13. 3,000 million CFA francs.	14. The project has been submitted to the following partners: BOAD. It is prepared to finance up to 33.33% of total investment and, if possible, buy stock worth up to 10% of the share capital. Société Nationale d'Investissements du Togo is ready to subscribe 25% of the share capital and to finance up to 8.33% of the total cost of the project

PROJECT PROFILE NO. 41 | **PRIORITY: First (short term)**

SUBSECTOR: Building materials industry (non-metallic mineral products) | **SUBREGION:** West Africa

1. Project title: Manufacture of glass containers, Liberia

2. Objective: Manufacture of (hollow) container glass

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. Government of Liberia and Liberia-Libyan Holding Company 4. Monrovia, Liberia	5. In full operation 6. -	7. 38 % are imported: - Soda ash - Lime stone - Carbon - Chemicals 8. Operation running 9. Comprises factory building, office building, and road system	10. 15 million bottles of various sizes per year 11. Liberia, Sierra Leone, Guinea, Gambia, Ghana	12. 50 tons/year 13. $21 million	14. (a) Liberia has share in this company and the company is considered a most successful Union industry. Also under consideration is the participation of Mano River Union Member States in company equity. (b) Currently operating at 52 per cent capacity. (c) Assistance sought in improving capacity utilization, enhancing raw material arrangements and securing new outlets.

PROJECT PROFILE NO. 42 — PRIORITY: Second (medium term)

SUBSECTOR: Building materials industry (non-metallic mineral products) — SUBREGION: West Africa

1. Project title: Manufacture of glass containers, CEAO Member States

2. Objective: To contribute to the production of pharmaceuticals, food products and liquids

3. Promoter/sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by member States
3. CEAO 4. CEAO Member States	5. Preliminary study conducted by CEAO with assistance of UNIDO in July 1984; prefeasibility study as well as a raw materials survey conducted by NNJC in October 1983 and February 1984 respectively. 6. Co-ordination of various activities completed hitherto.	7. Silica available in Member States 8. Not yet estimated 9. Very good	10. To be determined in the study 11. See 10 above	12. Needs of Member States 13. See 10 above	14. CEAO findings were considered by industrial experts in September 1984 and submitted to first meeting of CEAO Ministers of Industry in October 1984. NNJC experts had also considered the feasibility study and proposed that the project be located in Niger.

PROJECT PROFILE NO. 43 (new) PRIORITY: Third (long term)

SUBSECTOR: Other projects SUBREGION: West Africa

1. Project title: Wassou glassworks, Guinea

2. Objective: Production of hollow glass, bottles, and tableware for the local and subregional market

3. Promoter/ sponsor 4. Location	5. Project status 6. Immediate follow-up	7. Raw materials 8. Energy 9. Physical infrastructure	10. Projected demand by product 11. Market	12. Capacity by product 13. Total investment	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
3. Government of Guinea, MRU. 4. Sanoya, Conakry Guinea.	5. Pre-feasibility study and market study available. 6. Technical partners sought.	7. Available: local 98 per cent: sand, lime-stone, dolomite, alumina, pegmatite; imported 2 per cent. 8. Source: ENELGUI distribution network. 9. Non-existent.	10. To be specified by the market study. 11. National or local market 65 per cent; subregional market: 35 per cent.	12. 16,000 t/annum of finished products, comprising 12,000 t of bottles 4,000 t of hollow ware and pressings. 13. Estimated cost: 200,000,000 FF, to be more closely determined by a technical, economic and financial study.	14. Collaboration already sought: Italian Government and ACCT (France); efforts to secure funding; effort to find a technical partner; type of participation sought (semi-public or community company).

SUPPORT PROJECTS

SUPPORT PROJECT PROFILE NO. S.1

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM)

2. Objective: To assist countries in the subregion in laying the foundation for and promoting accelerated, national and integrated development design and manufacturing capability in engineering goods, particularly capital goods in the strategic sectors of agriculture, transport and construction, the immediate objective being to ensure the purchase of machinery and equipment for production and training in engineering design and manufacture

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3. Promoter/sponsor:

African Regional Centre for Engineering Design and Manufacturing (ARCEDEM)

4. Location:

Ibadan, Nigeria

5. Estimated total cost:

(i) Training	$ 500,000
(ii) Non-expendable equipment	$ 1,000,000
Total	$ 1,500,000

6. Project description and additional information:

The original recognition of the need to establish ARCEDEM stemmed from the desire of the African Ministers of Industry to promote industries producing capital goods, especially those producing machinery and spare parts. A major obstacle was the inadequate development and, in some cases, the absence of any national capability for the conception and design of machinery and equipment. The mandate of ARCEDEM is to assist the African countries to develop the facilities and manpower needed for engineering design, and especially to promote the possibility of producing machines and parts locally. The Centre is conceived as a medium-sized industrial establishment with activities centred around the design and production of machines and parts.

At present the Centre has 23 member countries and a staff of 32. UNDP has committed around $2.5 million to the Centre since 1978. As host country, Nigeria has pledged $7.5 million towards capital development, and member countries have so far contributed $3 million. Purchase of workshop, machinery and equipment for which funds are already committed will amount to US$ 1.8 million, by the end of 1984.

It was estimated in 1978 that $7.65 million would be required to equip fully the Centre's four workshops. After five years delay, inflation had raised this amount to nearly $11 million, of which $2 million have been secured. Efforts are being made to mobilize funds from all possible sources to fill the gap. $1.5 million now being requested are part of the resources to be mobilized to acquire a minimum amount of machinery and equipment to make the four workshops functional.

In an effort to mobilize the necessary funds, a project document of US$ 4,787,200 was prepared and submitted to UNDP for funding. UNDP has agreed to fund the project in 1989 at a reduced cost of US$ 3,297,000 which excludes the foundry component for the time being.

SUPPORT PROJECT PROFILE NO. S.2

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to the African Regional Centre for Technology (ARCT)

2. Objective: To assist ARCT in strengthening its activities, primarily those related to demonstration activities, on-the-job training and the dissemination of information.

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3. Promoter/sponsor:

African Regional Centre for Technology (ARCT)

4. Location:

Dakar, Senegal and other countries in the subregion/region

5. Estimated total cost:

$2.4 million

6. Project description and additional information:

The overall development objective of the assistance provided to the ARCT is to put the Centre in a strong position so that it can assist the African countries to strengthen their scientific and technological capabilities to the benefit of their socio-economic development, and achieve a larger measure of technological independence, primarily in the food and energy sectors, both of which are the priority areas of activity in the Centre. The Centre had received assistance from UNIDO and was fully linked to the TIES and INTIB systems of UNIDO. Strenthening the Centre will also enable it to carry out both operational and support activities in co-operation with national institutions for science and technology development throughout the region, including West Africa.

The various specific objectives include:

(i) Strengthening of science and technology capabilities in the food and energy sectors through advisory services and assistance in the establishment of pilot-scale demonstration units for viable food and energy technologies;
(ii) Development and operation of a user-oriented computerized technological information system to assist the public and private sector in Africa to implement activities that will ultimately lead to the commercialization of technologies and establishment of industries;
(iii) Generation and/or enhancement of awareness among policy-makers, planners and other users as to the potential applications and implications of frontier technologies for the African region;

(iv) Identification and upgrading of operational research and development facilities to serve as pilot demonstration units for newly-developed technologies or products which offer regional or subregional benefits and every possibility of industrial and commercial success;

(v) Establishment of improved linkages between research and development (R&D) institutions and industrial production organizations as a means of promoting the rapid commercialization of R&D results;

(vi) Organization of comprehensive basic profiles and data on existing technological infrastructure in Africa as a contribution to the effective mobilization and deployment of resources in planning, manpower development and execution of regional/subregional projects;

(vii) Creation of the capacity to assess technological resources and needs in rural areas through demonstration at national level;

(viii) Training of personnel so as to acquire the capacity to design technological policies and plans that are properly integrated with national economic planning and geared towards the most satisfactory choice and effective management of technology.

SUPPORT PROJECT PROFILE NO. S.3

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to the West African Economic Community (CEAO)

2. Objective: To assist the CEAO Secretariat and member countries in strengthening their capabilities for planning, programming, establishment, appraisal and promotion of community industries.

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3. Promoter/sponsor:

CEAO

4. Location:

CEAO secretariat, Ouagadougou, Burkina Faso

5. Estimated total cost:

$ 1.31 million

6. Project description and additional information:

(a) Immediate objective

(i) To carry out market and pre-feasibility studies for various CEAO industrial projects approved for implementation by CEAO and related to metallurgy, chemical industries, engineering, building materials industries and communications; (ii) to assist in deploying the various community industries within CEAO and in defining the responsibilities of the implementing countries and the role of the CEAO Secretariat; (iii) to assist the CEAO Secretariat and member countries in organizing bids and financing for those community industries; (iv) to assist in the evaluation of engineering studies, supervision of plant construction, and manpower development; and (v) to propose statutes for those community industries specifying the operation of such enterprises, including raw material supplies, trading of finished goods and distribution of profit.

(b) Expected output

(i) Study of the subregional market for the industries selected; (ii) pre-feasibility studies of approved community industries; and (iii) determination of ways and means of establishing the community industries approved.

(c) Proposed duration

Four years.

SUPPORT PROJECT PROFILE NO. S.4

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to the Economic Community of West African States (ECOWAS)

2. Objective: To assist ECOWAS in the formulation and implementation of subregional industrial policies and programmes in its member countries

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3. Promoter/sponsor:

Economic Community of West African States (ECOWAS)

4. Location:

ECOWAS Secretariat, Lagos, Nigeria

5. Estimated total cost:

$600,000

6. Project description and additional information:

(a) Background: This project was endorsed by the ECOWAS Secretariat for submission to the UNDP for funding.

(b) Immediate objective: To assist ECOWAS Member States (through the ECOWAS Secretariat) in: (i) harmonizing the relevant industrial laws and regulations of the community so as to establish common subregional industries as well as formulate and implement industrial co-operation policies; (ii) surveying and identifying areas which lend themselves to development co-operation in the subregion; (iii) carrying out investment-oriented pre-feasibility studies in identified priority sectors; (iv) preparing and maintaining portfolios of investment proposals; (v) strengthening the capabilities of the ECOWAS Secretariat and appropriate governmental institutions in respect of investment promotion and policies so as to control foreign investment and other forms of international industrial co-operation; and (vi) establishing industrial documentation and organizing training programmes on regional project identification, preparation and investment follow-up in the form of seminars and fellowships or through participation in consultancy work.

(c) Proposed duration: 5 years

(d) Additional information: UNIDO provided the services of an expert to assist in strengthening the secretariat's industrial planning capabilities. ECOWAS envisages undertaking a study on the elaboration of an industrial master plan for West Africa with the assistance of UNDP, UNIDO and ECA. ECA has already assisted in the finalization of the terms of reference of the study, and it is planned to finance the implementation of the project from the fourth programming cycle of UNDP.

SUPPORT PROJECT PROFILE NO. S.5

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance ECOWAS in the development of an industrial training programme

2. Objective: To assist ECOWAS to prepare and implement a Subregional Staff Training Programme for Industrial establishments in West Africa

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3. Promoter/sponsor:

Economic Community of West African States (ECOWAS)

4. Location:

ECOWAS Secretariat, Lagos, Nigeria

5. Estimated total cost:

To be determined

6. Project description and additional information:

(a) Background: The industrial staff training programme is one of the main components of the ECOWAS Industrial Development Programme which was adopted by the Council of Ministers in November 1986. Through this initiative, ECOWAS expressed its willingness to contribute to the efforts made by its Member States to resolve problems facing industrial establishments in the subregion which ave been affected by the lack of skilled personnel.

(b) Immediate objective: The objective of the project is to make a detailed assessment of all facilities and systems of training in the subregion. Global training programmes will be drawn up and implemented at the subregional level on the basis of the assessment made.

The programme will be focussed on:

(i) the setting up of structures to co-ordinate the training and further training of human resources in the industrial sector;

(ii) the recording and identification of institutions willing to co-operate in the area of training;

(iii) the preparation and updating of files on training requirements, programmes and institutions;

(iv) the establishment of systems of training for trainers.

It should be noted that this programme will primarily be geared towards training for technical staff of industrial establishments in the subregion who deal mainly with the maintenance of equipment, manufacture of spare parts, etc...

SUPPORT PROJECT PROFILE NO. S.6

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance ECOWAS in the development of an industrial consultancy and management capabilities

2. Objective: To develop and strengthen industrial management and consultancy institutions/policies with a view to improving industrial management and consultancy in the subregion.

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3. Promoter/sponsor:

Economic Community of West African States (ECOWAS)

4. Location:

ECOWAS Secretariat, Lagos, Nigeria

5. Estimated total cost:

To be determined

6. Project description and additional information:

(a) Background: The project is still at the conceptual stage and will have to be finalized.

(b) Objective: To develop and strengthen industrial management and consultancy institutions and policies in order to implement effectively the subregional industrial development programme.

SUPPORT PROJECT PROFILE NO. S.7

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance in the promotion of an integrated programme in the Liptako-Gourma region

2. Objective: Assistance to the Government for the implementation of projects in the pre-feasibility stage and for its actions to promote regional industrial plants.

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3. Promoter/sponsor:

The Liptako-Gourma Authority (Burkina Faso, Mali, Niger)

4. Location:

Directorate-General of the Liptako-Gourma Authority

5. Estimated total cost:

$960,000

6. Project description and additional information:

The first phase, funded by UNIDO in the amount of $1,094,000 enabled the different subregional projects to be identified.

As a result of that identification, in this first phase, LGA will need assistance to:

- supervise the technological feasibility of the procedures proposed for fertilizer industry (processing nitrous gas);
- set up a pilot plant to process nitrous gas;
- organize meetings with private promoters to encourage their participation in the industrial projects within a regional framework;
- organize regional workshops (1990 and 1991) for industrial promotion and co-operation;
- organize regional industrial fairs (1991);
- negotiate contracts which must be concluded between the States, private promoters, technical and financial institutions;
- carry out feasibility studies for the Decade projects.

Proposed duration of project: 1989-1992

Additional information:

- This assistance is sought by UNIDO, but also by various other institutions such as IDB, ADB, BOAD, ECOWAS Fund and BIRD.

- Funds requested for each component will be based on the status of the industrial projects or on the dates set for particular events (workshops/fairs).

SUPPORT PROJECT PROFILE NO. S.8

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Establishment of an industrial and technology fair serving the Member States of the Mano River Union

2. Objective: To promote and develop intra-Union trade in industrial products manufactured by members of the Mano River Union

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3. Promoter/sponsor:

Mano River Union

4. Location:

Within the member countries of the Union, i.e. Liberia, Sierra Leone and Guinea

5. Estimated total cost:

$546,000

6. Project description and additional information:

(a) Background: The project emerged from the Union's study assessing the level of technology within the Mano River Union Member States.

(b) The project aims at promoting the flow of industrial and technology information within the Union.

(c) A feasibility study in respect of this project was undertaken in 1983. The report contains detailed recommendations as to how the fair could be organized. These recommendations have not yet been implemented as the MRU secretriat has not obtained the necessary funding. However, the secretariat is using existing facilities to promote the basic objectives of developing subregional trade and co-operation among users and producers of appropriate technologies. In this regard, the Secretariat is using the opportunity offered by the UNIDO-sponsored Investors Forum in the subregion as well as fairs hosted by Member States.

SUPPORT PROJECT PROFILE NO. S.9

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Establishment of a Mano River Union financing institution

2. Objective: To propose a detailed scheme for the establishment of an institution aimed at promoting industrial development and mobilizing funds for the implementation of projects included in the programme adopted at the meeting.

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3. Promoter/sponsor:

Mano River Union

4. Location:

To be determined

5. Estimated total cost:

Adviser $60,000; Secretary: $10,000; Travel expenses: $10,000; Contingencies: $8,000; Estimated Total: $88,000

6. Project description and additional information:

With the assistance of an expert experienced in setting up and developing financing institutions, the project provides for a sequence of stages: (i) Contacting various prospective financing institutions so as to obtain information on possible capital structure and operation of the financing mechanism; (ii) Preparing draft statutes and operational manual, as well as financial and accounting regulations; (iii) Drawing up a draft agreement for the establishment of the institution; and (iv) Convening a meeting of Government authorities to review and adopt agreement, statutes and regulations for the operation of the institution.

SUPPORT PROJECT PROFILE NO. S.10

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Processing of fish and other sea foods

2. Objective: To expand existing plants and/or develop new plants for processing fish and other sea foods for the purposes of import substitution and export.

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3. Promoter/sponsor:

Mano River Union

4. Location:

MRU Secretariat, Freetown, Sierra Leone

5. Estimated total cost:

Exploratory study: $40,000

6. Project description and additional information:

Fish canning plants are operating in the subregion in such countries as Senegal and the Côte d'Ivoire, but output lags far behind the subregional demand, particularly that for canned tuna. West African coastal waters are rich in halieutic resources and increased consumption of fish by the population would help to combat current protein deficiencies in the subregion. An exploratory study will be conducted to assess potential demand, determine suitable products such as canned tuna, fish-protein concentrate and shrimps, and identify manpower requirements. The exploratory study, which will be followed up by a pre-feasibility study, if needed, will also propose the country or countries best suited to promote the investment project(s). It will also draw on the study undertaken by UNIDO on industrial fishery systems in West Africa and the outcome of the forum on appropriate technologies organized by UNIDO in November 1989 at Dakar.

SUPPORT PROJECT PROFILE NO. S.11

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Subregional development centre for hides, skins, leather and leather products, Zaria, Nigeria

2. Objective: To establish a subregional development centre for hides, skins, leather and leather products at the Leather Research Institute (LERI), Zaria, Nigeria

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3. Promoter/sponsor:

ECOWAS

4. Location:

Zaria, Nigeria

5. Estimated total cost:

Approximately $ 1.15 million

6. Project description and additional information:

(a) Objectives

Having established a centre providing needs-based professional training in the subregion, (i) to organize regular training courses (long- and short-term) in such areas as raw material improvement, by-product utilization, leather and footwear technology, marketing; (ii) to assist in project formulation, analysis and assessment in order to improve the technical bargaining capability of the countries in the subregion; (iii) to provide extension services for technical trouble-shoorting and industrial advice; and (iv) to provide technical services pertaining to hides, skins, leather and leather products.

(b) Expected output

(i) Raw hides and skins of improved quality and better utilization of by-products; (ii) increased output of finished leather and manufactured leather products; (iii) leather and leather products of improved quality; (iv) increased number of trained personnel (all levels); and (v) improvement of facilities at LERI to assist the countries in the subregion in R and D, quality control, training, marketing and other aspects of the leather industry.

(c) Proposed duration

Three years.

(d) Additional information

The Centre is one of the "centres of excellence", in UNIDO training programme and a long-term co-operation programme has been proposed

SUPPORT PROJECT PROFILE NO. S.12

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to NNJC

2. Objective: To provide technical assistance to the Nigeria-Niger Joint Commission for Co-operation with a view to enhancing its project implementation and industrial promotion capabilities.

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3. Promoter/sponsor:

NNJC

4. Location:

NNJC Secretariat

5. Estimated total cost:

To be determined.

6. Project description and additional information:

Following on the pre-feasibility and feasibility studies conducted by UNIDO, the project will be concerned with the promotion of the projects covered by those studies. The Joint Commission and the two member countries are particularly interested in ensuring the effective implementation of projects identified, the promotion of which would be undertaken with the assistance of other sources of finances such as the OPEC Fund, ADB or BADEA, as well as bilateral institutions. The project will be considered as a follow-up of project RAF/77/020 (UNDP, UNIDO Assistance to NNJC) in compliance with the Council of Ministers decision that the secretariat should identify and promote new industrial projects with the assistance of international organizations such as UNDP, UNIDO, etc.

SUPPORT PROJECT PROFILE NO. S.13

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Assistance to the Organization for the Development of the Senegal River Basin (OMVS)

2. Objective: To increase the resources of the High Commission and OMVS Member States in respect of the programming, establishment, appraisal and promotion of community industries.

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3. Promoter/sponsor:

Organization for the Development of the Senegal River Basin (OMVS)

4. Location:

The OMVS High Commission, Dakar, Senegal

5. Estimated total cost:

$1.5 million

6. Project description and additional information:

(a) Immediate objectives: (i) To establish an industrial data bank to cover national plans and the actual development of Member States, the planning and development of the various regions of the Senegal River Basin, the current state of industrialization within the macro-economic context of the CEAO, the planning and development of vocational training, etc.; (ii) To prepare pre-feasibility studies; identify and elaborate community projects; (iii) To assist Member States in their search for financing.

(b) Expected results: (i) Establishment of an energy, industrial, mineral and agro-industrial plan for the Senegal River Basin; (ii) Feasibility studies for approved projects; (iii) Promotion of projects; (iv) Development of estimated follow-up structures for the execution of four projects and appraisal of their results.

(c) Proposed duration: Three years.

(d) Additional information: OMVS had set up an inter-State committee for industrial development as well as a regional planning committee. For want of funds, no steps have been taken to implement the project. Consequently, OMVS has envisaged a new approach to the energy, mining, industrial and agro-industrial development of the Senegal River Basin. OMVS has prepared the terms of reference for an 18-month macro-economic study on a development plan for the Senegal River Basin. The estimated cost of the study amounts to 245 millions FCFA. With the dams at DIAMA and MANANTALI in operation, the study would elaborate on a development plan for optimizing their utilization based on the economic potential of the member countries. The terms of reference relate, in particular, to the following:

(i) The study should take into consideration and, if necessary, complete the sectoral master plans already implemented in the Basin;

(ii) The study should identify the framework and accompanying measures needed to ensure the optimal utilization of the investment envisaged;

(iii) The study should propose frameworks for each country and assure the homogeneity of development for the Basin as a whole;

(iv) In the ultimate analysis, the study should draw up scenarios for each country, the macro-economic feasibility of which should be demonstrated. The manner in which those scenarios were drawn up should be clearly explained.

SUPPORT PROJECT PROFILE NO. S.14

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Establishment of a Togolese National Centre for Technology Development, Togo

2. Objective: To provide the industrial sector with fundamental technical planning and production capability essential to strengthening local training capacities in repair and maintenance, production of spare parts, development of new products, adjustment and adaptation of equipment, and improvement of traditional technology

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3. Promoter/sponsor:

Government of Togo

4. Location:

Lomé and Kara (Togo)

5. Estimated total cost:

$1,050,000

6. Project description and additional information:

Within the framework of its technical promotion policy, the Government of Togo requested assistance in the conduct of a preliminary study related to the establishment of the centre. The study was jointly undertaken by ECA, UNIDO and ARCEDEM in June/July 1984. The findings confirmed the need for a National Technology Centre, which would utilize the equipment available in the central mechanical workshops run by CNPPME at Lomé and Kara and by UPROMA at Kara. UNDP funding has since been secured and a detailed technical study was undertaken in 1988 by the Société Togolaise d'Etudes de Développement (SOTED).

SUPPORT PROJECT PROFILE NO. S15 (new)

SUBREGION: West Africa

SUBSECTOR: Other support projects

1. Project title: Industrial maintenance centre, Benin

2. Objective: Design and development of a national industrial maintenance policy

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3. Promoter/sponsor:

Government of Benin

4. Location:

Cotonou, Benin

5. Estimated total cost:

To be determined in the feasibility study

6. Project description and additional information:

Objectives: (a) Design and execution of an awareness campaign in the field of maintenance in order to promote the maintenance function; (b) Advice to industrial organizations and operators on the subject of professional maintenance training; (c) Advice and assistance to plants and workshops for the local manufacture of spare parts; (d) Advice on and assistance in the purchase of new equipment.

SUPPORT PROJECT PROFILE NO. S16 (new)

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Guinea Pilot Centre

2. Objective: Maintenance of existing production units and manufacture of low-cost equipment to meet the needs of users without substantial resources

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3. Promoter/sponsor:

Government of Guinea and Mano River Union (MRU)

4. Location:

Conakry, Guinea

5. Estimated total cost:

8,705,450 dollars for the execution of the second phase
UNDP 2,379,450 dollars and UNCDF 3,326,000 dollars

6. Project description and additional information:

90 per cent of the first phase of this project was carried out between 1979 and 1982. The second phase provided for assistance from UNCDF for the purchase of a mini foundry with a capacity of 650 t/annum, additional equipment and working capital. Assistance from UNDP (1987-1988) permitted the import of raw materials to cover a three-month period. At present, the Centre is self-supporting in terms of raw materials.

The energy and equipment scheduled for the second phase constitute a bottleneck. The Centre repairs industrial equipment, manufactures semi-finished parts for various tradesmen, produces prototypes commissioned by the EEC and USAID, and provides training in electrical and mechanical maintenance and industrial safety.

Prototype manufacture activities have slowed down because of the users' low purchasing power. International assistance to the project would expand the Centre's training and technical manufacturing activities so as to meet the expressed needs of the countries in the subregion.

SUPPORT PROJECT PROFILE NO. S17

SUBREGION: West Africa

SUBSECTOR: Institutional infrastructure

1. Project title: Use of plant material in the building sector, Togo

2. Objective: To study the behaviour of plant materials used for roofing in order to improve their active lifespan, with the object of establishing a new semi-industrialized employment-generating craft

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3. Promoter/sponsor:

   Cacavelli Centre, Government of Togo

4. Location:

   Lomé, Togo

5. Estimated total cost:

   17,400,000 CFA francs.

6. Project description and additional information:

(a) Background: Plant material such as straw which is available in the subregion are used throughout the world for thatching roofs. Roofs in Africa do not last more than four years, while the lifespan of thatched roofs in the Netherlands varies from 25 to 40 years. Combined efforts by the African countries would seem to be necessary to make a study of the characteristics of the materials used in Africa, the reasons for deterioration, and the technology to be applied in order to secure a long lifespan for thatched roofs in the region, for which there is a substantial demand.

(b) Additional information: Study of the situation with regard to existing techniques is being undertaken and research is in progress on plant materials used for roofing. A preliminary report on some possibilities for the use of straw in housing is ready. A report concerning the technology, existing data and conclusions emerging from the research work will be finalized at a later date.

Framework for co-ordinating information flow on, and follow-up to, IDDA industrialization projects or programmes in the ECOWAS countries