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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*

Harare, Zimbabwe, 31 October - 4 November 1988

REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME
FOR THE EASTERN AND SOUTHERN AFRICAN SUBREGION**

Prepared by
the UNIDO Secretariat

5/69

* Organized by UNIDO, in co-operation with the Secretariat of the Preferential Trade Area for Eastern and Southern African States (PTA), the Southern African Development Co-ordination Conference (SADCC) and the Government of Zimbabwe.

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INTRODUCTION

Objective of the report

1. This document was initially prepared as a basis for discussion at the follow-up subregional meeting on the promotion of intra-African industrial co-operation in the Eastern and Southern African subregion within the framework of the Industrial Development Decade for Africa (IDDA). It was drawn up in the light of the discussions held with the officials responsible for industrial co-operation and development in the various countries in the subregion and with the secretariats of the Preferential Trade Area for Eastern and Southern African States (PTA) and the Southern African Development Co-ordination Conference (SADCC), and subsequently amended in the light of discussions at the subregional meeting itself.

Scope and contents of the report

2. The first chapter presents background information on industrial co-operation in the subregion. The second chapter describes the initial integrated industrial promotion programme and projects adopted at the subregional meeting held at Addis Ababa (Ethiopia) in November 1983. The third chapter assesses the current status of implementation of that programme. The fourth chapter outlines a revised integrated industrial promotion programme drawn up during the follow-up subregional meeting held at Harare (Zimbabwe), 31 October - 4 November 1988, while a strategy for accelerating the implementation of the proposed revised programme is suggested in the fifth chapter.

CHAPTER I

INDUSTRIAL CO-OPERATION IN THE SUBREGION

Historical background

3. The Eastern and Southern African subregion, as defined by the United Nations system, comprises 17 countries: Botswana, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Seychelles, Somalia, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. Its population totalled close on some 164 million in 1986. The population of the member countries in that year was: Botswana 1.1 million, Comoros 0.4 million, Djibouti 0.4 million, Ethiopia 43.5 million, Kenya 21.2 million, Lesotho 1.6 million, Madagascar 10.6 million, Malawi 7.4 million, Mauritius 1.0 million, Mozambique 16.2 million, Seychelles 0.07 million, Somalia 5.5 million, Swaziland 0.9 million, Tanzania 23.0 million, Uganda 15.2 million, Zambia 6.9 million and Zimbabwe 8.7 million.

4. Although not part of the Eastern and Southern African subregion, as defined by the United Nations system, Angola, Burundi and Rwanda, are, by virtue of their geographical and economic links with the countries of the subregion, especially within the framework of the PTA, considered integral parts of the subregion. In 1986, their populations numbered 9.0 million, 4.8 million and 6.2 million, respectively.

5. The predominant activities of the countries in the subregion are in the agricultural sector, involving the production of coffee, tea, sisal, meat, hides, sugar, tobacco and timber products, employing some 80 per cent of the labour force. Some countries rely on the export of one major cash crop, while others have a wider range. Some countries in the subregion also depend heavily on the export of semi-processed minerals such as oil, diamonds, gold and copper as the major source of foreign exchange revenue.

6. Despite the predominant role of agriculture, overall productivity in that sector is relatively low owing to its high subsistence character and inadequate supporting physical and institutional infrastructures. Most of the countries in the subregion have, therefore, failed to achieve self-sufficiency in food production and have become increasingly dependent on imports. Practically all the countries of the subregion depend on external sources for major factor inputs such as capital goods, intermediate goods, technology, finance and services for their economic development. The subregion's economic vulnerability stems from a dual dependence on the export of a limited number of primary commodities whose prices are determined externally, and on the import of increasingly costly industrial factor inputs.

Industrial structure of the subregion

7. The level of industrial development in the subregion is relatively low. In the individual countries, the industrialization process encompasses a broad range of economic activities such as agro-related projects, manufacturing, mining and construction, as well as infrastructural and institutional development. It is characterized by light industries with emphasis on consumer goods, little value added, major dependence on imported capital and know-how, and relatively small production capacities. Thus, the share of light industries in manufacturing output varies between 56 per cent in Zimbabwe and 100 per cent in Mauritius and Swaziland.

8. Most industries in the subregion are engaged in the production of food, tobacco, beer and textiles. Since they depend heavily on imported machinery, spare parts, materials and semi-processed inputs, they provide little or no linkage with other sectors. They are also so small that they derive little or no benefit from the economies of scale and thus cannot compete effectively with foreign products, even in their own markets. Exports of manufactured products are therefore of little importance.

9. The countries in the subregion are, however, endowed with a wide range of important resources, notably agricultural, water, mineral, energy and human resources. These provide a sound base for self-sufficient industries and self-sustained industrialization in the subregion. Their contribution would be even greater, were those resources to be pooled together, through increased subregional co-operation.

Industrialization strategies and policies

10. On gaining independence, most of the countries in the subregion quickly adopted import-substitution industrialization strategies as the most rapid means of achieving their development goals. Based on these policies and strategies, almost all the factor inputs, particularly machinery, equipment and spare parts, know-how, raw materials and, to some extent, skilled manpower

have had to be imported, but little technology transfer has actually taken place. In conformity with these industrialization strategies and given the relatively small size of domestic markets, all the countries have tended to protect their young industries through a number of policy measures. These have included tariff barriers, import licences and quotas to discourage imports, including skilled manpower from neighbouring countries, as well as inflexible tax laws. In a number of cases, there has also been direct state control of production and trade.

11. The adoption of import-substitution policies and strategies was largely based on the experience of the developed countries, where a high 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 is 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.

12. The inherent characteristics of these import-substitution strategies, however, which were based on a tariff structure that granted higher protection to final consumer goods than to intermediate and capital goods, brought about an internal orientation of domestic markets and a heavy dependence on imported semi-processed raw materials and intermediate goods. In some countries, balance of payment problems have led to a shortage of the foreign exchange that is 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.

13. 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.

14. 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.

Institutional arrangements in the subregion

15. Of the multilateral and bilateral industrial co-operation mechanisms in the subregion, the two most important multilateral economic co-operation bodies are the Southern African Development Co-ordination Conference (SADCC) and the Preferential Trade Area for Eastern and Southern African States (PTA). A major contribution to subregional co-operation was also made by the Indian Ocean Commission.

Southern African Development Co-ordination Conference (SADCC)^{1/}

16. Established in July 1981 with the main objectives of reducing dependence on South Africa and accelerating economic development, SADCC set up an industrial co-ordination unit which is located in Dar-es-Salaam, Tanzania, to speed up the process of industrial co-operation and integration among the SADCC Member States. In a subregional plan of industrial co-operation approved by the SADCC Council of Ministers in Blantyre in November 1981, the main thrust is directed towards developing industries to meet the basic needs of the population in the areas of food, clothing, housing, health, water supply, power, transport and education, while the development of basic industries such as fertilizers, pharmaceuticals, pesticides, iron and steel, capital goods and engineering industries also form part thereof. Based on the declared priorities, 53 projects have been identified for implementation and a further 35 projects have been selected for further study. Twelve projects are under implementation with \$236 million already secured and negotiations on funds amounting to \$397 million for another 15 projects are underway.

17. The establishment of SADCC policy and the selection of its subregional projects rest with Annual Meetings of the Ministers of the Member States. Each Member State takes on the responsibility of co-ordinating one or more subject areas: transport and communications are co-ordinated by Mozambique; food security by Zimbabwe; agricultural research and animal disease control by Botswana; fisheries, wildlife and forestry by Malawi; soil and water conservation and land development by Angola; mining by Zambia; industrial development and trade by Tanzania; and tourism by Lesotho. A small Secretariat has been established in Gaborone, with responsibility for the general servicing of and liaison with SADCC institutions and overall co-ordination of the execution of the tasks of SADCC. Thus, SADCC performs a co-ordinating function, with Member States doing the work as well as implementing the actual projects themselves. Lack of infrastructure is considered a far greater obstacle to intra-regional trade than tariffs and licences, and this is reflected in the policy priorities adopted by the SADCC.

18. In order to emphasize the complementarity of industrial development among the Member States and to harmonize development, specific criteria have been laid down for the identification of SADCC projects:

- (a) Ability of the project to meet internal consumption and to have surplus for export, particularly to other SADCC countries;

^{1/} The Member States are Angola, Botswana, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe.

- (b) Need for the project to obtain its raw materials within the SADCC subregion;
- (c) Possibility of transporting raw materials and products within the subregion.

In addition to the above general guidelines, the project should have a funding gap in foreign exchange, should be bankable, and should have a reasonable implementation period.

19. An industrial subsector is selected by the SADCC on the criterion that it meets one of the basic needs of the people of the region. A plan is then prepared for the subsector, taking into account existing production capacities and their potential for expansion. After approval by the Industry Ministers Committee, the plan and the projects are subject to detailed feasibility studies and corresponding action plans are drawn up for their implementation. Project promotion is carried out by the co-ordinating country, Tanzania, through the SADCC Industrial Co-ordination Division. SADCC has established the following means for raising foreign funds for projects:

- (a) SADCC donor conferences which are held annually;
- (b) Specific investment-promotion conferences held either on a sectoral or geographical basis;
- (c) Direct negotiations with potential investors.

20. Once a project has been defined and a foreign donor or partner identified, the role of the Industrial Co-ordination Division is fulfilled, whereafter the Member State concerned and its implementing agency take over. SADCC exercises very little influence over the overall implementation process, since it has neither the policy instruments nor executing authority. Nevertheless, the process of consultation has achieved considerable success in convincing Member States to drop, adapt, or accept certain projects in accordance with the overall strategy of SADCC. This process has also been facilitated by the recent creation by SADCC of Regional Business Councils in seven Member States and the establishment of the Regional Co-ordinating Council.

The Preferential Trade Area for Eastern and Southern African States (PTA)

21. The treaty establishing an economic co-operation arrangement - the Preferential Trade Area for Eastern and Southern African States (PTA) - was signed at a meeting of Heads of State in Lusaka (Zambia) and it entered into force in September 1982. To date, the following 15 countries have acceded to the PTA treaty: Burundi, Comoros, Djibouti, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Rwanda, Somalia, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe. The objective of the PTA is to promote economic co-operation among the participating countries in all fields of economic activity, particularly in the fields of trade, customs, industry, transport and communications, agriculture, natural resources and monetary affairs; with the aim of establishing a subregional common market and, eventually, an economic community.

22. The PTA has now entered its implementation phase in earnest. In addition to the PTA secretariat in Lusaka (Zambia), the following organs have now been established: the PTA Clearing House which is located in Harare (Zimbabwe); the PTA Trade and Development Bank located in Bujumbura (Burundi); the PTA Information and Documentation in Lusaka (Zambia) which has been established with the assistance of the ITC in Geneva (Switzerland) and UNDP; and the PTA Federation of Chambers of Commerce and Industry in Lusaka (Zambia) which is currently served by the PTA secretariat. The operational phase of the PTA was launched in July 1984 when the processes of reducing tariff and non-tariff barriers to intra-PTA trade and of promoting programmes for upgrading or constructing missing inter-State transport links for the establishment of multinational industrial and agricultural enterprises commenced.

23. Although the treaty of co-operation among the States of Eastern and Southern Africa is designated as the treaty for a preferential trade area, its objectives go beyond the promotion of intra-subregional trade. The key role played by the production sectors and transportation systems in the development process is an integral part of the treaty. Trade liberalization and facilitation, which are being given emphasis in the short term, are intended to integrate the dispersive markets of the PTA subregion in order to make it economically feasible to promote the establishment of larger and more efficient basic production units in the sectors of industry and agriculture: to develop intersectoral and inter-project linkages in those sectors among the PTA States; and to promote all modes of inter-State and intra-PTA transportation systems.

24. The cardinal principles of the PTA are self-help and partnership among the participating countries. The focal organ for the implementation of its programme is the PTA secretariat, which is financed entirely from resources contributed to the PTA budget by Member States. Programme priorities and the timetable for their implementation are formulated at meetings of specialized technical committees and sectoral committees of officials, and submitted for approval to annual meetings of the PTA authority (the conference of Heads of State and Government).

25. In the field of industry, the protocol on industrial co-operation emphasizes the fact that meaningful preferential trade area arrangements cannot be realized under the diverse economic conditions that prevail among Member States unless economic restructuring is undertaken through co-operation throughout the entire area of industrial development. The PTA policy organs have, therefore, adopted a strategy for the implementation of the protocol on industrial co-operation which is aimed at establishing a viable and competitive industrial structure producing not only consumer goods but also capital and intermediate products. This aim is to be attained by: promoting co-operation in the rationalization/expansion of existing capacities and the creation of new capacities; fostering cross-border, vertically and horizontally integrated production - marketing - distribution systems; and promoting small-, medium- and large-scale production enterprises, as well as multinational enterprises, for example, in the case of large-scale basic or core industries. In this regard, a charter on the promotion of multinational industrial enterprises between two or more Member States as public enterprises or between two or more national private enterprises has been formulated.

26. The current industrial development activities focus on the implementation of specific projects and programmes beginning with: rehabilitation and upgrading of national plants, where required, especially iron and steel plants and foundries; establishment of multinational sponge iron plants; rationalization of existing national and establishment of new multinational fertilizer plants; rationalization of the building materials industry, with initial emphasis on existing cement plants; development of agro-, agro-based and mineral-processing industries; and promotion of co-operation in the exploitation and utilization of energy resources in the subregion.

27. It is expected that the above activities involving the horizontal and vertical integration of production units in industry (as well as in agriculture) will contribute substantially to the development of inter-State and intersectoral linkages as well as foster inter-dependence in production enterprises and sectors among the PTA Member States. This, in turn, is expected to generate an increase in the volume of intra-PTA trade and improve the economic viability of inter-State multimodal transportation system.

Indian Ocean Commission (IOC)

28. Established in December 1982, the Commission's members are the Comoros, Madagascar, Mauritius, the Seychelles and France (representing the overseas department of Réunion). The Indian Ocean Commission promotes co-operation, particularly in economic development, between the countries of the South-West Indian Ocean. With a permanent liaison organizational structure in each Member State, the priority projects promoted by the Commission relate to: commerce; fishing; industrial co-operation; air and sea links and telecommunications; petroleum prospecting; scientific training and research. In addition to proposals for a tuna-fishing development scheme and the formation of a regional shipping line, with assistance from the European Community, consideration is being given, at present, to: the establishment of a petroleum refinery in Madagascar; the publication of an import-export guide; the launching of a training scheme for marketing; the organization of annual trade fairs in different member countries over the next three years; the establishment of a clearing house comparable to the system drawn up by PTA; and the promotion of exports of spices and essential oils. The overriding consideration in all these endeavours is to promote trade and the reduction of tariffs among the Member States.

29. The creation of these organizations reflects not only the political commitment on the part of the Member States, but also their resolve to take concrete steps towards the integrated development of the subregion. For example, both PTA and SADCC have been involved in identifying, promoting and financing industrial projects, as well as in training and exchanging industrial information. This is expected to stimulate and contribute to the initiation of joint studies and projects, essentially resource-based, by the countries in the subregion. They should, eventually, lead to the exchange of raw materials, intermediate products and final goods. This approach is very much in line with the efforts of such United Nations agencies as UNIDO and ECA. It is also in keeping with the aims of the Lima Declaration and Plan of Action on industrial co-operation among the developing countries of the world, as well as the programme for the Industrial Development Decade for Africa. As indicated earlier, the SADCC and PTA secretariats have identified in their programmes the same priority industrial subsectors and branches. These

programmes aim at developing core industries related, in particular, to natural gas, iron and steel, metals and engineering, coal, pharmaceuticals, fertilizers and basic chemicals.

30. All the foregoing suggests that increased attention is being accorded to industrial co-operation by the countries in the subregion as this has been recognized to be necessary as well as a prerequisite for any further development efforts. This subregional co-operation, which started only recently, will require some time before concrete results are achieved. In all these efforts, a number of constraints have to be overcome. These include, in particular, inadequate means (human and financial) and mechanisms for putting into operation the political will that has been unequivocally expressed in support of both subregional industrial co-operation and the implementation of relevant policy decisions.

The Industrial Development Decade for Africa (IDDA)

31. The Lagos Plan of Action^{2/} 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, 27 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.

32. 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 and self-sufficiency in the areas 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.

33. 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 legislative bodies of the ECA and UNIDO, is based on the principle of self-reliance and self-sustained development. It presumes that the necessary initiative and stimuli must emanate, first and foremost, from within each

^{2/} OAU - Lagos Plan of Action for the Economic Development of Africa (1980-2000).

country or 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.

34. 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.

35. 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.

36. 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.

37. 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 Eastern and Southern Africa being adopted at the meeting held at Addis Ababa (Ethiopia) in November 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 to enhance the industrial activities of the national institutions.

CHAPTER II

INITIAL INTEGRATED INDUSTRIAL PROMOTION PROGRAMME
FOR EASTERN AND SOUTHERN AFRICA

38. The idea of devising comprehensive programmes for subregional co-operation in different areas of economic activity originates from the "Lagos Plan of Action for the Economic Development of Africa 1980-2000" and the Final Act of Lagos. In respect of the industrial sector, the programme for the Industrial Development Decade for Africa (IDDA) advocates the elaboration of a subregional industrial co-operation programme in each of the four subregions of Africa - Eastern and Southern, Central, Western and Northern Africa. To this end, and in keeping with the need to promote subregional co-operation, an expert group meeting on the promotion of industrial co-operation in Eastern and Southern Africa within the framework of the IDDA was held in Addis Ababa, Ethiopia, from 22 to 26 November 1983.^{3/}

39. The meeting was attended by experts/representatives of the following countries and organizations of the subregion: Burundi, the Comoros, Ethiopia, Kenya, Madagascar, Mauritius, Mozambique, Rwanda, Swaziland, Tanzania and Zimbabwe, The East African Development Bank (EADB), the Eastern and Southern African Mineral Resources Development Centre (ESAMRDC) and the Preferential Trade Area for Eastern and Southern African States (PTA). The meeting was organized by UNIDO in co-operation with OAU, ECA, PTA and SADCC. At that meeting, an initial integrated industrial promotion programme defining priority industrial subsectors and areas was adopted consisting of 18 core and nine support projects. In an effort to ensure successful implementation of the programme, the meeting also considered and adopted some modalities for implementing the projects selected. The programme was endorsed by the Conference of Africa Ministers of Industry and the OAU Council of Ministers. It was noted with interest by the Fourth General Conference of UNIDO, held in Vienna, Austria, in August 1984. It was also presented to the relevant legislative bodies of the subregion, notably the PTA Committee on Industrial Co-operation and the ECA MULPOC Council of Ministers.

Priority core subsectors

40. On the basis of the decisions of the policy organs of subregional organizations in Eastern and Southern Africa as contained, in particular, in the report of the second meeting of the PTA Council of Ministers held in December 1982, the industrial programme of the Southern African Development Co-ordinating Conference (SADCC) and in resolutions of successive meetings of the Council of Ministers of the Lusaka-based ECA Multinational Programming and Operational Centre (MULPOC), the subregional meeting on the promotion of intra-African industrial co-operation within the framework of the Industrial Development Decade for Africa agreed to accord priority to the following core industrial subsectors: metallurgical, engineering, chemical; building materials industries; and agro- and agro-based industries. Taking into account their strategic importance and potential contribution to the

^{3/} See UNIDO document ID/WG.408/3/Rev.1, 14 February 1984 and final report document ID/WG.408/4, 2 December 1983.

development of an integrated self-sustaining industrial base at both the national and subregional levels, the following core industrial subsectors, listed in order of priority, were emphasized in the subregional programme.

Metallurgical industry

41. In the initial programme, it was recognized that the metallurgical industry provides linkages upstream to industries processing raw materials (mining, energy, water) and downstream to the metal-working and engineering subsectors. This subsector is basic to the entire industrialization process. It is to be noted that the subregion is well endowed with large quantities of valuable metallic and other minerals which are not fully exploited, yet the few minerals being exploited are exported with little or no processing. The programme further recognized the fact that the manufacture of metal consumer goods and equipment in the subregion requires accelerated growth of the intermediate industries to provide such basic inputs as iron and steel, aluminium and other metallurgical products. Most of the metallurgical products, it was noted in the initial programme, depend on the exploitation of mineral resources such as iron ore, coal and copper, most of which are being exported. Thus, the development of metallurgical industries in the subregion would facilitate the creation of vertically integrated industries from mining through refining to fabrication. In the short term, this involves the production, for example, of spare parts, agricultural machinery and implements and, in the long term, this would involve the production of a whole range of capital goods and other metal products.

42. According to a PTA study^{4/}, the subregion has some twenty three (23) mini-steel plants in nine countries distributed as follows: Kenya (7), Mauritius (4), Zimbabwe (3), Ethiopia (2), Tanzania (2), Uganda (2), Angola (1), Madagascar (1) and Mozambique (1). The largest and only integrated steelworks in the subregion is the Zimbabwe Iron and Steel Company Limited (ZISCO), near Redcliff. This complex is equipped with blast furnaces and oxygen converters and has a production capacity of 850,000 tonnes per annum. About eight plants in the subregion may be classified as "mini mills" in the sense that they operate scrap-based smeltshops for producing billets and/or ingots and sections.

Engineering industries

43. The inclusion of the engineering industry among the priority core industrial subsectors contained in the initial programme, was in recognition of the pivotal role that this subsector can play in the production/manufacture of machine tools, agricultural machinery and equipment, tractors, commercial vehicles and local transport equipment and spare parts. It is to be noted that the industrialization process would be enhanced by the integrated development of engineering industries in the subregion such as metalworking, mechanical, electrical and electronic branches for the production and manufacture of the above mentioned engineering products as well as other intermediate and capital goods for use in food production and in such

^{4/} See PTA, "Conceptual Framework and Current Activities in the Field of Industry and Energy" mimeo, 1988.

other priority subsectors as the agro-based, building materials and metallurgical industries. The establishment, in the subregion, of such facilities as foundries, forges and heat-treatment shops, tool rooms, machine shops and metal-coating shops would contribute to the alleviation of the shortages of spare parts, components and accessories to many sectors of the economy.

44. It is also to be noted that the engineering subsector has generally been developed in conjunction with the metallurgical industry subsector, and that the same countries producing iron and steel have made some advances in the engineering subsector. While the engineering industry subsector in the subregion is in the initial stages of development, a few countries have made significant and notable progress. In Tanzania, machine tools are assembled, while plans to manufacture machine-tools in Kenya and Zimbabwe have reached final stages. The foundry industry is well established in Zimbabwe and, to a lesser degree, in Kenya and Zambia.

Chemical industry

45. Chemical industries were accorded priority and included among the category of core subsectors in the initial programme because their products are geared towards meeting and satisfying some of the basic needs (especially health), while others are vital to increased agricultural production, food processing and storage, thereby helping to reduce food losses and imports. To this end, the production, in the subregion, of essential chemicals such as fertilizers, pesticides, pharmaceuticals and petrochemicals based on either domestically or subregionally available resources (such as natural gas, coal, phosphate, potash and electric energy) would stimulate the development of agriculture, industry and other sectors of the economy.

46. Despite the availability of raw materials, the production of chemicals in the subregion has not been accorded the priority it deserves in all the countries. Natural gas which is one of the preferred raw materials for the manufacture of nitrogenous fertilizers is available in Angola, Ethiopia, Mozambique and Tanzania. Phosphate rocks from which phosphatic fertilizers are produced are available in Burundi, Tanzania, Uganda, Zambia and Zimbabwe. Brine which is also used for manufacturing phosphate fertilizers is available in Botswana, Tanzania and Uganda. At present, ammonia is being produced at a coal-based plant in Zambia and at another plant in Zimbabwe based on water electrolysis. It has been suggested that there is a need to increase ammonia production from less expensive feedstocks, such as natural gas. To this end, some projects, such as the manufacture of ammonia/urea in Tanzania based on natural gas and a similar one in Rwanda based on methane gas from Lake Kivu, were identified in the initial programme.

Building materials industry

47. The building materials industry was accorded priority in the initial programme since it contributes to the satisfaction of one of the population's basic needs, housing, and to the exploitation of local natural resources. In addition to meeting the requirements of other sectors and subsectors, the building materials industry also provides inputs to the construction industry which, for its part, is not confined to the construction of dwellings alone, but includes the creation of major infrastructural works, such as dams,

irrigation schemes, roads, airports and harbours. The construction industry literally paves the way for the establishment of conditions conducive to socio-economic development. This it achieves not only by providing improved physical facilities, but also by employing a large labour force, thereby generating additional purchasing power and widening the subregional market for the products and services of other subsectors and sectors of the economy.

48. The building materials in great demand include bricks, cement, natural stone, lime, fine ceramics and sheet-glass. Production levels of some of these materials are very low. Whereas a few countries in the subregion may export cement, others import significant quantities from outside the subregion. Installed production capacity in the subregion is about 8 million tonnes per annum, whereas production is said to reach hardly 3.5 million tonnes per annum. Cases of serious capacity underutilization have been reported in Tanzania, Angola, Mozambique and Zambia. Some of these industries may need rehabilitation within the framework of the subregional programme.

Agro- and agro-based industries

49. The development of agro- and agro-based industries was accorded priority because of the important role such industries play in establishing forward and backward linkages not only among industrial sub-branches, but also between industry and the agricultural sector. In calling for the increased processing of agricultural produce, the initial programme aimed at making it possible for countries in the subregion to reduce the degree of dependence on food imports by diminishing pre- and post-harvest losses. The development of industries that process agricultural produce establishes viable linkages between agriculture and industry; it also increases "value added" of the raw materials, augments export earnings, raises employment both in the agricultural and industrial sectors, and improves income in general. The need to establish suitable processing, storage and preservation facilities was stressed in the initial programme.

Areas and services supporting industrial development

Agriculture

50. Although agriculture still remains the major source of employment, food and industrial raw materials, efforts directed at increasing the performance of the agricultural sector have not yielded the desired results. Consequently, agricultural productivity has been declining, even after the serious drought that affected the subregion during first half of the 1980 decade. The development of the agricultural sector contributes to industrial development in two aspects: first, as a supplier of raw materials it stimulates the establishment of agro-industries that process agricultural produce into semi-finished and finished products; and secondly, as a user of industrial products it facilitates the creation and expansion of industrial enterprises that produce the necessary inputs for agriculture. Such a development fosters the establishment of inter-sectoral linkages which form the basis for self-sustained industrialization.

Mineral resources

51. 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, copper ore and coal in Zambia, Zimbabwe and Botswana has enabled some of those countries to engage in downstream industrial activities, such as metal and copper fabrication. Increased mining and quarrying activities would lead to an increase in the demand for mining and quarrying machinery, equipment, tools and other inputs which are produced by metallurgical and engineering industries. Furthermore, mining and quarrying activities stimulate industrial development in the sense that such activities produce raw materials for the metallurgical and engineering industries, as well as chemical and building materials industries. The mineral resource endowments of the subregion are described, in part, in paragraphs 41 and 46.

Energy

52. Most countries in the subregion depend on oil to meet their energy needs, particularly in the transport and industrial sectors. So far only Angola is reported to be endowed with oil, while a few others have significant sources of energy, in particular hydroelectric power (though still underexploited), as well as new and renewable sources of energy, the development of which will require major investments far beyond the scope of individual countries. Given this situation, it would appear that the subregion will continue to depend on oil as a major source of energy, and it will need to intensify subregional co-operation in the development and utilization of its energy resources.

53. Practically all countries in the subregion rely on wood as a source of energy for domestic cooking, heating and lighting, particularly in the rural areas. The potential for hydroelectric power is great. Angola and Mozambique account for almost 30 per cent of the hydropower potential in southern Africa. Zambia, Tanzania and Zimbabwe also have significant potential hydropower. In the east, Madagascar has the largest hydropower potential followed by Ethiopia, Kenya and Uganda. To the extent that the operations of industrial enterprises depend upon energy (oil, hydroelectric power, geothermal, coal, etc.), the joint development and utilization of energy resources at the subregional level, would contribute substantially to the establishment and development not only of a self-sustaining industrial sector, but also of an interdependent and integrated subregional industrial sector.

Transport and communications

54. The transport and communications system in the subregion will have to be significantly improved, if they are to support adequately the subregional industrial promotion programme. Whereas the railway system provides the most efficient and cheapest means of transport in the subregion, being relatively well developed (especially in the southern part of the subregion), it faces a number of problems related to the destabilization policies of South Africa. It also faces such technical problems as the deterioration of the permanent way, shortages of manpower, lack of locomotives and rolling stock, the absence of links between main lines, and inefficient management. The road network is limited and generally in poor condition. Air transport, though

greatly improved, is still inadequate. With regard to telecommunications, the majority of countries in the subregion are, despite some progress, still not directly linked with each other. Most traffic to and from the subregion has to be routed via Europe and some countries outside the subregion.

55. Both the transport and communications systems need to be improved and the dependence on external countries reduced. The costly construction of harbour facilities makes the joint development and utilization of strategic sea ports essential, and similar subregional initiatives are called for with respect to improving the road network, air transport services and the railway system, including its rolling stock. A subregional microwave communications system already initiated within the framework of PANAFTEL needs to be expanded. All these improvements are among the priority activities contained in the programme for the United Nations Transport and Communications Decade in Africa.

Human resources

56. 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 technologists 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.

57. 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 new 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

58. Implementation of the projects retained in the subregional programme will call for major investments - a basic factor determining the complete production 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 Trade and Development Bank for Eastern and Southern Africa.

Technology

59. 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 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.

60. 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.

Industrial institutional infrastructure

61. 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 need to be made between: ..) 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 and investment promotion.

Strategy for implementation

62. It is pertinent at this juncture to restate some of the important modalities adopted in the initial programme for its implementation. These include:

- The need to identify clearly priority subsectors or branches. Given the limited resources available, 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 permit the mobilization of the investment financing required to implement 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 PTA and SADCC 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 among countries, PTA, SADCC and other relevant subregional institutions leading to actual negotiations on each project;
- The involvement of the private sector;
- 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 PTA and SADCC.

CHAPTER III

ASSESSMENT OF THE IMPLEMENTATION OF THE PROJECTS IN THE
INITIAL INTEGRATED INDUSTRIAL PROMOTION PROGRAMME

Status of the projects

63. The initial integrated industrial promotion programme for Eastern and Southern Africa adopted at the subregional meeting held in Addis Ababa, in November 1983, comprised 18 investment projects in four core areas and nine support projects covering institutional infrastructure, manpower development and other areas. Annex II provides details on the status of implementation of the initial programme.

64. From annex II it can be seen that since the Addis Ababa meeting several countries and project sponsors had taken a variety of follow-up actions to implement the projects contained in the initial programme. As at 31 October 1988, of the 18 core projects:

- Two projects had been implemented (including one for which the project concept was changed by the promoter):
 - Manufacture of diesel engines for tractors, trucks, lorries and buses, Zimbabwe (4)
 - Manufacture of low-cost standard multi-purpose vehicles, Madagascar (6)
- Four projects were under implementation:
 - Expansion of iron and steel mill, Uganda (2)
 - Irrigation equipment plant, Zambia (8)
 - Manufacture of transformers, Zambia (11)
 - Production of caustic soda, Kenya (16)
- Six projects were still being studied:
 - Upgrading and diversification of products from ZISCOSTEEL, Zimbabwe (1)
 - Integrated iron and steel mill, Mombasa, Kenya (3)
 - Copper fabrication plant for Eastern and Southern Africa, Zambia (10)
 - Tanzania multinational ammonia/urea product (13)
 - Phosphate fertilizer plant, Uganda (14)
 - Sheet-glass production unit, Madagascar (18)
- Five projects had been withdrawn:
 - Manufacture of diesel engines mounted chassis for lorries, trucks and mini-buses (5)
 - Manufacture of agricultural machinery (four-wheel tractors) (7)
 - Re-rolling mills for sections and bars for high-tension electricity transmission in Eastern and Southern Africa (9)
 - Phosphate fertilizer plant, Zimbabwe (15)
 - Mauritian Cement Corporation, Mauritius (17)

- One project had been temporarily suspended:

Ethiopian potash, Ethiopia/Libya (12)

65. With regard to support projects, it should be noted that countries in the subregion as well as regional and subregional organizations had taken steps to implement some of the nine support projects contained in the initial programme. As a result, three of the projects had been completed; three were under implementation; one had been held in abeyance; and two had not progressed.

66. An analysis of the causes for success or failure in the execution of the projects revealed that the completion or implementation of a project was directly related to the degree of preparation prior to its inclusion in the initial programme. Thus, of the 18 investment projects proposed at the November 1983 meeting in Addis Ababa, nine had been at the conceptual stage, four had been based on pre-feasibility studies, while only five had been based on completed feasibility studies and had thus been ready for implementation.

Constraints upon the implementation of the initial programme

67. By and large, progress towards the implementation of the initial integrated industrial promotion programme for Eastern and Southern Africa can be considered satisfactory. This is particularly evident when measured in terms of progress made in promoting co-operation in the field of industry. This progress notwithstanding a number of constraints were encountered. Thus, of the eighteen projects identified in 1983 as falling within the strategic industrial subsectors whose implementation would have contributed towards the objective of developing a self-sustaining industrialization process in the subregion, only two had been fully implemented. The limited record of implementation was due partly to failure to identify specific co-ordinating mechanisms for effective implementation of the identified projects and partly due to the inadequacy of support (technical and financial) from the lead countries as well as from subregional, regional and international organizations. The programme bore comparison with other regional programmes, such as those in the Andean Pact and ASEAN countries. Those programmes had experienced a long gestation period, and it was generally recognized that project cycles could be very long, particularly for major projects incurring large investments. The countries in the subregion should not be deterred by the multiplicity of constraints, particularly those attributable to the pervasive economic crisis. On the contrary, it should spur them on to seek more co-operation from and greater understanding of others. That held particularly true for the financing institutions which should be encouraged to maintain their full commitment throughout a project cycle, despite shifts in the financial situation of their partners. Similarly, UNDP, UNIDO and other agencies should help the countries in the subregion to secure technology and other essential project inputs at a more acceptable cost.

68. The process of identification and selection of projects for inclusion in the list of core projects to be implemented was not clear. The mere listing of criteria for selecting multinational/subregional industrial core projects is not sufficient in itself. Some projects were submitted on the spur of the

moment with little or no consultations at the national level on the implications and problems of implementation. Not only did some of the projects fail to be accorded top priority in terms of financial support, but there was not any reformulation of the necessary policy measures and strategies to ensure their implementation at the national level. A major constraint identified was the duplication of activities among the various subregional and international organizations. Furthermore, national and subregional priorities were sometimes at variance with each other, thus making it all the more necessary to ensure effective integration of the various projects and their objectives. Certain projects had failed to make any progress since, at the time of their inclusion in the initial programme, they had not been backed up by any prior studies. Such studies would have made for more precise definition of objectives and a clearer assessment of priorities and parameters. Stricter application of the selection criteria adopted at the first subregional meeting would have obviated some of the subsequent difficulties. It was clearly not sufficient to agree to a collection of projects: their further integration and the establishment of effective linkages were necessary so as to ensure optimum utilization of financial, technological and human resources within the subregion.

69. Some of the projects did not have proper sponsors. Seven of the initial integrated projects were sponsored by the Intergovernmental Committee of Experts on Engineering Industries for Eastern and Southern Africa following the recommendations of the sixth meeting of the Lusaka-based MULPOC Council of Ministers. Some projects by their very nature cannot be sponsored successfully by meetings or subregional, regional and international organizations. For example, a project such as "Copper fabrication plant for Eastern and Southern Africa" should not have been sponsored by the second meeting of the Intergovernmental Committee of Experts, but by an institution in Zambia such as the Industrial Development Corporation (INDECO) Ltd. Subregional or international organizations may sponsor projects in certain categories of activities such as training and studies or surveys which they themselves can undertake. A good example is the project "Inventory of subregional training facilities" which was sponsored and undertaken by SADCC.

70. Generally speaking, some of the representatives of African countries that submitted projects for implementation at the initial subregional programme had falsely assumed that they would receive substantial and appropriate assistance (technical and financial) from international, regional and subregional organizations. However, the bulk of the assistance rendered by international organizations, including UNIDO and ECA, consists of pre- or feasibility and investment studies, advisory missions, technical assistance etc. Even where feasibility studies indicate that a project would be viable, primary responsibility for mobilizing funds rests with the lead country, and project sponsor with, where appropriate, external assistance such as that provided by UNIDO.

Constraints at the national level

71. Part of the period under review falls within the years in which countries of the subregion experienced severe economic difficulties. Therefore, in some cases, while there was genuine willingness to implement subregional industrial projects within the framework of the IDDA, PTA or SADCC, the economic and social crisis besetting Africa not only altered

development priorities but also imposed a serious constraint on project implementation. Because of sharp and drastic declines in the levels of foreign exchange resources, overall economic activity had to be reduced and the industrial sector in the subregion was adversely affected. Consequently, many countries recorded a poor industrial performance: the main characteristics were low levels of capacity utilization due to lack of spare parts for worn-out equipment and machinery and the shortage of imported semi-processed and raw-material inputs for many factories. Under such conditions, it was difficult to implement projects retained in the initial integrated industrial promotion programme.

72. Furthermore, constraints at the national level arose from the lack of co-ordinating mechanisms. In most cases, the subregional projects were only known to those Government representatives who attended the meeting in Addis Ababa in November 1983 or to the department dealing with subregional co-operation. Other departments, let alone other ministries, did not know of the projects. This accounts for the absence of such projects in the national development plans with the result that national policies and strategies and co-operation mechanisms did not take into full account the projects retained in the initial programme.

73. Inadequacy of trained industrial skills in many of the countries not only contributed to the high rate of de-industrialization (i.e. low level of capacity utilization and closure of some industrial plants), but also to the failure to integrate subregional projects in the industrial development strategies at the national level. This shortcoming is demonstrated, in some cases, by little or no linkage between industrial subsectors and branches, and between industry and other economic sectors at the national and subregional levels. The role of international organizations (UNIDO, ECA, UNDP, etc.) and subregional and regional organizations in providing adequate and appropriate technical assistance is of paramount importance to facilitating the formulation of policies, strategies and follow-up mechanisms which ensure that subregional industrial development programmes and projects are incorporated into, and are implemented as integral parts of, national industrial development plans.

Constraints at the subregional level

74. At the subregional level (either under the auspices of the PTA, SADCC or MULPOC or all of them), resolutions containing policy statements and strategies pertaining to the development and promotion of industrial co-operation have been adopted. Some of these resolutions would have had bearing on industrial development, if adequate attention had been paid to the modus operandi. Given that neither the PTA nor the SADCC secretariats can implement and operate subregional industrial or multinational enterprises, the adoption of policies and strategies for creating subregional projects must be based on identified mechanisms for co-ordinating the activities of the participating entities (private or public or both). Progress in the implementation of the initial programme was constrained by the absence of such mechanisms.

75. The role of subregional and international organizations should also be spelt out in greater detail in the strategies for implementing projects. Once the mechanisms are spelt out and every country and/or organization is

aware of the actions it ought to take, the questions of industrial expertise, source, type and magnitude of financial resources become important parameters in deciding whether to proceed with the projects.

76. One of the most serious constraints upon the development of subregional projects is the limitation of financial resources. It is much more difficult to secure financial resources for subregional projects than for national projects. Subregional and national organizations entrusted with the task of carrying out studies for joint or multinational projects do not always have the necessary budgetary allocations for such activities. These are activities that should be supported financially and technically by international organizations. Intergovernmental organizations responsible for both national and subregional industrial development require assistance in terms of financial and technical resources. They need to be strengthened in order to ensure their effectiveness in transforming national projects into subregional projects.

77. International organizations such as UNIDO, ECA, UNDP, the Commonwealth Secretariat and others should co-ordinate their assistance to subregional intergovernmental organizations and national Governments. It is also of absolute importance that bilateral donors and multilateral donors co-ordinate their programmes. The lack of co-ordination among many bilateral donors, international and regional organizations have contributed to the confusion that is reflected in the poor performance of the industrial sector in the subregion. For example, one national project that was to be promoted to subregional status has been the subject of no less than four feasibility studies undertaken by four different interested parties.

CHAPTER IV

PROPOSALS FOR A REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME

78. The revised programme proposed in this chapter has been prepared on the basis of information obtained during missions fielded by UNIDO to most of the countries in the subregion and in close consultation with the PTA and SADCC. On the basis of information obtained during the missions as well as discussions held with the divisions responsible for industrial co-operation within the secretariats of the PTA and SADCC, it became clear that the initial integrated industrial promotion programme should be revised in the light of the new realities in the individual countries and developments in the subregion as a whole.

79. To this end, the divisions responsible for industrial development and co-operation in the secretariats of the PTA and SADCC have, on the basis of their respective mandates, outlined priority programme activities. These were drawn from national priority programmes in the field of industrial development and co-operation at the subregional level.

80. In respect of the PTA, its long-term industrial development is clearly spelt out in the "PTA Conceptual Framework and Current Activities in the Fields of Industry and Energy".^{5/} In those sectors, the long-term objective is to foster co-operation in the rationalization and expansion of existing capacities, in the creation of new capacities, and in the promotion of cross-border production, marketing and distribution systems. A summary of the main thrust of the strategy and programme is given in paragraphs 25 and 26 of this document.

81. With regard to SADCC, an analysis of its industrial development and co-operation projects reveals that the main subsectors of industry are the same as those of the PTA. This stems from the fact that SADCC derives most of its projects from the same Member States as the PTA. Priority programme activities cover projects, which are currently being reviewed in the following subsectors: metal and engineering industries, chemicals and fertilizers, agro- and agro-allied industries; and energy.

82. During the SADCC Industry and Trade Sector Annual Conference held at Arusha (Tanzania) in January 1988 and after reviewing the relevant SADCC activities, it was indicated that, while continuing the implementation of the industrial development programme under the Blantyre Memorandum, which is currently being assessed by Member States, a separate follow-up programme would be launched for thorough and wider consultations at Member State level. This would help to co-ordinate national and regional positions and prepare a memorandum of action for presentation to the meetings of the SADCC

^{5/} See PTA, "Conceptual Framework and Current Activities in the Field of Industry and Energy", mimeo, 1988.

Industry Ministers Committee in May 1988.^{6/} The meeting was subsequently postponed to late August 1988 and will be followed by a full meeting of the Council in early October 1988. The reports of those meetings will be made available to the follow-up subregional meeting and utilized in refining the revised programme.

83. As a result of the field missions and consultations with the PTA and SADCC Secretariats, some of the projects included in the initial programme which are not being accorded priority by the sponsors were deleted and new ones introduced. The presentation used in the initial programme, however, has been retained for the revised programme: the projects are grouped in subsectors and subprogrammes. In the case of some projects currently being studied, no information is available concerning the market, production and costs.

84. Furthermore, some countries visited were not in a position to provide the mission with information on the status of implementation of projects retained in the initial programme. Others were not in a position to propose new projects for consideration in the revised programme. It is expected that the representatives of those countries will bring that information together with details (project profiles) of new projects they wish to propose during the meeting in Harare.

85. In the light of the above, the listing of projects carried over from the initial programme and the new projects proposed for inclusion in the revised programme, should be regarded as an indicative listing drawn up for the purpose of discussion at the subregional meeting. At the meeting each project will be presented by the sponsoring country, reviewed by the meeting and a final decision taken on its inclusion in the revised programme.

Selection of core subsectors and core investment projects

86. The priority subsectors identified in the initial integrated industrial promotion programme for the subregion which are in line with the PTA and SADCC priorities were as follows: building materials industry, chemical industry, metallurgical industries and engineering industries. Priority was also accorded to a number of other factors, such as resources, infrastructure and services supporting industrial development. These included natural resources, human resources, technology, industrial financing and institutional support. The projects proposed for inclusion in the revised programme are in line with the above priorities, subsectors and areas.

87. In order to ensure effective execution of the revised integrated industrial promotion programme, it is recommended that only the core subsectors and the areas mentioned in that programme be included. Attainment of targets relating to self-sufficiency and self-sustaining economic development is dependent on the development of those priority core subsectors and areas.

^{6/} See SADCC, "Industry and Trade Activities: Addendum to Industry and Trade Sector Annual Conference (1988) Report", Arusha, Tanzania, January 1988.

88. In the light of the assessment in Chapter III, it is recommended that future action on the implementation of the projects contained in the revised programme be approached on a priority basis. The core projects may thus 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 have been included in the first priority category. While particular attention should be paid to implementing projects accorded first priority, this should not prejudice action by the sponsors of projects in the other two categories.

89. The proposed revised programme contains 13 core projects and seven support projects carried forward from the initial programme as well as one core project taken from the revised programme for Central Africa. Twenty-nine (29) new core and 13 new support projects were also included. The basic information regarding the core and support projects carried forward from the initial programme is given in the project profiles attached as Annex III and that for the new core and support projects is given in Annex IV.

CORE PROJECTS

90. The 13 core projects contained in the initial programme and one core project taken from the revised programme for Central Africa that were retained in the revised programme are as follows:

Metallurgical industries

1. Upgrading and diversification of products from ZISCOSTEEL (Zimbabwe) (initially project profile No. 1)
2. Expansion of iron and steel mill (Uganda) (initially project profile No. 2)
3. Integrated iron and steel mill (Kenya) (initially project profile No. 3)

Engineering industries

4. Manufacture of diesel engines for tractors, trucks, lorries and buses, (Zimbabwe) (initially project profile No. 4)
5. Manufacture of low-cost standard multi-purpose vehicles (Madagascar) (initially project profile No. 6)
6. Irrigation equipment plant (Zambia) (initially project profile No. 8)
7. Copper fabrication plant for Eastern and Southern Africa (Zambia) (initially project profile No. 10)
8. Manufacture of electric motors and transformers (Zambia) (initially project profile No. 11)

Chemical industries^{7/}

9. Ethiopian potash (Ethiopia/Libya) (initially project profile No. 12)
10. Tanzania multinational ammonia/urea project (Tanzania) (initially project profile No. 13)
11. Phosphate fertilizer plant, (Uganda) (initially project profile No. 14)
12. Production of phosphate fertilizers (Burundi)^{8/}
13. Production of caustic soda (Kenya) (initially project profile No. 16)
14. Sheet-glass production unit (Madagascar) (initially project profile No. 18)

NEW CORE PROJECTS

91. The 29 new core projects included in the revised programme are as follows:

Metallurgical industry

1. Establishment of integrated iron and steel mill (Madagascar)
2. Establishment of a steel re-rolling mill (Zambia)
3. Establishment of multinational sponge iron plants in PTA countries (Mozambique/Tanzania/Uganda/Zambia)

Engineering industry

4. Manufacture of low-cost vehicles (Ethiopia)
5. Spare parts and engineering hand tools factory (Ethiopia)
6. Water pump factory (Ethiopia)

^{7/} In addition to the projects listed, the subregion is also expected to benefit from a project in Rwanda dealing with the exploitation of methane gas from Lake Kivu. The project is contained in the revised subregional programme for Central Africa (document ID/WG.456/3/Rev.1) and is also being promoted by the PTA.

^{8/} Project profile No. 4 in the revised subregional programme for Central Africa.

7. Machine-tool factory (Ethiopia)
8. Tractor- and animal-drawn farm implements factory (Ethiopia)
9. Truck-trailer and bodies factory (Ethiopia)
10. Multi-purpose engineering workshop (Ethiopia)

Chemical industry

11. Establishment of a salt refining and packaging plant (Somalia)
12. Expansion of Berbera gypsum factory (Somalia)
13. Rehabilitation of urea fertilizer plant (Somalia)
14. Manufacture of carbon black (Kenya)
15. Hollow glass manufacturing plant (Somalia)
16. Rehabilitation of copper oxychloride plant (Zambia)
17. Rehabilitation of copper oxychloride plant (Zimbabwe)
18. Integrated chlor-alkali and PVC plant (Zimbabwe)
19. Chrome tanning salts (Zimbabwe)
20. Production of caustic soda (Tanzania)
21. Lake Natron soda ash project (Tanzania)
22. Mbagala sheet glass project (Tanzania)

Building materials industry

23. Production of cement for Indian Ocean island countries (Madagascar)
24. Cement blending and packaging plant (Lesotho)
25. Edible oil production (Lesotho)
26. Coconut processing programme (Comoros)
27. Cotton weaving plant (Lesotho)
28. Blanket manufacture (Lesotho)
29. Fish-processing facilities (Uganda)

SUPPORT PROJECTS

92. The seven support projects contained in the initial programme that were retained in the revised programme are as follows:

- S1. Transformation of Serere research station into a subregional R & D centre (Uganda)
- S2. Assistance to the African Regional Organization for Standardization (ARSO) and the African Institute for Higher Technical Training and Research (AIHTTR)
- S3. Inventory of subregional training facilities
- S4. Managerial and technical personnel training
- S5. Development of industrial consultancy and management capabilities
- S6. Development of local entrepreneurship (Directory of small-scale industrial project profiles)
- S7. Improvement and development of the cement industry

NEW SUPPORT PROJECTS

93. The 13 new support projects included in the revised programme are as follows:

- S1. Upgrading of Kenya Textile Training Institute (KTTI) into a subregional training centre (Kenya)
- S2. Upgrading of Ethiopian Management Institute into a subregional centre (Ethiopia)
- S3. Regional Sugar Cane Training Centre for Africa (RSCTCA) (Mauritius)
- S4. Upgrading of Management Training and Advisory Centre (MTAC) into a subregional centre (Uganda)
- S5. Upgrading of training and design facilities of the spare parts manufacturing plant into a subregional centre (Ethiopia)
- S6. Establishment of a subregional cement institute at the Muger cement plant (Ethiopia)
- S7. Upgrading the Mogadishu Industrial Vocational Training Centre (IVTC) into a subregional centre (Somalia)
- S8. Establishment of a Metallurgical Technology Centre for PTA countries (Zimbabwe)
- S9. Promotion of spare parts production in PTA countries (Kenya/Tanzania/Zimbabwe)

- S10. Tanzania Institute of Leather Technology (Tanzania)
- S11. Consolidation of the Institute of Cement Technology (Tanzania)
- S12. Establishment of a pilot and demonstration physical manufacturing facilities at TEMDO (Tanzania)
- S13. Establishment of a pilot demonstration toolroom and engineering design centre (Zimbabwe)

CHAPTER V

STRATEGY TO BE ADOPTED TO ACCELERATE IMPLEMENTATION OF THE REVISED PROGRAMME

Measures to be adopted

94. In the plan for the implementation of the initial integrated industrial promotion programme for Eastern and Southern 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 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, PTA, SADCC and the ECA MULPOC Office for Eastern and Southern 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 implementation of the revised programme.

At the national level

95. 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.

96. 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.

97. 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.

98. 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, needs 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.

99. 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.

100. 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. 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 96 also explains the lack of familiarity with procedures for obtaining technical and financial assistance from external organizations.

At the subregional level

101. The priority activities identified for the implementation of the revised integrated industrial promotion programme at the subregional level are in line with the industrial priorities established by PTA, SADCC 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.

102. 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.

103. Institutional measures to effect changes and implement policies and programmes should therefore include strengthening the secretariats of the relevant intergovernmental organizations, especially PTA, SADCC and the ECA MULPOC Office for Eastern and Southern 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.

104. 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.

105. As at the national level, communication also presents a problem; however, the flow of information between countries in the subregion could be improved by using the channels of communication established by SADCC and PTA. It could also be improved through a formalized process of consultation and be further enhanced by establishing an effective monitoring system. It is thus urged that action be taken, as recommended in the programme for the IDDA and in the guidelines for priority actions during the preparatory phase of the Decade, to establish a subregional committee of experts on the IDDA, which could reinforce the existing subregional industrial co-ordination machinery and monitor the implementation of the programme. Proper co-ordination also needs to be maintained not only among the various subregional bodies (notably PTA, SADCC and ECA/MULPOC Office) but also 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

106. 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 PTA, SADCC and the ECA MULPOC Office should collaborate with the project sponsors in carrying out this co-ordination.

Mobilization of financial resources

107. 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), the PTA Bank, 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.

108. 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, UNIDO could evolve innovative ways and means of involving major financial institutions and assisting countries in the subregion to secure their co-operation.

Role of the co-ordinating and other agencies

109. 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.

110. 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 Co-operation Committee of PTA, 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 101(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.

111. It is perhaps important to stress the need for a system which should be developed by UNIDO, in co-operation with the PTA, SADCC and the ECA MULPOC Office as well as other appropriate subregional organizations, to assist countries in monitoring the implementation of the revised programme. In this regard and as part of the monitoring system, UNIDO should continue to convene regular meetings, for example every two years, of all the Governments, co-ordinating agencies and organizations concerned in order to review, adjust and monitor the implementation of the programme. For such a system to be effective, Member States and other project sponsors would have to provide information on the projects' status of implementation.

ANNEX I

Criteria for selecting 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 31 OCTOBER 1988 OF
PROJECTS INCLUDED IN THE INITIAL INTEGRATED INDUSTRIAL PROMOTION PROGRAMME

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
<u>I. - CORE PROJECTS</u>				
<u>TALLURGICAL INDUSTRY</u>				
Upgrading and diversification of products from ZISCOSTEEL, Zimbabwe.	Government of Zimbabwe	Detailed market and feasibility studies.	Pre-feasibility studies completed and overall project consultants appointed.	Costs have since escalated and the total cost of the project is currently estimated at \$150 million, 80 million of which are needed to purchase a reconditioned mill from Sweden. Negotiations for funds are at an advanced stage. The project basically entails product diversification, switching from the export of billets to the manufacture of flat products, thus achieving higher value-added. Market studies have revealed a current demand for flat products in the domestic and subregional markets of some 298,000 tons rising to 529,000 tons by the year 2000. The following items will be produced: 192,000 tons of plates (6-25 mm thick); 76,800 tons of cold rolled coil (0.1-0.2 mm); and 96,000 tons of hot rolled sheets (1.8-6.0 mm). The project is in the process of being revised. Project should be retained in the revised programme in the short term.
Expansion of iron and steel mill, Uganda.	Ministry of Industry	It was agreed to include the project in the initial programme since the existing steel plant utilizes imported billets/ ingots and local scrap whereas expanded plants would utilize locally extracted iron.	Project is still at conceptual stage.	The mill expansion envisaged in the original project has been initiated. Funds have been secured and the project is underway. A new facility has been in operation since 1983, and its possible expansion is being considered. Studies have been undertaken in respect of a third (sponge-iron) project that is being promoted by the PTA and the Government of India which has received samples for testing purposes. Project should, therefore, be retained in the revised programme for implementation in the medium term.
Integrated iron and steel mill, Mombasa, Kenya.	Ministry of Industry	It was agreed to promote the project under the long-term option because there was sufficiently high domestic consumption of iron and steel products to justify establishment of an integrated complex (432,000 tons in 1985.)	Austroplan's feasibility study (1982) was reviewed by Commonwealth Secretariat team in October 1984 for PTA Secretariat. An inter-ministerial task force was set up in June 1988 to examine all aspects of the development of the iron and steel industry.	Austroplan's study recommended an integrated steel plant to be developed in stages. It was to be based on wood charcoal as fuel and reducing agent, and would thus require 120,000-180,000 hectares of eucalyptus plantation. Final production capacity of plant would be 1 million tons, and total investment cost was estimated by Austroplan at \$876.6 million. Based on the findings of the Austroplan study, the whole project is being revised as it cannot be implemented as originally envisaged. Project should be retained in the revised programme on a long-term basis.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
ENGINEERING INDUSTRY				
Manufacture of diesel engines for tractors, trucks, lorries and buses, Zimbabwe.	MULPOC Council of Ministers	The project was to be located in Zimbabwe or Kenya and pre-investment studies were recommended.	Project approval has since been obtained from the Ministry of Industry. The joint venture approach has also been approved for the project which will be expanded to cover the subregion. T.A. Holdings Ltd of Zimbabwe has entered into a joint venture with a company to assemble diesel engines and for repowering, refurbishing, repairing and servicing all makes of trucks.	Local content is estimated to reach a level of 30 per cent and implementation of the project is expected to commence before the end of 1988. The output would include stationary diesel engines and marine engines as well. A similar project is being promoted by SADCC for the manufacture of mining spares, in which diesel engines could be of use to off-road vehicles. The project, which has the capacity to supply the PTA and SADCC subregion, should be retained in the revised programme for implementation in the short term.
Manufacture of diesel engines mounted chassis for lorries, trucks and mini-buses.	MULPOC Council of Ministers	The project was to be located in Ethiopia, Mozambique and Tanzania and pre-investment studies were to be undertaken.	Tanzania is restricting its project to the national level at present. In Ethiopia, subsequent studies indicated that it would be more feasible to establish a plant manufacturing trailers or trucks that could also produce chassis. A joint venture with a foreign partner is being promoted along those lines.	This project in its original form did not have a real sponsor or promoter. It was <u>not</u> recommended for retention in the revised programme.
Manufacture of low-cost standard multi-purpose vehicles, Madagascar.	Institut Malgache d'Innovation	The project was retained in the initial programme for implementation by Botswana, Madagascar, Mozambique, Uganda and Zambia.	Project completed in Madagascar and has been operational since November 1987. Total investment cost was FMG3,670 million. Botswana is working with a Scandinavian company on a related project, while Zambia is trying to standardise low-cost vehicles.	The plant in Madagascar has an annual production capacity of 300 vehicles. Promoter is looking for local or subregional partnership to market the vehicles in other countries in the subregion. Project should be retained in the revised programme for implementation in the short term.
Manufacture of agricultural machinery (four-wheel tractors).	MULPOC Council of Ministers	The project was to be located in Zimbabwe and follow-up action entailed the preparation of pre-investment studies.	No action taken because Zimbabwe already manufactures agricultural machinery.	The project did not have a real sponsor as Zimbabwe was already manufacturing agricultural machinery for which it required assistance in marketing the machinery in the subregion. The project was <u>not</u> recommended for retention in the revised programme.
Irrigation equipment plant, Zambia.	Industrial Development Corporation (INDECO)	No particular follow-up action was recommended.	It has been included in the fourth national development plan that will start in January 1989. To date, only the feasibility study has been completed.	Negotiations on financing the project which will be implemented by INDECO are currently under way. The project should be retained in the revised programme for implementation in the short term.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
Re-rolling mills for sections and bars for high-tension electricity transmission in Eastern and Southern Africa.	Meeting of PTA Committee of Experts	Project was to be located in Zimbabwe and pre-feasibility studies were recommended.	No action taken.	Since there was no specific promoter for the project, it was recommended that it <u>not</u> be retained in the revised programme. However, the project concept will be taken into account in the programme for the expansion and diversification of ZISCOSTEEL.
Copper fabrication plant for Eastern and Southern Africa, Zambia.	PTA Committee of Experts	Project was to be located in Zambia and follow-up action entailed the preparation of pre-feasibility studies.	INDECO and a Polish company were undertaking a new feasibility study which would determine the final scale of production.	Initially the scale of production might have to be reduced in order to bring it within the financial reach of Zambia, thus ensuring implementation of the project. The project was included in both the fourth national development plan and the industry chapter of the SADCC programme for the subregion. Therefore, it was recommended that the project be retained in the revised programme for implementation in the short term.
Manufacture of transformers, Zambia.	INDECO Zambia	Project was to be located in Zambia and follow-up action included feasibility study.	Feasibility study undertaken and project scaled down to national level.	Included in the industry chapter of the SADCC programme, the project is the second phase of a project for the manufacture of electric motors for which a feasibility study has been carried out and negotiations are being held with potential partners. The size of the project would be determined by the express wish to begin with a plant of manageable size that was within the financial means of the country. It was therefore recommended that the project be retained in the revised programme for implementation in the medium term.

Project number, title and location of the project	Promoters/Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
CHEMICAL INDUSTRY				
. Ethiopian potash, Ethiopia/Libya.	Ethio-Libyan Joint Mining Co. (ELMICO)	Project retained in initial programme given the abundance of potash deposits, (at present not exploited) and in order to meet multi-country/subregional demand.	First phase of feasibility study completed in 1987.	The study concluded that project was technically feasible, but that an economic study was also needed. Phase II of studies was temporarily suspended owing to logistical problems in the project area, but will be resumed as soon as situation improves. Project should be retained in the revised programme for implementation in the long term.
. Tanzania multinational ammonia/urea project, Tanzania.	Government of Tanzania	Final decision on construction of plant.	Action taken to mobilize financial assistance, particularly pledges, some of which have been outstanding for 4 years.	Definitive courses of action need to be taken on the basis of a well-articulated strategy for implementing the project which is a priority project for the Government. It is also included in the industry chapter of the SADCC programme. Costed at some \$425 million, with a local input of \$20 million, the project would initially be export oriented. Despite several countries' expressing interest in participation, no firm commitment has as yet been received. It was also recognized that the demand for fertilizers far outstripped local supplies, thus justifying the establishment of new capacity. That notwithstanding, efforts should be rationalized not only in terms of plant location and economies of scale, but also in terms of production processes and feedstocks used. None of the four plants currently operational in the PTA countries use natural gas, the preferred feedstock. It should be retained in the revised programme for implementation in the medium term.
. Phosphate fertilizer plant, Uganda.	Government of Uganda	Project retained in initial programme in view of local abundance of basic raw materials (phosphate rock and pyrites).	Updating of comprehensive study of 1984 to include manufacture of triple super phosphate being carried out by outside consultants and will be completed by December 1988. ADB had agreed to participate in co-financing, its share being established once the study was complete. Government looking for equity partner.	In view of established demand for phosphate fertilizers, the project is recommended for retention in the revised programme on a short-term basis.
. Phosphate fertilizer plant, Zimbabwe.	African Explosives and Chemical Industries Ltd	Located at Msasa in Harare and follow-up action recommended was expansion of plant.	Project as originally conceived has been scaled down to national level.	Project was never conceived as a subregional project. It had, in fact, been scaled down and was likely to meet local demand only. It was therefore <u>not</u> recommended for retention in the revised programme.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
16. Production of caustic soda, Kenya.	Joint Binla Technical Services (India) and Vinyls and Chemicals (Kenya)	Project retained in initial programme in view of local abundance of basic raw materials (limestone and soda ash).	Joint venture agreement signed in June 1988, for production of 10,000 tons of concentrate.	Promoters seem interested in local market only, but potential exists for subregional level market given high demand for caustic soda that three plants currently in the subregion cannot satisfy. It should therefore be retained in the revised programme for implementation in the short term.
<u>BUILDING MATERIALS INDUSTRY</u>				
17. Mauritian Cement Corporation, Mauritius.	Mr G. Joonas	Study to assess environmental risks needed to be carried out. If risks acceptable, feasibility study was to be carried out.	None.	The Government and the promoter are no longer interested in the project owing to acute shortage of sand for construction works (the rate of depletion being greater than the rate of replenishment), and the associated long-term ecological impact of the project, as well as the availability of imported cement at highly competitive prices. The project was therefore not recommended for retention in the revised programme.
18. Sheet-glass production unit, Madagascar.	Ministry of Industry	Project retained in initial programme since sheet glass is an essential building material currently imported by countries in the subregion. Some raw materials available locally.	Opportunity study for subregional project covering both sheet and hollow glass carried out by UNIDO in mid-1987.	The study concluded that a unit producing only sheet glass was not a feasible proposition. It recommended a combined plant producing both sheet and hollow-glass, which would be feasible, provided that the SOVEMA factory for hollow glass at Tamatave (closed since July 1984) was rehabilitated and expanded into an integrated plant to reduce investment costs and serve the limited Indian Ocean market, especially that of Mauritius. Project to be retained in revised programme for implementation in the medium term.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
II. - SUPPORT PROJECTS				
S1. Transformation of Serere research station into a subregional R & D centre.	ECA-MULPOC	It was agreed to retain the project in the initial programme as it had been endorsed by the Council of Ministers of the MULPOC at its meeting of March 1982. The project would benefit the countries of the subregion by reducing their dependency on wheat imports, increasing the utilization of indigenous crops and contributing to self-sufficiency, etc.	Little progress made owing to political situation in Uganda. The station has been closed since June 1987 owing to troubles in the area, and the research activities temporarily transferred to Arapai Agricultural College. PTA had included in its programme a project for the revitalization of the research station in respect of agriculture.	The project should be kept in abeyance until such time as normal activities are resumed at the Serere research centre. It should, nevertheless, be retained in the revised programme.
S2. Assistance to the African Regional Organization for Standardization (ARSO) and African Institute for Higher Technical Training and Research (AIHTTR).	ECA/OAU/ UNIDO/ARSO AIHTTR	It was agreed to enhance and strengthen the capacity of both institutions to assist countries in improving (a) national standards, quality control, and (b) African institutions, technologists and engineers through producer-oriented training.	ARSO received assistance from UNIDO. Assistance was approved by UNDP. Both ARSO and AIHTTR have co-operated with ECA and UNIDO in carrying out a number of activities.	In view of the importance of ARSO and AIHTTR to Africa's industrialization and the promotion of subregional co-operation, it is recommended that the project be retained in the revised programme.
S3. Inventory of subregional training facilities.	SADCC Industrial Co-ordination Unit.	It was agreed to undertake a survey of industrial training facilities.	The Directory for SADCC countries has been prepared. UNIDO has also extended assistance to some of institutions in the subregion.	Although the project has been completed for SADCC countries, it should, nevertheless, be retained in the revised programme and expanded to cover other countries of the subregion.
S4. Managerial and technical personnel training.	SADCC	It was agreed to plan and implement training programmes for managerial and technical personnel at ESANI.	In progress.	This is an on-going long-term project and should therefore be retained in the revised programme.
S5. Development of industrial consultancy and management capabilities.	SADCC	Not specified.	SADCC undertook a survey and published a directory of industry consultancy firms within the SADCC subregion.	A directory of industry consultancy firms in SADCC countries was published in Aug 87. Tanzania Industrial Studies and Consultancy Organisation (TISCO), for example, has the expertise to provide consultancy. It is recommended that the project be retained in the revised programme and expanded to cover other countries in the subregion and a programme to utilize subregional industrial consultancy services should be developed.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
S6. Development of local entrepreneurship (Directory of small-scale industrial project profiles).	ECA/UNIDO/ OAU	The preparation of a directory of project profiles was recommended.	The first edition of the directory has already been completed and distributed by ECA. Furthermore, UNIDO has produced and distributed a study on "How to start manufacturing industries" containing project profiles for small-scale industries.	<p>1. In many countries of the subregion, there are institutions charged with the promotion of small- and medium-scale industries which develop their own project profiles. It is thus important to assist these institutions in co-ordinating their actions by familiarizing them with and harmonizing their work through this project.</p> <p>2. These activities will facilitate the standardization of the project profiles, the method of utilization and their implementation in this field.</p>
S7. Processing of fish and other seafoods.	PTA/SADCC/ ECA/UNIDO/ OAU	Not specified.	No action taken.	Since no progress has been made on the project it was recommended that the project <u>not</u> be retained in the revised programme.
S8. Improvement and development of cement industry.	SADCC	It was recommended that a network of national institutions be established to gather and disseminate technical information on cement and allied products.	UNIDO and PTA had co-operated in an appraisal of the cement industry in the subregion. A follow-up and expanded project had been approved for financing from the UNDP regional IPP for the fourth programming cycle so as to enable UNIDO to undertake further, more detailed studies. Tanzania had also established a National Institute of Cement Technology whose resources it was prepared to make available to other countries in the subregion.	PTA and SADCC are still interested in the project which should be retained in the revised programme.
S9. Utilization of steel plant waste for the production of slag cement.	SADCC/PTA	Not stated.	No progress.	<p>Since the project had been advanced as an idea and no progress has been made, it was recommended that it <u>not</u> be retained in the revised programme. The slag available at ZISCOSTEEL (500-600,000 tons a year) was sufficient only for a national project which would be tied in with a cement brick factory and the programme for the expansion and diversification of ZISCOSTEEL.</p>

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ANNEX III

PROFILES OF PROJECTS RETAINED IN THE REVISED PROGRAMME

PROJECT PROFILE NO. 1

SUBSECTOR: Metallurgical industry (iron and steel)

SUBREGION: Eastern and Southern Africa

PRIORITY: short-term

1. Project Title: Upgrading and diversification of products from ZISCOSTEEL (Zimbabwe)
2. Objective: To upgrade or rehabilitate most of the major production equipment at ZISCO.

- | | | |
|-------------------------|---------------------------|----------------------------|
| 3. Promoter/
sponsor | 5. Project
status | 7. Raw materials |
| 4. Location | 6. Immediate
follow-up | 8. Energy |
| | | 9. Physical infrastructure |
3. ZISCO and subsidiary companies BLMCO and LANCASHIRE STEEL.
4. Redcliff, Midlands Province, Zimbabwe.
5. Pre-feasibility studies completed. Overall project consultants appointed and will soon start work.
6. Subregion to assist in the promotion of the utilization of the products. UNDP/UNIDO, ADB and other funding organizations will assist in raising the finances.
7. Iron ore, coke, limestone, diesel fuel/oil.
8. All available as per ZISCO current programme.
9. ZISCO and subsidiary infrastructure available.

- | | | |
|---------------------------------|-------------------------|--|
| 10. Projected demand by product | 12. Capacity by product | 14. Additional information including collaboration arrangements already made and type of participation sought by Member States |
| 11. Market | 13. Total investment | |
10. Zimbabwean and subregional demand for iron and steel products is well documented. Details in sub-projects.
11. Both local and subregional markets, details of which are outlined in the sub-projects listed under 14.
12. Overall capacity of ZISCO of about 1 million tons liquid steel will not change, but efficient plants will contribute to more consistent production and better quality.
13. At about Z\$1 billion, 50 per cent of which will be foreign exchange.
14. Existing equipment is very old and therefore becoming inefficient. The upgrading involves the following set of projects:
 1. Iron-ore restructuring, including burden-preparation.
 2. Sinter plant.
 3. Recline of blast furnace number 4.
 4. Desulphurizing plant.
 5. Replacement and modernization of LD vessels.
 6. Slab caster.
 7. Cold strip mill.
 8. Bar/rod mill modification.
 9. Rebuilding of battery 3 or 4.
 10. Benzol refining and tar distillation plant.
 11. Steel centre.
 12. Power station.
 13. Effluent treatment plant.

PROJECT PROFILE NO. 2

SUBSECTOR: Metallurgical industry (iron and steel)

1. Project Title: Expansion of iron and steel mill (Uganda)

2. Objective: To exploit known iron ore deposits for use in expanded steel plant.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials	10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
4. Location	6. Immediate follow-up	8. Energy	11. Market	13. Total investment	
3. Ministry of Industry, Uganda.	5. Conceptual stage.	7. Existing steel plant utilizes imported billets/ ingots and local scrap at present, but expanded plant will utilize locally extracted iron.	10. Information not available.	12. (a) <u>Present</u> 25,000 p.a.: steel intermediates (rods, bars, sections and strips). (b) <u>Expanded</u> 100,000 tons p.a.: current steel intermediates and additional unspecified items.	14.(a) The mill expansion in the original project has been initiated and funds secured. A new facility has been in operation since 1983, and its possible expansion is being considered. A third (sponge- iron) project is also being considered. b) Although no collaboration arrangements entered into so far, Government welcomes economic co-operation with multilateral sources in the form of consultancy foreign capital and technological know-how. c) The Government and local private sources could provide up to 30% of the estimated total investment, the balance coming from multilateral sources; the structure of ownership flexible. d) Terms of co-operation are subject to negotiation between Government and potential partners. e) Information about manpower requirements not available, but training of local personnel necessary.
4. Uganda.	6. Feasibility study to establish viability, including detailed study of market and future demand in terms of volume and product mix.	8. Energy required is available (630-700 million kWh/p.a.)	11. Local market (70%), export to neighbouring countries (30%). A national study on availability of local scrap and on demand for iron and steel has been carried out.	13. Estimated at \$600 million, excluding costs of infrastructure.	
		9. (a) Steel plant in operation but requires expansion. (b) Primary metal facilities still to be developed. (c) Transport facilities between the iron ore beds and the steel/iron plant still to be developed.			

PROJECT PROFILE NO. 3

SUBSECTOR: Metallurgical industry (iron and steel)

1. Project Title: Integrated iron and steel mill (Kenya)

2. Objective: To establish a new enterprise for the manufacture of non-flat and flat steel products.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Kenya.	5. A feasibility study was prepared in June 1982 by Austroplan and reviewed by Commonwealth Secretariat in October 1984.	7. Iron ore, manganese ore and coking coal are to be imported, whereas limestone fluor spar and scrap are available locally.
4. Mombasa, Kenya.	6. Feasibility study, whose findings had led to the project being revised, needs updating. An inter-ministerial task force was set up in June 1988 to examine all aspects of iron and steel industry.	8. Austroplan recommended use of wood charcoal as fuel and reducing agent, but this requires planting eucalyptus trees over 120,000-180,000 hectares, to which the Government may not agree.
		9. 11 steel-rolling plants exist in Kenya. No exact information is available concerning the new enterprise; however, Mombasa has adequate harbour facilities and related infrastructure.

PRIORITY: long-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 432,000 tons in 1985 524,600 tons in 1990 735,800 tons in 1995, and 1,031,500 tons in 2000.	12. Proposed production programme: a) <u>Non-flat products:</u> 103,650 tons in 1995 and 241,250 tons in 2000. b) <u>Flat products:</u> 316,400 tons in 1990 445,000 tons in 1995 611,400 tons in 2000	14. (a) No information is available concerning any collaboration arrangements entered into in respect of this project. (b) No particular participation by countries in the subregion is sought, however, participation by countries outside the region is sought in terms of equity holding, supply of technology know-how and loans and credit. (c) Total manpower requirements for all the stages of the project total 6,695 persons at all levels, but no information on training requirements is available.
11. Mainly geared to domestic market, but export opportunities to neighbouring countries exist.	13. Estimated in 1982 at some \$887.6 million for all the stages of the project.	

PROJECT PROFILE NO. 4

SUBSECTOR: Engineering industry (engine manufacture)

1. Project Title: Manufacture of diesel engines for tractors, trucks, lorries and buses (Zimbabwe)

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

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Second meeting of Intergovernmental Committee of Experts on Engineering Industries for Eastern and Southern Africa following the recommendations of the Sixth Meeting of the Lusaka-based MULPOC Council of Ministers.	5. Project expected to become operational at the end of 1988 as project approval had been obtained from the Ministry of Industry.	7. Grey cast iron and forging quality steel will be available in the subregion. Quality steel to be imported initially. Aluminium ingots can be imported from outside the subregion.
	6. Expansion to cover the subregional market.	8. Energy available.
		9. Physical infrastructure proposed.

4. Zimbabwe.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 100,000 units p.a. (1990) 237,000 units p.a. (2000).	12. 30,000 p.a. on one-shift basis and 90,000 p.a. on three-shift basis.	14. T.A Holdings Ltd of Zimbabwe has entered into a joint venture with a company to reassemble diesel engines and to repower, refurbish repair and service of all makes of trucks. Output would include stationary diesel engines and marine engines as well.
11. Supplies to tractor factory and lorries/trucks/buses chassis factories proposed for the subregion.	13. (a) Pre-investment studies: \$300,000 (b) Total basic investment: \$80 million.	

PROJECT PROFILE NO. 5

SUBSECTOR: Engineering industry (road transport)

1. Project Title: Manufacture of low-cost standard multi-purpose vehicles (Madagascar)

2. Objective: To develop manufacture of road transport equipment suited to rural needs.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Institut Malgache d'Innovation (IMI).	5. Completed and operational since November 1987.	7. Mechanical parts, chassis and coachwork.
4. Fianarantsoa, Madagascar.	6. Expansion to cover the subregional market.	8. 500,000kw.
		9. Buildings, equipment and access road completed.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Not known.	12. 300 light cars (5-seaters) (present production per year).	14. Promoter looking for local or subregional partner to market the vehicles in the subregion.
11. Domestic.	13. FMG3,670 million.	

PROJECT PROFILE NO. 6

PRIORITY: short-term

SUBSECTOR: Engineering industry (agricultural machinery and equipment)

SUBREGION: Eastern and Southern Africa

1. Project Title: Irrigation equipment plant (Zambia)

2. Objective: Production of various irrigation equipment, such as pumps, pipes, connections and valves.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure
3. INDECO (main shareholder).	5. Project not yet implemented. However, feasibility study has already been completed, and INDECO are looking for suitable partners. Negotiations at an advanced stage.	7. Steel profiles, sheets, pipes, alloy castings, etc., to be imported.
A. Lusaka or the Copperbelt.		8. Available.
	6. Construction of building as soon as suitable shareholders have been identified.	9. Available in part; other facilities such as buildings will be provided at a later stage.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	
10. Projected demand for various irrigation items: 3,677 tons per year.	12. Estimated planned capacity: 3.6 thousand tons per annum (373,480 pieces per annum).	14. Project presented to the UNIDO regional investment promotion meeting for Southern African countries (Lusaka, October 1983). Project being implemented by INDECO and a suitable partner. Project is contained in the national development plan.
11. Local.	13. Estimated investment: \$19.2 million.	

PROJECT PROFILE NO. 7

SUBSECTOR: Engineering industry (energy equipment)

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

1. Project Title: Copper fabrication plant for Eastern and Southern Africa (Zambia)

2. Objective: To produce copper sheets and copper strips.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Industrial Development Corporation (INDECO).	5. Feasibility study carried out by INDECO using UK consultants.	7. Copper.
4. Lusaka, Zambia.	6. UNIDO providing technical assistance for feasibility study.	8. Available.
		9. Other infrastructure available, but building to be constructed.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. To be determined in the feasibility study.	12. To be determined in the feasibility study.	14. Although the project has been scaled down to cover only the national market, it possesses potential for expansion to cover the subregional market.
11. Local.	13. To be determined in the feasibility study.	

PROJECT PROFILE NO. 8

SUBSECTOR: Engineering industry (energy equipment)

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

1. Project Title: Manufacture of electric motors and transformers (Zambia)

2. Objective: To manufacture electric motors and transformers.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. INDECO Ltd, Zambia.	5. Negotiations for implementing the project have reached an advanced stage.	7. (a) Electric motors: copper wire from Zambia Metal Fabricators Ltd. Initially castings will be imported, but later will be localized from metal scrap. (b) Transformers: Electric motors from phase one. Rolled and drawn copper rods and copper strips available locally. Steel channel sections and angles available in the subregion; other raw materials to be imported from the subregion.
4. Lusaka, Zambia.	6. PTA/UNIDO to assist in securing finance.	8. Available.
		9. Other infrastructure available, but buildings to be constructed.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. (a) Electric motors: local demand. (b) Transformers: 4,000 MVA p.a. (1990) 9,000 MVA p.a. (2000).	12. (a) Electric motors: initially 1,400 motors per annum; 5,000 motors by 1990. (b) Transformers: 1,500 units p.a. (16 KVA - 2000 KVA).	14. The project will be implemented in an integrated form. The electric motor project will constitute phase one and the transformer project phase two. The project is contained in the fourth national development plan to be launched in January 1989.
11. (a) Electric motors: initially local, later to cover the subregion. (b) Transformers: all electricity enterprises in the subregion.	13. (a) Electric motors: \$2.70 million. (b) Transformers: \$18.84 million.	

PROJECT PROFILE NO. 9

SURSECTOR: Chemical industry (fertilizers)

PRIORITY: long-term

SUBREGION: Eastern and Southern Africa

1. Project Title: Ethiopian potash (Ethiopia/Libya)

2. Objective: To exploit potash deposits and meet multicountry/subregional demand.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure
3. Ethio-Libyan Joint Mining Co.	5. First phase of feasibility study completed in 1987 by PEC engineering France and reviewed by an independent consultant.	7. Sylvinite: 160 million tons. The total potential reserves of potash could be several billion tons.
4. Dallol, Ethiopia.	6. Completion and evaluation of feasibility study.	8. Potentially available: geothermal.
		9. Needs to be developed.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	
10. Combined demand for potassium chloride and potassium sulphate in the subregion is expected to rise to 133,000 tons K ₂ O in 1990 and 232,000 tons by 2000, as against 50,000 tons in 1979.	12. 1.5 million tons of potassium chloride from underground mining of sylvinite ore.	14. (a) First phase of study concluded that the project was technically feasible, but that an economic study was also needed. Consultants recommended the underground, open pit and solution method of mining. (b) Second phase of studies temporarily suspended owing to logistical problems in project area. (c) Government submitted project to PTA Secretariat in October 1987 with request to arrange transfer of technology for mining, processing and developing a potash-based chemical industry, as well as financing the project and marketing the product.
11. Principal markets for Ethiopian potash are outside Africa, since nature of African soil is unsuitable for potassic fertilizers.	13. Investment of \$500 million, including outlay for harbour and rail facilities.	

PROJECT PROFILE NO. 10

PRIORITY: medium-term

SUBSECTOR: Chemical industry (fertilizers)

SUBREGION: Eastern and Southern Africa

1. Project Title: Tanzania multinational ammonia/urea project (Tanzania)

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

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Tanzania.	5. Finance only partly secured through pledges.	7. National gas reserves one trillion (10^{12}) cubic feet, enough to supply the plant for 60 years at a rate of 16 million cubic feet/year. None of the four plants currently operational in the PTA countries use natural gas; they preferred feedstock.
4. On Kilwa Masoko shoreline, 150 miles south of Dar-es-Salaam, Tanzania.	6. Long-term purchase agreement with countries in the subregion. There is need to investigate the concerns of Malawi.	8. Hydroelectric power supply from national grid.
		9. Road being improved.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. No information available.	12. 1,150 ton/day ammonia and 1,750 ton/day urea.	14. Action has been taken to mobilize financial assis- tance, particularly pledges, some of which have been outstanding for 4 years. Definitive courses of action need to be taken on the basis of a well-articulated strategy for implementing the project, to which the Government has accorded priority.
11. Domestic and SADCC subregion, initially export-oriented.	13. \$425 million, local component \$20 million.	

PROJECT PROFILE NO. 11

PRIORITY: short-term

SUBSECTOR: Chemical industry (fertilizers)

SUBREGION: Eastern and Southern Africa

1. Project Title: Phosphate fertilizer plant (Uganda)

2. Objective: To establish new facilities incorporating existing fertilizer plant.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. Government of Uganda (TICAF).	5. Study undertaken in 1984 to determine the commercial, technical, financial and economic viability of the project.	7. Phosphate rock and pyrites, and imported sulphur. Phosphate reserves are estimated at 230 million tons (12.8 per cent P ₂ O ₅).
4. Uganda (Tororo).	6. Updating and evaluation of the study almost complete.	8. Hydroelectric power from electric grid.
		9. Adequate.

10. Based on past trends, subregional demand is estimated at 1.3 million tons by 2000.	12. 210,000 tons/year of single super phosphate and 38,000 tons/year of triple super phosphate.	14. (a) The Government of Uganda is willing to involve other Member States in the sub- region in technical services, marketing and equity. (b) TICAF plant closed since 1978. (c) Contract for updating the feasibility study awarded recently for \$50,000 to same firm which carried out original study. This study will be completed by December 1988. (d) ADB has agreed to act as lead bank in putting together the financing package. (e) Government is looking for an equity partner with technical and management know-how in this field.
11. Extends beyond subregion to other countries in the Central African subregion. 20 to 30 per cent of the planned capacity could be absorbed by Uganda.	13. \$120 million.	

PROJECT PROFILE N O. 129/

SUBSECTOR: Chemical industry (fertilizers)

1. Project Title: Production of phosphate fertilizers (Burundi)

2. Objective: Manufacture of fertilizers using phosphate.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Burundi.	5. Pre-feasibility study completed.	7. Phosphate deposits in Matongo. ^{10/}
4. Matongo, the proximity of the deposits.	6. Complete market studies as con- firmation of feasibility.	8. Energy from Rwegura dam, situated 20kms from Matongo.
		9. Physical infrastructure to be developed.

9/ It was agreed to include this project in the project for the Eastern and Southern African subregion on account of the fact that the project, which had also been retained in the revised subregional programme for Central Africa (see document ID/WG.456/3/Rev.1, 4 March 1986, page 47, profile No. 4), was fully integrated within the PTA programme and served Burundi, Rwanda and Tanzania.

10/ Reserves:

9,297,175 tons with a phosphate content of 7 per cent (weighted average of 13.3 per cent P₂O₅).
13,716,350 tons with a phosphate content of 5 per cent (weighted average of 11.5 per cent P₂O₅).
These reserves are minimal.

PRIORITY: short-term

SUBREGION: Central Africa/Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. CEPGL demand estimated at 29,000 tons a year.	12. 20,000 tons of super phosphate per annum based on the pre- feasibility study. This figure will be confirmed by the market survey indicated under 11 above.	14. a) Funds for setting up the plant being sought. b) Intermediates not available locally will be imported primarily from countries in the subregion.
11. Will be determined on basis of market survey which covered countries outside the CEPGL.	13. \$40 million according to the feasibility studies.	

PROJECT PROFILE NO. 13

SUBSECTOR: Chemical industry (basic chemicals)

1. Project Title: Production of caustic soda (Kenya)

2. Objective: To establish a caustic soda production enterprise.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Kenya.	5. Feasibility studies carried out in 1979. Project under implementation.	7. (a) <u>Locally available</u> : Limestone and soda ash; deposits of latter estimated at 100 million tons. (b) <u>Imported</u> : Sodium nitrate, sulphur and hydrochloric acid.
4. Kajiado township, Kenya.	6. Promotion of project in the subregional market.	8. Information about present project requirements is not available.
		9. No details are available, apart from general requirements such as land, buildings, machinery and equipment.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Information not available, but demand for caustic soda known to be high throughout the subregion.	12. 10,000 tons p.a. of concentrated caustic soda.	14. (a) Manpower requirements are estimated at 50 technical staff; (b) A joint venture between Binla Technical Services (India) and Vinyls and Chemicals (Kenya) has been recently formed and production is due to start in 1989.
11. Local: 18,000 tons p.a.; (based on imports in 1985 and 1986).	13. Estimated at \$5.3 million, including land, buildings, machinery, equipment, pre-production costs, contingencies, and working capital.	

PROJECT PROFILE NO. 14

SUBSECTOR: Chemical industry (ancillary products)

1. Project Title: Sheet-glass production unit (Madagascar)

2. Objective: To promote local production of sheet-glass, an essential building material currently imported by countries in the subregion.

3. From per/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure
3. Government.	5. Opportunity study completed in 1987.	7. Sand, quartz, dolomite and feldspar locally available. Other raw materials (soda ash, sodium sulphate, borax fluorspar and cryolite) to be imported.
4. Toamasina, Madagascar.	6. (i) Consultations with other countries of the subregion for their participation in the project; (ii) Feasibility study; (iii) Mobilization of investment.	8. Fuel oil. 9. Working of sand pit and mining of quartz and feldspar will have to be developed.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	
10. 13,500 tons p.a. sheet-glass and 11,200 tons p.a. hollow glass in the Indian Ocean islands.	12. 16,740-20,385 tons of crude glass of both types per year.	14. According to opportunity study: (i) a unit to manufacture only sheet-glass is not feasible; (ii) it recommended rehabilitation and expansion of the existing SOVEMA hollow glass factory at Tamatave (closed since July 1984) and its use as an integrated plant to produce both sheet- and hollow glass; (iii) the project will require market-sharing arrangements with other countries in the subregion, especially Mauritius; (iv) manpower requirements: 261 nationals and four expatriates.
11. Madagascar and other Indian Ocean islands in the subregion.	13. <u>Sheet-glass:</u> local: FMG3,450 mill. foreign: FMG17,383 mill. <u>Hollow glass:</u> local: FMG1,956 mill. foreign: FMG1,861 mill. Grand total: FMG24,650 million (including civil works).	

PROJECT PROFILE NO. S1

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure

1. Project Title: Transformation of Serere research station into a subregional R & D centre (Uganda)
2. Objective: To assist countries in improving food supplies in the subregion by increasing the production of indigenous cereals, root crops and legumes and their utilization in traditional, new and modified food products.

3. Promoter/sponsor:

Council of Ministers of the Lusaka-based MULPOC.

4. Location:

Uganda.

5. Estimated total cost:

\$1,095,000.

6. Project description and additional information:

At its fifth meeting, March 1982, the Lusaka-based MULPOC Council of Ministers endorsed the progress made on composite flour development programmes and adopted a resolution on converting Serere research station into a subregional institution for research and development of composite flours from sorghum, millet and other cereals and cassava. These crops grow well in the subregion and could reduce dependence on imported wheat. Bakery products made from composite flour as against 100 per cent wheat flour offer many advantages to African countries which import wheat in increasing quantities, yet grow non-wheat cereals, roots and tubers suitable for use in composite flour. These benefits are as follows:

- (a) Reduction of dependence of local bakeries and associated industries on wheat imports, thus leading to foreign exchange savings;
- (b) Increased utilization of indigenous products, thus providing production incentives;
- (c) Increased industrial investment, thus generating employment;
- (d) Increased food self-sufficiency;
- (e) Convenience as a 'vehicle' for improved nutrition through the addition of flour(s) from high-protein legumes.

The centre would also give demonstrations of industrial-scale processing of these materials, root crops and legumes and provide training in that field. There has been little progress in the development of the station as a subregional R & D centre because of the changes in the political situation in Uganda in recent years. In fact, research activities have been transferred to Arapai Agricultural College, 28 miles from Serere.

Recommendation: The project should be kept in abeyance until such time as normal activities are resumed at the station.

PROJECT PROFILE NO. S2

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure

1. Project Title: Assistance to the African Regional Organization for Standardization (ARSO) and the African Institute for Higher Technical Training and Research (AIHTTR)
2. Objective: To enhance and strengthen the capacity of both institutions to assist countries in improving;
(a) national standards, quality control; and (b) services of African technicians, technologists and engineers through producer-oriented training.

3. Promoter/sponsor:

ECA/OAU/UNIDO/ARSO/AIHTTR.

4. Location:

Nairobi, Kenya.

5. Estimated total cost:

- (a) \$100,000 for ARSO
- (b) \$200,000 for AIHTTR.

6. Project description and additional information:

(1) ARSO:

(a) The immediate project objective is to: (i) harmonize or introduce national standards for priority areas in the subregion; (ii) harmonize or introduce certification marking schemes in the subregion; (iii) assist the countries of the subregion in establishing and operating national metrology programmes; (iv) establish a technical standards documentation and information service at the ARSO secretariat; (v) train technical staff in the field of standardization, quality control, certification marking and metrology; (vi) assist countries of the subregion in strengthening their national standards bodies (NSB); and (vii) involve the countries of the subregion in the activities of international organizations concerned with standardization, quality control, certification marking and metrology; and

(b) Project outputs: (i) Review of standardization, quality control, certification marking and metrology practices in the subregion; (ii) Establishment of technical committees in priority fields; (iii) Preparation of standards of particular interest to the subregion; (iv) Collection and dissemination of data on standardization and related activities in the subregion; and (v) Survey of legal and industrial metrology practices in the countries of the subregion.

This project is being implemented.

(2) AIHTTR:

This project aims at: (i) Producing cadres in specific technical fields of importance to industry and R & D; (ii) Re-training of technical trainers, emphasizing the technological reorientation of education and training schemes; and (iii) Clearing-house activities, including comparisons/consensus on technical educational standards/qualifications, manpower profiles and data base, and collection and dissemination of information on industrial and technical training. This project is being implemented. ARSO received assistance from UNIDO. Further assistance is approved by UNDP. Both ARSO and AIHTTR have co-operated with ECA and UNIDO in carrying out a number of activities. The Directory for SADCC countries has been prepared.

PROJECT PROFILE NO. S3

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Inventory of subregional training facilities
2. Objective: To prepare an inventory of industrial training facilities in the subregion and strengthen a limited number thereof in order to improve industrial manpower training in the subregion.

3. Promoter/sponsor:

SADCC.

4. Location:

SADCC Industrial Co-ordination Unit, Dar-es-Salaam, Tanzania.

5. Estimated total cost:

Information not available.

6. Project description and additional information:

The project is designed to provide a complete survey of all training facilities/schemes in the subregion on the basis of which comprehensive subregional training programmes can be prepared and implemented. Although the project is being promoted by the SADCC, it is planned to expand its scope to include the other countries in the subregion and to involve AIHTTR and other relevant institutes. In carrying out the survey, information which would contribute to the preparation of an inventory of the industrial structure of the subregion should also be collected.

The directory has been prepared by the SADCC Secretariat for SADCC countries. However, it needs to be extended to cover other countries in the subregion. UNIDO has also extended assistance to some of the institutions in the subregion, such as the ZISCO Training Centre and is considering further assistance to other centres to strengthen their capabilities to become centres of excellence.

P R O J E C T P R O F I L E N O. S4

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Managerial and technical personnel training
2. Objective: To train the managerial and technical personnel required for subregional industrial development.

3. Promoter/sponsor:

SADCC.

4. Location:

SADCC Industrial Co-ordination Unit, Dar-es-Salaam, Tanzania.

5. Estimated total cost:

Further information on costs to be furnished by SADCC.

6. Project description and additional information:

(a) Background: A project idea discussed during a UNIDO programming mission to certain SADCC countries, whereafter SADCC undertook a feasibility study and some training has started at ESAMI.

(b) Immediate objective: To plan and implement training programmes for managerial and technical personnel at the Eastern and Southern African Management Institute (ESAMI), Dar-es-Salaam, in such areas as: (i) small-scale industries development and management; (ii) Project planning, evaluation and management; (iii) Production management; (iv) Stock control and warehouse management; (v) Financial management; (vi) Planning, evaluation and management of transport projects.

(c) Project activities: Although the SADCC has already undertaken a preliminary study relating to the project and ESAMI is already providing some training for managerial skills, there is a need for UNIDO, in co-operation with ECA and OAU, to assist SADCC in conducting a more comprehensive survey to determine the training needs of the subregion. On the basis of that survey training programmes could be drawn up for implementation during the second phase, within the framework of the IDDA and UNIDO's technical co-operation programme in Africa. Considerable assistance is also being extended to the countries and organizations in the subregion in the training of industrial technical and managerial skills.

(d) The scope of the project will be expanded to include other countries in the subregion.

PROJECT PROFILE NO. S5

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Development of industrial consultancy and management capabilities
 2. Objective: To develop or strengthen industrial management and consultancy institutions and policies in order to improve industrial management and consultancy in the subregion.
-

3. Promoter/sponsor:

SADCC.

4. Location:

SADCC Industrial Co-ordination Unit/Tanzania Industrial Studies and Consultancy Organization (TISCO), Dar-es-Salaam, Tanzania.

5. Estimated total cost:

\$891,000.

6. Project description and additional information:

(a) Background: A project idea discussed during a UNIDC programming mission to certain SADCC countries.

(b) Immediate objective: To develop or strengthen industrial management and consultancy institutions and policies designed to contribute to the effective implementation of the subregional industrial development programme. To utilize the services of TISCO in Tanzania and in Zimbabwe:

All Metal Founders - foundry and general
Conolly - foundry and general
Kornkarni (Pvt) Ltd - consultancy firm.
Morewear Industries - wagons and rolling stock
Nei Cochraine - boilers and water pumps
NIMR and Chapman - foundry and general
Samuel Osborne - mining equipment
Tinto Industries - agricultural implements and trailers
W.S. Craster - foundry and general
Zimplot - agricultural implements ox-drawn

(c) Project activities/cost/duration: Project activities are still to be defined: total costs are estimated at \$891,000. It is proposed that the project last two years. The SADCC Industrial Co-ordination Unit has already prepared a directory of industrial consultancy firms in SADCC countries.

(d) Suggestion: The scope of the project will be expanded to include other countries in the subregion.

PROJECT PROFILE NO. S6

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Development of local entrepreneurship (Directory of small-scale industrial project profiles)

2. Objective: To upgrade entrepreneurial capabilities in the small-scale industry subsector thereby promoting the establishment of the small-scale and manufacturing industries required during the Industrial Development Decade for Africa (1980-1990).

3. Promoter/sponsor:

SADCC and PTA
ECA/OAU/UNIDO.

4. Location:

Addis Ababa.

5. Estimated total cost:

a) Project personnel \$166,000
b) Training workshops and study tours for African entrepreneurs \$222,140
c) Equipment \$12,000
Total 400,140.

6. Project description and additional information:

The project aims at assisting African countries in laying the foundation for the accelerated, rational and integrated development of the small-scale industry subsector with a view to satisfying basic consumer needs and development needs in rural and urban areas as well as achieving the objectives spelt out in the programme for the Decade. The directory of project profiles is expected to provide local small-scale industrial entrepreneurs with the detailed information and guidance they require for initiating, preparing and implementing small-scale industrial projects, with or without the help of extension services. It is envisaged that the directory of project profiles will be developed into a handbook for entrepreneurs and African investors interested in small-scale industrial promotion units.

ECA undertook an initial project in this field (Ref: ECA/INR/SSI/WP/2 - Directory of Project Profiles on Small-Scale Industries in Africa). The first edition of the directory has already been completed and distributed by ECA. Furthermore, UNIDO has produced and distributed a study on "How to start manufacturing industries" containing project profiles for small-scale industries.

PROJECT PROFILE NO. S7

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Other support projects

1. Project Title: Improvement and development of the cement industry
2. Objective: To provide assistance to the SADCC member countries in developing and improving their cement and allied products industries.

3. Promoter/sponsor:

SADCC.

4. Location:

SADCC Industrial Co-ordination Unit, Dar-es-Salaam, Tanzania.

5. Estimated total cost:

Project costs still to be established.

6. Project description and additional information:

A project idea discussed during a UNIDO programming mission to certain SADCC countries.

Immediate objective: To establish a network of national institutions (co-ordinated by the SADCC Industrial Co-ordination Unit), which will:
(i) gather and disseminate technical information related to cement and allied products; (ii) initiate and co-ordinate subregional R & D programmes on cement and allied products, including feasibility studies; (iii) provide consultancy and advisory services; and (iv) organize training programmes, study tours, fellowships as well as meetings and workshops on various aspects of cement and cement-related industries.

Project activities: Assistance has been extended by UNIDO to the countries of the subregion in the preliminary assessment of their cement industries. A follow-up project has been approved for financing from the UNDP regional IPF for the fourth programming cycle so as to enable UNIDO to undertake further, more detailed studies.

ANNEX IV

SUMMARY INFORMATION ON NEW PROJECTS (PROJECT PROFILES)

PROJECT PROFILE N O. 1 (new proposal)

SUBSECTOR: Metallurgical industry (iron and steel)

1. Project Title: Establishment of integrated iron and steel mill (Madagascar)

2. Objective: To establish a new enterprise to manufacture metallurgical products.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Madagascar.	5. Feasibility study available.	7. Iron ore deposits available 15 km from project site.
4. Moraranga, Madagascar.	6. Financing to be arranged.	8. Electricity (14MW in first year, 71MW in second year and 69MW in third year) available in project area.
		9. Complete factory to be set up, as well as infrastruc- ture for mining the iron ore and transporting iron to project site.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Not available.	12. 70,000 tons metallurgical products.	14. Government seeks private investor interested in developing the project.
11. Market study made.	13. FF671.5 million.	

PROJECT PROFILE NO. 2 (new proposal)

SUBSECTOR: Metallurgical industry (iron and steel)

1. Project Title: Establishment of a steel re-rolling mill (Zambia)
2. Objective: To manufacture wire rods, channels angles, square, flat and round reinforcing bars.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. INDECO.	5. Feasibility study completed. Promoter looking for sources of finance.	7. Iron ore: 350 metric tons p.a.; ferro silicone: 120 metric tons p.a.; ferro manganese: 245 metric tons p.a.; metal scrap.
4. Lusaka, Zambia.	6. PTA, UNIDO and ADB to assist in securing finance.	8. Available.
		9. Complete plant to be set up.

SUBREGION:

PRIORITY: short-term
Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 120,000 metric tons by 1990. 165,000 metric tons by 1995.	12. Initially 30,000 tons billets p.a. After expansion, 60,000 tons p.a.	14. Project already submitted to ADB for financing and supply/purchase arrangements will be negotiated with ZISCOSTEEL.
11. Local.	13. \$35 million.	

PROJECT PROFILE NO. 3 (new proposal)

PRIORITY: short-term

SUBSECTOR: Metallurgical industry (iron and steel)

SUBREGION: Eastern and Southern Africa

1. **Project Title:** Establishment of multinational sponge iron plants in PTA countries (Mozambique/Tanzania/Uganda/Zambia)

2. **Objective:** To augment and supplement the production of iron and steel, presently based on metal scrap, in the subregion.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. PTA secretariat.	5. Through UNIDO technical assistance project (RP/RAF/85/611), a survey of the iron and steel industry of the PTA and SADCC countries was carried out. This study also included supply and demand projections up to the year 1995 and beyond. Together with the assistance of the Commonwealth Secretariat, UNIDO assisted PTA in conducting an in-depth assessment of small steel plants/rolling mills/re-rolling mills in the subregion.	7. The PTA subregion is well-endowed with mineral resources such as iron ore, coal, chrome ore, nickel, cobalt, titanium, copper and refractory materials/fluxing minerals such as silica, magnesite, limestone, fluospar, etc. The coal resources of the subregion is estimated at approximately 54,604 million tons with Zimbabwe accounting for the largest share, followed by Botswana and Mozambique. Large deposits of iron ore are to be found in several countries, notably Angola, Madagascar, Mozambique, Zambia and Zimbabwe.
4. Mozambique, Tanzania, Uganda and Zambia.	6. As a result of these studies, PTA initiated supply/purchase arrangements for ZISCOSTEEL billets with various national steel plants. Ethiopia, Kenya, Mauritius, Uganda and Zambia now obtain their feedstock from Zimbabwe. However, in order to meet fully the requirements of the subregion, it is considered desirable to promote the development of sponge-iron production in the subregion.	8. Varies according to project. 9. Varies according to project.

10. By 1995: 3.13 million tons per year.	12. Varies according to project.	14. The UNIDO survey estimated the iron and steel demand for the subregion would, at best, amount to about 3.13 million tons per year by the year 1995, while the total consumption of iron and steel in the subregion amounted to only 1.2 million tons per year during the period 1981-1983. Moreover, very little commercial exploitation of some of these resources is carried out and the processing of iron ore in particular is at an elementary stage. Prospects for the development of sponge iron are particularly favourable in Mozambique, Tanzania, Uganda and Zambia. Zambia has already taken concrete action in this direction and formulated a project for possible implementation with a major donor country.
11. Subregional.	13. Varies according to project.	

PROJECT PROFILE NO. 4 (new proposal)

SUBSECTOR: Engineering industry (road transport)

1. Project Title: Manufacture of low-cost vehicles (Ethiopia)

2. Objective: To produce bicycles, motorcycles, side-cars, three-wheelers, and animal drawn carts suitable for rural areas to meet local and subregional demand.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure
3. Ministry of Industry, Ethiopia.	5. Feasibility study available (by I.P.S. national consultants, in association with I.T. Transport of UK, January 1986).	7. 50 per cent local; 50 per cent imported.
4. Addis Ababa, Ethiopia.	6. UNIDO assistance sought for market study for bicycles, motorcycles and three-wheelers in the subregion, for which terms of reference are available.	8. Electricity (available).
		9. Building of 10,000m ² . required.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	
10. Local demand: Bicycles: 9,500 p.a. Bicycle trailers: 500 p.a. Motorcycles: 4,000 p.a. Three-wheelers: 800 p.a. Side-cars: 500 p.a. Horse carts: 900 p.a. Rural carts: 2,100 p.a.	12. Bicycles: 17,500 p.a. Bicycle trailers: 500 p.a. Motorcycles: 14,000 p.a. Three-wheelers: 1,200 p.a. Side-cars: 500 p.a. Horse carts: 400 p.a. Rural carts: 2,100 p.a.	14. 1) Negotiations underway with Government of China for collaboration in financing and know-how. 2) The first phase of project is manufacture of bicycles and three-wheelers. Designs for other low-cost vehicles will be prepared by the factory, and metal production would be left to local artisans.
11. Primarily domestic, but exports (mainly bicycles and motorcycles) to countries in the subregion would make it economic to manufacture more parts locally.	13. \$10 million.	

PROJECT PROFILE NO. 5 (new proposal)

SUBSECTOR: Engineering industry (machine tools and allied machinery)

1. Project Title: Spare parts and engineering hand tools factory (Ethiopia)

2. Objective: To manufacture various types of cast, machined and forged industrial spare parts, engineering hand tools and stainless steel cutlery.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Ethiopia.	5. Commissioning to be completed in first quarter of 1989.	7. Local scrap and other imported iron and steel. Basic products, chemicals, etc.
4. Akaki, Ethiopia (20 km from Addis Ababa).	6. UNIDO assistance required for market study for factory products in the subregion. Upgrading of training centre.	8. Electricity and gas available locally.
		9. Development area: 250,000m ² . Covered area: 30,000m ² .

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Local demand (present) Spare parts: 2,000 tons p.a. Engineering hand tools: 180,000 pieces p.a. Cutlery: 200,000 pieces p.a.	12. Industrial spare parts: 4,500 tons p.a. Engineering hand tools: 500,000 pieces p.a. Cutlery: 2,000,000 pieces p.a.	14. Know-how assistance in the operational management of plant needed. Inputs in the form of sponge iron, pig iron, steel rods and bars needed.
11. Primarily domestic, but export would greatly improve utilization of available capacity.	13. \$86 million.	

PROJECT PROFILE NO. 6 (new proposal)

SUBSECTOR: Engineering industry (agricultural machinery and equipment)

1. Project Title: Water pump factory (Ethiopia)

2. Objective: To produce centrifugal pumps (2-8 inches) and hand pumps for irrigation, water supply and construction applications.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Ethiopia.	5. Project already completed and production started 1987.	7. Local scrap, imported pig iron, steel bars and rods and chemicals.
4. Akaki, Ethiopia (20 km from Addis Ababa).	6. Assistance in surveying subregional market and promoting plant products.	8. Electricity available.
		9. Compound area: 20,000 m ² . Built-up area: 10,000 m ² .

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 500 centrifugal pumps and 2,000 hand pumps.	12. 1,500 centrifugal pumps/year and 3,300 hand pumps/year.	14. Plan to expand plant to produce 24-inch section diameter pumps already completed, but implementation suspended at present.
11. Initially estimated domestic demand was not realistic.	13. \$8 million.	

PROJECT PROFILE NO. 7 (new proposal)

SUBSECTOR: Engineering industry (machine tools and allied machinery)

1. Project Title: Machine-tool factory (Ethiopia)

2. Objective: To produce various types of universal machine tools and small presses.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Ethiopia.	5. Feasibility study completed. Negotiations with Italian suppliers under way as project is to be financed by Italian Government Credit.	7. About 70 per cent locally made, 30 per cent imported machine parts and components.
4. Akaki, Ethiopia.	6. Survey of subregional market and promotion of products required.	8. Electricity available.
		9. Built-up area: 10,000m ² .

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. About 200 pieces per year of lathes, milling machinery and drilling machinery as well as 35 pieces per year of small presses.	12. 350 units lathes, milling and drilling machinery. 60 units small presses (40-120 tons).	14. If going into subregional market proves successful, plant shall be expanded in terms of both quantity and type of machine tools. Need is recognized for close co-ordination and effective project harmonization through such organizations as PTA, SADCC and UNIDO, with related projects in Tanzania and Zimbabwe.
11. Initially, oriented towards domestic demand. But initial market penetration rate could be lower than anticipated, and excess capacity available for export to the subregion.	13. \$24 million.	

PROJECT PROFILE N O. 8 (new proposal)

SUBSECTOR: Engineering industry (agricultural machinery and equipment)

1. Project Title: Tractor- and animal-drawn farm implements factory (Ethiopia)

2. Objective: To produce tractor-drawn farm implements such as disc ploughs and harrows, as well as animal-drawn implements such as mouldboard ploughs and planters.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry.	5. Project detail design almost completed.	7. Imported plates, sheets and long products.
4. Nagreth, Ethiopia.	6. Assistance in surveying subregional market required.	8. Electricity and gas locally available.
		9. Compound area: 250,000m ² . Built-up area: 30,000m ² .

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. About 2,000 tons of nine types of tractor-drawn implements and 1,000 tons of 14 types of animal-drawn implements per year.	12. Annual capacity working two shifts: 6,000 tons of animal- and tractor-drawn farm implements.	14. Since major efforts will be required, especially in the initial year, to promote domestic market exports to neighbouring countries will contribute greatly to economic operation of plant.
11. Initially oriented to domestic market, with possibility of export to neighbouring countries.	13. \$35 million.	

PROJECT PROFILE NO. 9 (new proposal)

SUBSECTOR: Engineering industry (road transport)

1. Project Title: Truck-trailer and bodies factory (Ethiopia)

2. Objective: To manufacture locally truck bodies as well as animal- and semi-trailers for both solid and liquid cargoes.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry/ Calabrene of Italy.	5. Project feasibility study completed and approved for implementation. Negotiations on joint venture contract with foreign partner currently under way.	7. Steel plates and sheets as well as long products - hollow and solid, mostly imported.
4. Addis Ababa, Ethiopia.	6. Assistance in surveying subregional market for products required.	8. Electricity available.
		9. Compound area: 30,000m ² . Built-up area: 10,000m ² .

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Agro-trailers: 341. Truck-trailers and semi-trailers: 720. Truck bodies and chassis: 1,308. Tankers: 98. Tippers: 348.	12. Same as indicated in 10 above.	14. Products envisaged to be more competitive as against imports from outside Africa because of possible advantages through lower transport costs.
11. Initially oriented towards the domestic market, but excess capacity during early years of market penetration and additional shift capacities could serve subregional market.	13. \$20 million.	

PROJECT PROFILE NO. 10 (new proposal)

SUBSECTOR: Engineering industry (machine tools and allied equipment)

1. Project Title: Multi-purpose engineering workshop (Ethiopia)
2. Objective: To manufacture simple fabricated metal goods (vessels, conveyors, concrete mixers, boilers, etc.) needed for storage, material handling transport and processing, and to build up engineering capability.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Ethiopia.	5. Project feasibility study completed and approved for implementation. Negotiation for project design contract with foreign partner currently under way.	7. Imported steel sheets and bars, prime movers, locally cast components.
4. Akaki, Ethiopia.	6. Assistance in subregional market survey for plant products required.	8. Electricity locally available. 9. Compound area: 20,000m ² . Built-up area: 10,000m ² to be developed.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. About 2,000 tons of vessels material hand- ling equipment, boilers, heat exchangers, etc.	12. Capacity per year per shift: about 3,500 tons comprising boilers, heat exchangers, column mixers and agitators, vessels and material handling equipment.	14. Products envisaged to be more competitive in the subregion, as against imports from Europe or Far East, because of possible advantages through lower transport costs.
11. Primarily oriented towards domestic market, but extension to subregional market possible.	13. \$35 million, of which about 23 million in foreign currency.	

PROJECT PROFILE NO. 11 (new proposal)

SUBSECTOR: Chemical industry (basic chemicals)

1. Project Title: Establishment of a salt refining and packaging plant (Somalia)

2. Objective: To enhance export earnings.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Somalia.	5. Pre-feasibility study completed in 1981.	7. Available locally in abundance.
4. Hurdio- Hafun, Somalia.	6. Updating of study.	8. Group of diesel engines with 350HP total capacity.
		9. Infrastructure not developed.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 80,000 tons (domestic).	12. 3.8 million tons/year.	14. The pre-feasibility study concludes that the project was technically feasible and economically viable. Total investment figure includes interest during the period of construction, infrastructure costs and operating capital. Government is looking for equity participation, know-how and technology.
11. Export-oriented.	13. \$140 million.	

PROJECT PROFILE NO. 12 (new proposal)

SUBSECTOR: Chemical industry (basic chemicals)

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

1. Project Title: Expansion of Berbera gypsum factory (Somalia)
2. Objective: To help import substitution and exploit natural resources.

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| 3. Promoter/
sponsor | 5. Project
status | 7. Raw materials |
| 4. Location | 6. Immediate
follow-up | 8. Energy |
| | | 9. Physical infrastructure |
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| 3. Government
of Somalia. | 5. Factory
operational. | 7. 7 million tons of high-grade
gypsum and anhydrite re-
serves, one of the largest
deposits in the world. |
| 4. Berbera,
Somalia. | 6. Feasibility and market
studies needed. | 8. Factory obtains electricity
from nearby cement factory. |
| | | 9. A newly established factory
with all infrastructure. |

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| 10. Projected
demand by
product | 12. Capacity
by product | 14. Additional information
including collaboration
arrangements already made
and type of participation
sought by Member States |
| 11. Market | 13. Total
investment | |
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| 10. Not known. | 12. 1,620 tons of
calcined gypsum a
year. | 14. Government seeks technical
expertise for product
development and access to
foreign markets. |
| 11. No information
available, but
domestically oriented. | 13. No information
available. | |

PROJECT PROFILE N O. 13 (new proposal)

PRIORITY: short-term

SUBSECTOR: Chemical industry (fertilizers)

SUBREGION: Eastern and Southern Africa

1. **Project Title:** Rehabilitation of urea fertilizer plant (Somalia)

2. **Objective:** To increase agricultural production.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
3. Government of Somalia.	5. Pre-feasibility.	9. Physical infrastructure
4. Mogadishu, Somalia.	6. Investigation of technical problems.	7. Plant depends on nearby petroleum refinery for raw material.
		8. 6MW supplied by factory, an additional 3.2MW needed.
		9. Factory with all necessary equipment available; easily accessible.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	
10. Domestic, 15,000 tons p.a.	12. 50,000 tons p.a.	14. Initial investment in the plant was \$70 million. Factory has some technical problems. Participation sought in trouble-shooting, loan, know-how and management. Factory established in 1983, but has been operating at low level (1,405 tons in 1984, 1,953 tons in 1985 and 840 tons in 1986). Factory closed since 1986.
11. 35,000 tons of urea to be exported annually.	13. \$16 million.	

PROJECT PROFILE NO. 14 (new proposal)

PRIORITY: medium-term

SUBSECTOR: Chemical industry (ancillary products)

SUBREGION: Eastern and Southern Africa

1. Project Title: Manufacture of carbon black (Kenya)

2. Objective: To establish a new plant to produce carbon black, an essential raw material for the manufacture of tyres and printing ink.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Kenya.	5. Feasibility study carried out in 1987.	7. Light and heavy crude oil from refinery at Mombasa.
4. Mombasa, Kenya.	6. Market study needs to be carried out.	8. Information not available.
		9. Information not available.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Information not available.	12. 20,000 tons p.a. (minimum economic size).	14. Government looking for a private promoter.
11. Local: 8,000 tons p.a. Export: 12,000 tons p.a.	13. \$5 million.	

PROJECT PROFILE N O. 15 (new proposal)

SUBSECTOR: Chemical industry (ancillary products)

1. Project Title: Hollow glass manufacturing plant (Somalia)

2. Objective: To encourage import-substitution and give impetus to cottage-level producers.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Somalia.	5. Pre-feasibility.	7. Silica sand available locally.
4. Mogadishu, Somalia.	6. Further study to confirm market demand and analyze profitability.	8. No available information.
		9. A tarmac road links the proposed factory site to the raw material deposits.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 3,210-5,712 tons p.a. (1990).	12. 3,000-4,500 tons p.a. (minimum economic size).	14. Equity participation and know-how sought.
11. Oriented towards domestic market.	13. \$8.1 million.	

PROJECT PROFILE NO. 1 (new proposal)

SUBSECTOR: Chemical industry (pesticides)

1. Project Title: Rehabilitation of copper oxychloride plant (Zambia)

2. Objective: To expand production of copper oxychloride.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

3. Promoter, sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Marana Chemicals Ltd.	5. Feasibility study for the rehabilitation under preparation.	7. Copper wires/scrap, hydrochloric acid, fuel oil.
-. Ndola, Zambia.	6. Completion of feasibility study and promotion among potential investors and financing institutions.	8. Hydroelectricity available.
		9. Available.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. To be determined in the feasibility study.	12. To be determined in feasibility study on expansion.	14. Commonwealth Secretariat carrying out feasibility study and supply/purchase arrangements to be worked out with neighbouring countries.
11. Domestic and subregional.	13. To be determined in feasibility study on expansion.	

PROJECT PROFILE NO. 17 (new proposal)

SUBSECTOR: Chemical industry (pesticides)

1. Project Title: Rehabilitation of copper oxychloride plant (Zimbabwe)

2. Objective: To contribute to production of pesticides, thus reducing pre-harvest crop losses and increasing food output.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Zimbabwe.	5. Feasibility study for rehabilitation and expansion of existing plant under preparation.	7. Copper wires/scraps, hydrochloric acid, fuel oil.
4. Zimbabwe.	6. Completion of feasibility study and promotion among potential investors and financing institutions.	8. Coal-generated power available.
		9. Already established.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Local demand by 1990: more than 2,000 tons a year. Other countries in the subregion: 500 tons.	12. 3,000 tons.	14. Commonwealth Secretariat carrying out feasibility study and supply/purchase arrangements to be worked out with neighbouring countries.
11. Domestic and subregional.	13. To be determined in feasibility study.	

PROJECT PROFILE NO. 18 (new proposal)

PRIORITY: short-term

SUBSECTOR: Chemical industry (basic chemicals)

SUBREGION: Eastern and Southern Africa

1. Project Title: Integrated chlor-alkali and PVC plant (Zimbabwe)
2. Objective: Manufacture of chlor-alkali products (NaOH, Cl₂, HCl, NaOCl) and PVC resins for both the domestic and subregional markets.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

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| 3. Industrial Development Corporation of Zimbabwe Ltd (IDC). | 5. Requests for technical offers. | 7. Salt imported from the subregion; calcium carbide to be manufactured in Zimbabwe; process water made available locally; sodium carbonate imported from the subregion; and process chemicals imported. |
| 4. Plumtree, Zimbabwe. | 6. Final investment appraisal and requests for final offers. | 8. Electricity from the national grid (ZESA) at 11KV. There is to be a centrally located medium-voltage sub-station and a transformer-rectifier for the chlorine/caustic soda unit. |
| | | 9. The complex is to be located close to a source of raw water and fuel. The scope of off-sites and utilities is to include: electrical power sub-station; water supply and treatment; storage facilities and workshops; effluent treatment and disposal units; fire station; laboratories; medical centre and other personnel facilities. |

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| 10. Projected demand by product | 12. Capacity by product | 14. Additional information including collaboration arrangements already made and type of participation sought by Member States |
| 11. Market | 13. Total investment | |
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| 10. PVC: 15,000 tons p.a.
Caustic soda: 13,000 tons p.a.
Chlorine: 1,000 tons p.a.
Hydrochloric acid: 3,000 tons p.a. | 12. Acetylene: 8,686 tons
Chlorine: 13,563 tons
Caustic soda: 15,198 tons
Hydrogen chloride: 12,322 tons
VCM: 20,200 tons
PVC: 20,000 tons. | 14. Project expected to be a joint venture between IDC and Zimbabwe private sector companies. Issues of participation by Member States not yet decided. Total manpower requirement for the project is 362, of whom 75 engineering and technical staff. |
| 11. Domestic and subregional markets. | 13. Z\$235 million (\$125 million). | |

PROJECT PROFILE NO. 19 (new proposal)

PRIORITY: short-term

SUBSECTOR: Chemical industry (basic chemicals)

SUBREGION: Eastern and Southern Africa

1. Project Title: Chrome tanning salts (Zimbabwe)

2. Objective: Manufacture of sodium dichromate solution (leather tanning salt) for the domestic and subregional markets.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Industrial Development Corporation of Zimbabwe Ltd (IDC).	5. UNIDO team of experts to carry out final techno-economic feasibility study.	7. Chromite and limestone available in Zimbabwe; soda ash imported from the subregion; sulphuric acid available in Zimbabwe.
4. Shurugwi, Midlands.	6. Final investment appraisal.	8. Electrical power from the national grid (ZESA).
		9. Off-sites and utilities to be close to supply of main raw material (chromite ore).

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Tons p.a. by 1990: Zimbabwe: 960 Botswana: 400 Zambia: 100 Malawi: 100 Other SADC countries: <u>100</u> 1,660	12. 2,000 tons p.a. sodium dichromate.	14. Interested parties so far are the Industrial Development Corporation of Zimbabwe (IDC), the Botswana Development Corporation, Rio Tinto, Ciba, Bata Shoe Company, Imponente Tanning and Belmont Leather. Apart from Botswana, participation by subregional Member States not yet considered. Total manpower requirement is expected to be in the region of 35.
11. Domestic and subregional markets.		

PROJECT PROFILE NO. 20 (new proposal)

PRIORITY: medium-term

SUBSECTOR: Chemical industry (basic chemicals)

SUBREGION: Eastern and Southern Africa

1. Project Title: Production of caustic soda (Tanzania)

2. Objective: To ensure regular supply of basic chemicals urgently needed in priority industries, such as soap and detergents, textile and pulp and paper processing.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. National Chemicals Industries, Dar-es-Salaam, Tanzania.	5. Pre-feasibility study conducted by promoters.	7. Soda ash: at first from Lake Magadi, and later on from Lake Natron. Lime: from limestone quarried in coastal areas.
4. Arusha, Tanzania.	6. Feasibility study to be undertaken by future partner, covering such areas as: (i) Techno-economic feasibility study; (ii) demand analysis and pricing; (iii) technical aspects; (iv) raw materials; (v) manpower and training requirements; (vi) utilities and essential services; (vii) financial and economic analysis; and (viii) schedule of implementation.	8. Readily available from Tanzania Electrical Supplies Company.
		9. Provisional site selected in industrial area at Arusha, well served with essential facilities such as water and passable roads.

10. Local demand is estimated at 25,000- 30,000 metric tons p.a. Regional demand is estimated to be 50,000- 60,000 metric tons p.a.	12. 25-30,000 tons of caustic soda per annum.	14. The project requires a feasibility study by a partner who could actively participate in its preparation, provide technical know-how, supply machinery and possibly take share of the equity. Loan will be sought from such institutions as the EADB. Training in general will also be required.
11. Upon expanding the plant at a later stage, it is expected that the products will sell in Burundi, Kenya, Rwanda, Uganda and Zambia.	13. To be determined in the feasibility study.	

PROJECT PROFILE NO. 21 (new proposal)

SUBSECTOR: Chemical industry (basic chemicals)

1. Project Title: Lake Natron soda ash project (Tanzania)

2. Objective: Exploitation of soda ash.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. State Mining Corporation (STAMICO), Dar-es-Salaam, Tanzania.	5. Between 1974 and 1976, three Japanese companies (Toyo Soda, Toyo Menka Kaisha and Nippon Koei) carried out a feasibility study for a larger project (1.0 million tons per annum) costing \$318 million (1976 prices) that covered extensive infrastructural improvements, but proved too costly. However, given increasing domestic demand of soda ash, a smaller project was initiated and a new feasibility study was conducted by UNIDO experts in 1982/1983. Labour camp to accommodate 30-40 workers established and the construction of solar evaporation pans (reservoirs, condensers and crystallizers) is under way.	7. 109 million tons of soda ash reserves in crust and over 27 million tons in brine with an annual replenishment through springs.
4. On Kenya-Tanzania border, north-west of Arusha, Tanzania.		8. Solar evaporation process (with calcination) used.
		9. Available for smaller project.
	6. Purchase of the calcining plant, brine pumps, transport vehicles and other equipment required.	

10. Demand adequate and continually growing.	12. 30,000 tons of soda ash p.a. to be expanded to 60,000 tons p.a. in the second phase.	14. The first (larger) project was not implemented on account of the heavy investment involved, one-third of which was devoted to infrastructural improvements (roads, Arusha-Tanga railway line and the port facilities at Tanga). The project is open for joint venture with STAMICO. The project could also be geared to provide soda ash to other SADCC countries.
11. Local and subregional markets.	13. Capital cost: \$10.7 million, of which \$6.4 million is local component.	

SUBSECTOR: Chemical industry (non-metallic mineral products)SUBREGION: Eastern and Southern Africa1. Project Title: Mbagala sheet glass project (Tanzania)

2. Objective: To promote the local production of sheet glass and serve both local and subregional markets.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. Tanzania Saruji Corporation, through its subsidiary company Mbagala Sheet Glass Ltd, Dar-es-Salaam, Tanzania.	5. Rehabilitation required prior to final commissioning. 6. Mobilization of all local costs amounting to \$1 million. Provision of infrastructure including water, electricity and manpower. Mobilization of foreign currency for rehabilitation. Rehabilitation and infrastructural improvements require \$2 million (DM4 million), while initial raw materials and working capital call for an additional \$500,000. (Total cost of rehabilitating the plant amounts to \$2.5 million).	7. Silica sand: locally available some 15km from project site. Dolomite: locally available some 160km from project site. Limestone: locally available 400km from project site. Soda ash: imported from Kenya. Salt cake: imported from Europe. Alumina: imported from Europe.
4. Dar-es-Salaam, (15km south of city centre) Tanzania.		8. Available. 9. A 15km tarmac road in need of repair connects the plant to Dar-es-Salaam harbour and railway station. Water supply from city centre is inadequate. Telecommunication networks available.

10. Local demand is about 4-5,000 tons p.a., while exports are expected to reach 10,000 tons p.a.	12. Installed capacity: 15,000 tons of sheet glass p.a. 13. \$20,000,000.	14. Tanzania Saruji Corporation awarded a turnkey contract to Basse Sambre Eri of Belgium in 1979 to construct the plant. Development Consultants International of India were the overall consultants. Physical implementation of the project started in May 1981, and was completed in 1984. Additional facilities for the treatment of raw materials, particularly sand beneficiation, were completed in July 1985 and commercial production was expected to start immediately. However, owing to power supply problems, the plant could not be commissioned. Adequate electricity was only made available in April 1987.
11. Potential markets include Uganda, Zambia, Kenya, Madagascar, Rwanda and Burundi. The first three have rail links with Tanzania and enjoy traditional trading ties.		After lying idle for so long, some of the machinery and equipment, particularly the electronic equipment, as well as the furnace were inoperable making it necessary to rehabilitate the plant before commissioning it. The Belgian Government, which financed the original loan, was unable to fund the essential rehabilitation and commissioning of the plant which a contractor is willing to undertake. The Tanzanian Government has decided to proceed with plant rehabilitation, and is soliciting funds from elsewhere as well as drawing on its own resources. The Tanzania Industrial Studies and Consulting Organization (TISCO) have been hired as project consultants, and their study on rehabilitation needs shows a total foreign component requirement of DM900,000 (about \$450,000).

PROJECT PROFILE NO. 23 (new proposal)

PRIORITY: long-term

SUBSECTOR: Building materials industry (cement)

SUBREGION: Eastern and Southern Africa

1. Project Title: Production of cement for Indian Ocean island countries (Madagascar)

2. Objective: To establish a new enterprise to produce cement for the Indian Ocean island countries.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Madagascar.	5. Opportunity study carried out by UNIDO in early 1988.	7. Limestone, clay, charcoal, iron ore locally available. 19,200 tons of gypsum to be imported per annum.
4. Tulsar, Madagascar.	6. Feasibility study needed.	8. Thermal based on charcoal (48 million kWh p.a.).
		9. Need to develop infrastructure for exploiting coal deposits some 200km from project site.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. In year 2000 Portland cement: 773,900 tons. Clinker: 263,700 tons. Special cement: 139,200 tons.	12. 120,000 tons (1992) 400,000 tons (1995) (wet process).	14. Government prefers to import the 90,000 tons p.a. of coal from the subregion rather than incur high costs of infrastructure associated with exploiting local coal deposits. This alternative would improve viability of project (rate of return 13.56 per cent) and make the cement more competitive in the subregion.
11. Indian Ocean islands. In 1985, cement consumption totalled 647,000 tons, of which 97,000 tons were produced locally.	13. FF467.2 million.	

PROJECT PROFILE N O. 24 (new proposal)

SUBSECTOR: Building materials industry (cement)

1. Project Title: Cement blending and packaging plant (Lesotho)

2. Objective: Production of cement to substitute present imports.

3. Promotee/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Lesotho National Development Corporation (LNDC) and Anglo Alpha.	5. Under negotiation. 6. LNDC to investigate other possible joint venture partners.	7. Bulk cement and slag: 50,000 tons p.a. Source: regional. 8. Electricity and water adequate. 9. Well developed road and air facilities. Lesotho linked to RSA road and rail network. Local companies provide international road haulage services.
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PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 90,000 tons (domestic) increasing to 856,000 tons p.a. during phase 1A of the Lesotho Highland Water Scheme.	12. Initial capacity will be 50,000 metric tons p.a. and building up as demand increases.	14. The project offers opportunities for collaboration with Mozambique.
11. Domestic.	13. M(Maloti)3.5 million.	

PROJECT PROFILE NO. 25 (new proposal)

PRIORITY: short-term

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

SUBREGION: Eastern and Southern Africa

1. Project Title: Edible oil production (Lesotho)

2. Objective: Production of edible oil from locally produced sunflower.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

3. Lesotho National Development Corporation (LNDC), Elangeni Oil and Cake Mills, and Chesterland Holdings Inc. (UK).	5. Construction of factory building on-going; production scheduled for January/February 1989.	7. Sunflower seed: 14,000 tons p.a. Source: Lesotho. Chemicals: to be determined.
4. Maseru, Lesotho.	6. Not applicable at present, but product range will be extended.	8. Electricity and water adequate.
		9. Well developed road and air facilities. Lesotho linked to RSA road and rail network. Local companies provide international road haulage services.

10. 300,000 tons p.a. (PTA).	12. 4,000 tons in year one, building up to 8,000 by year four.	14. By-products will include oil cake (high protein animal feed), sunflower husks which can be used for stoking steam engines. Product extensions will include margarine, soap detergents, industrial oils and textured vegetable protein. The domestic and subregional demand for edible vegetable oils is appreciable, with a large proportion of the market still being supplied by sources outside the subregion.
11. SADCC, Zaire, India and PTA.	13. M(Maloti)6,940,000.	

PROJECT PROFILE NO. 26 (new proposal)

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

1. Project Title: Coconut processing programme (Comoros)

2. Objective: Production of coconut oil for food purposes.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of the Comoros.	5. Conceptual stage.	7. Locally grown coconuts.
4. Comoros.	6. Feasibility study being commissioned.	8. Requirements to be determined in feasibility study.
		9. Requirements to be determined in feasibility study.

PRIORITY: medium-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. Requirements to be determined in feasibility study.	12. Requirements to be determined in feasibility study.	14. The programme comprises four sub-projects: (a) production of coconut oil for human consumption; (b) manufacture of coir mattresses and mats; (c) use of coconut husks for the manufacture of furniture; and (d) possible extraction of alcohol and sun-tan oil for export.
11. Requirements to be determined in feasibility study.	13. Requirements to be determined in feasibility study.	

PROJECT PROFILE NO. 27 (new proposal)

PRIORITY: short-term

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

SUBREGION: Eastern and Southern Africa

1. Project Title: Cotton weaving plant (Lesotho)
2. Objective: Production of woven grey cloth and denim fabric.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

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| 3. Lesotho
National
Development
Corporation
(LNDC). | 5. LNDC negotiating with
possible partners. | 7. Cotton yarn (10 ⁵
or 20 ⁵):
10,000 tons p.a.
Source: SADCC and PTA. |
| 4. Maseru,
Lesotho. | 6. LNDC investigating
possible sources of
raw materials, their
prices and the demand
in PTA and SADCC
regions. | 8. Electricity and water
adequate. |
| | | 9. Well developed road and air
facilities. Lesotho linked
to RSA road and rail
network. Local companies
provide international road
haulage services. |

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

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| 10. Unlimited overseas
market; investigating
regional demand. | 12. 8 million yards of
grey cloth p.a.;
12 million yards of
denim p.a. | 14. Phase 2 will include
dyeing, and phase 3
spinning.
Discussions have been
held with Chinese
authorities and other
interested parties. |
| 11. PTA, SADCC, USA and
Europe. | 13. M(Maloti)12,000,000
(1987 prices). | |

PROJECT PROFILE NO. 28 (new proposal)

PRIORITY: short-term

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

SUBREGION: Eastern and Southern Africa

1. Project Title: Blanket manufacture (Lesotho)

2. Objective: Manufacturing of fashion clothing and sleeping blankets.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Lesotho National Development Corporation (LNDC) and Phillip Frame Group.	5. Under negotiation.	7. Yarn, acrylic fibres, cotton and dyestuffs under investigation.
4. Maseru, Lesotho.	6. Phillip Frame Group to submit a detailed and costed proposal.	8. Electricity and water adequate.
		9. Well developed road and air facilities. Lesotho linked to RSA road and rail network. Local companies provide international road haulage services.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 9 million units p.a. (SACU) SADCC and PTA under investigation.	12. About 1 million units p.a., i.e. 20 per cent of SACU market.	14. Project very important to Lesotho in terms of local resource use, i.e. wool and mohair (waste fibres only). Considerable scope for reducing Lesotho's dependence on RSA. Zimbabwe expressed wish at subregional meeting to be associated with cotton weaving and blanket manufacture projects in Lesotho.
11. SACU, SADCC.	13. To be determined.	

PROJECT PROFILE NO. 29 (new proposal)

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

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

1. **Project Title:** Fish-processing facilities (Uganda)

2. **Objective:** Production of fish fillets and by-products.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Government of Uganda.	5. Agreement reached between Italian/ Chinese Governments and Uganda Government on provision of technical and financial assistance.	7. Fish from Lake Victoria and other lakes.
4. Jinja/Entebbe, Uganda.	6. Market survey in the subregion with a view to reaching purchase/ supply agreement.	8. From national grid.
		9. Available.

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. To be determined.	12. To be provided later.	14. Financing already negotiated and procurement of equipment under way.
11. PTA subregion and other island countries.	13. To be provided later.	

PROJECT PROFILE NO. S1 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Upgrading of Kenya Textile Training Institute (KTTI) into a subregional training centre (Kenya)

2. Objective: To provide training in textile manufacturing to countries in the African region.

3. Promoter/sponsor:

Ministry of Technical Training and Applied Technology, Kenya.

4. Location:

Nairobi, Kenya.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

KTTI runs six-month courses for apprentices and six-week courses for skills-upgrading in all stages of textile manufacturing. It has modern textile machinery and laboratory equipment, as well as boarding facilities for 120 trainees. KTTI is keen to receive trainees from other African countries.

PROJECT PROFILE NO. S2 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Upgrading of Ethiopian Management Institute into a subregional training centre (Ethiopia)
 2. Objective: To provide management training and consultancy services to the subregion.
-

3. Promoter/sponsor:

Government of Ethiopia/EMI.

4. Location:

Debrezeit, Ethiopia.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

EMI was established in March 1985, as an autonomous public organization, accountable to the Ethiopian Council of Ministers. EMI has a staff of 50 full-time national lecturers, all post-graduate degree holders with 7-10 years experience, and assisted by 5 international experts provided by UNDP/ILO.

EMI runs short-term programmes (ranging from a few weeks to 6 months), diploma courses of 6 to 12 months duration, and degree courses of one-and-one-half to two years. The areas of training include general management, organization and methods, finance and accounting, production management, marketing, materials management, construction and transport management, management information systems, management of training, project analysis and management, etc.

The Management Training Centre of EMI, located 50 km from Addis Ababa, has 6 lecture halls, a conference hall (120 seats) and a library, as well as board and lodging facilities to international standards (200 beds). EMI is ready to extend its training courses to participants from other African countries and to organize seminars and specific courses at the request of international organizations.

PROJECT PROFILE NO. S3 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Regional Sugar Cane Training Centre for Africa (RSCTCA)
(Mauritius)
2. Objective: To provide training in technology of all aspects of sugar production and utilization of sugar cane by products.

-
3. Promoter/sponsor:

RSCTCA/UNDP.

4. Location:

Rduit, Mauritius.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

Established in 1980, RSCTCA runs four three-month courses alternately in English and French, in sugar manufacture, sugar cane agronomy, analysis of sugar products and chemical control of sugar factories, and sugar engineering. Designed primarily to provide training for African students, the activities of the centre have been extended to cover the Asian and Arab regions. Thus, at the end of 1987, 350 students from 36 developing countries had followed the courses on a full-time basis.

The Mauritius Sugar Industry Research Institute provides the centre with laboratories, library, lecture rooms, experiment stations and most of the lecturers from its professional staff. The centre is subsidized by UNDP, which has also provided equipment to augment the laboratories of the institute and supplement the centre's own teaching equipment. The centre is willing to arrange special courses and group training programmes for fellows sponsored by UNIDO, but these have to be negotiated in advance through the UNDP Representative in Mauritius. The ability of the centre to serve the subregion is also contingent upon an assessment of the needs of the countries in the subregion.

PROJECT PROFILE NO. S4 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Upgrading of Management Training and Advisory Centre (MTAC) into a subregional centre (Uganda)
2. Objective: To provide management training services, consultancy and advisory services, as well as research and information services to the subregion.

3. Promoter/sponsor:
Government of Uganda/MTAC.

4. Location:
Kampala, Uganda.

5. Estimated total cost:
Current investment: \$4 million.

6. Project description and additional information:

MTAC is a parastatal body under the Ministry of Industry and Technology. It was established in 1965 by UNDP/ILO, and offers training programmes for the lower, middle and top management in the areas of general management, management development, functional management (e.g. accounting, marketing, production personnel etc.), and sectoral management (e.g. small enterprise). Seminars and training in specialist areas are also organized at the request of client organizations. MTAC also provides consultancy services to public and private enterprises in the areas of corporate planning, general management, business appraisal, marketing and sales management, production management and engineering, financial control, project management and small-scale entrepreneurship development. The Centre's capacity is as follows:

Training: 300 man/weeks per year, including top, middle and supervisory management seminars in various functional areas and entrepreneurial development.

Management consultancy: 200 man/weeks per year.

Research and information services: 100 man/weeks per year.

MTAC has an administration building containing 48 offices and a large store room; a training building containing five classrooms and two conference halls; an engineering workshop for entrepreneurial training and demonstration in carpentry, metalwork, automotive repairs, and electrical repairs; and a small library and audio visual aids unit. Its total land area is three hectares built up and six hectares still free. The Centre still lacks lodging (and boarding) facilities and up-to-date training facilities. MTAC receives about 800 students for the 50 short-term training courses (1-5 weeks duration)

it organizes every year. Currently the MTAC has 15 full-time professionals (i.e. trainers, consultants, researchers), plus a variety of administrative and technical support personnel, many of whom also carry out professional work. In addition, the Centre engages the services of some part-time professionals as the need arises. Arrangements are under way for the professional development of some MTAC staff by association of management and training institutions of Eastern and Southern Africa. Currently, MTAC is carrying out agricultural management training (AMTA) in collaboration with African Development Bank (ADB) and Pan African Institute for Development. MTAC is ready to receive students from the subregion, as it used to do in the past.

Follow-up:

The nature and cost of additional facilities required to upgrade the Centre will have to be assessed and arrangements made for the related financing. These facilities would include hostel for course participants, related catering facilities, new professional services building, additional library facilities, additional audio visual facilities, computer unit, additional staff houses, additional administrative support facilities, additional professional staff, programme for professional development of MTAC staff, etc.

PROJECT PROFILE NO. S5 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Upgrading of training and design facilities of the spare parts manufacturing plant into a subregional centre (Ethiopia)

2. Objective: (i) To upgrade the plant into a design and prototype fabrication centre as well as an information and training centre; (ii) to provide consultancy services for the design and fabrication of spare parts in local workshops of other African countries; and (iii) to supply manufactured industrial spare parts as well as hand tools and cutlery.

3. Promoter/sponsor:

Ministry of Industry Ethiopia.

4. Location:

Akaki, Shoa Province, Ethiopia.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

The spare parts manufacturing plant is now under construction with the financial assistance of the Government of Italy. The total investment cost is \$85 million of which \$57.6 million is in foreign exchange. It is due to be completed in February 1989. It will supply spare parts to the food, textiles, building materials and metal-working industries of Ethiopia. It will also produce various types of hand tools and cutlery for the domestic and export markets. At full capacity, the plant will produce 3,600 types of spare parts and 2.2 million pieces of hand tools and cutlery, per year. It is equipped with a foundry with a yearly capacity of 4,450 tons, forging and machine shop units, a design centre and a training centre.

Follow-up:

UNIDO's assistance is being sought in developing the factory's links with industries in the subregion and in carrying out a market study on the possibility of exporting mass-produced hand tools and cutlery to countries in the subregion.

PROJECT PROFILE NO. S6 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Establishment of a subregional cement institute at the Mughher cement plant (Ethiopia)

2. Objective: To assist countries in the subregion in all aspects of cement production.

3. Promoter/sponsor:

Ministry of Industry Ethiopia.

4. Location:

Mughher, Ethiopia.

5. Estimated total cost:

\$3.4 million in foreign exchange.

6. Project description and additional information:

Project ongoing since September 1984, at full capacity of 300,000 tons of clinker per annum. Expansion underway to double plant production capacity and due to be completed by end of 1989.

Follow-up:

UNIDO to mobilize funds and take all necessary steps to set up a subregional cement institute under the management of the Mughher cement plant.

PROJECT PROFILE NO. S7 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Industrial manpower development

1. Project Title: Upgrading the Mogadishu Industrial Vocational Training Centre (IVTC) into a subregional centre (Somalia)
 2. Objective: To enlarge the existing facility in terms of machinery/equipment and personnel.
-

3. Promoter/sponsor:

Government of Somalia.

4. Location:

Mogadishu, Somalia.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

Located on the periphery of Mogadishu, the Centre was established in June 1985 to train the industrial workforce of governmental, parastatal and private enterprises for the betterment of the economy and industry of Somalia. The Centre is an institution of the Ministry of Labour and Sports of Somalia, and it is assisted by the Federal Republic of Germany through the offices of GTZ. Training is offered in the mechanical, electrical and automotive trades. The Centre can accept 128 trainees at any one time.

PROJECT PROFILE NO. S8 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Establishment of a Metallurgical Technology Centre for PTA countries (Zimbabwe)

2. Objective: To promote the development of the iron and steel industry in the PTA countries through the establishment of a Metallurgical Technology Centre.

3. Promoter/sponsor:

FTA secretariat and Government of Zimbabwe.

4. Location:

Redcliff, Zimbabwe.

5. Estimated total cost:

The total cost of establishing the Centre has been estimated by one donor country to be about \$33 million. A proposal amounting to about \$98,000 has been submitted to UNIDO for assistance to the PTA in planning and formulating a phased development programme so as to enable the Member States of PTA to make a suitable investment decision on the establishment of the Centre. UNIDO has reviewed the proposal and has decided to make available a smaller amount for the project appraisal and will consider approval of the rest of the funds on the basis of the results of that appraisal.

6. Project description and additional information:

The PTA subregion is well-endowed with mineral resources such as iron ore, coal, chrome ore, nickel, cobalt, titanium, copper and refractory materials/fluxing minerals such as silica, magnesite, limestone, fluospur, etc. The coal resources of the subregion is estimated at approximately 54,604 million tons with Zimbabwe accounting for the largest share, followed by Botswana and Mozambique. Large deposits of iron ore reserves are to be found in several countries, notably Angola, Madagascar, Mozambique, Zambia and Zimbabwe. However, very little commercial exploitation of some of these resources is carried out and the processing of iron ore in particular is at an elementary stage.

The subregion has a total of about 23 steel plants/rolling mills capable of melting ferrous metallic raw materials in a furnace for casting semis or processing semis into finished products. The largest and only integrated steelworks is the Zimbabwe Iron and Steel Company (ZISCOSTEEL), Redcliff, Zimbabwe. ZISCOSTEEL is equipped with blast furnace and oxygen converters and

has a finished steel production capacity of 850,000 tons per year. The subregion has a liquid steel-making capacity of 1.2 million tons per year. Nevertheless actual capacity utilization in the production of steel in the region is only about 25 per cent.

The subregion however lacks well-equipped laboratories to test the quality of raw materials, semi-manufactured and manufacture products. Research work on iron ores, coal and other mineral and refractory materials are very elementary and limited to the immediate needs of a particular steel plant/rolling mill. To promote iron and steel development, it is necessary to encourage and develop applied research and development in raw material inputs, process and production technology in various branches of metallurgy including testing and beneficiation of minerals, metal refining, fabrication, etc.

The proposed Metallurgical Technology Centre is envisaged as a centre of excellence, undertaking R & D work on various aspects of iron and steel and ferrous metallurgy industries development. The Centre could provide technical services through its data bank and library documentation facilities as well as assist in the transfer, adaptation and development of technology. It would be basically divided into three main departments: (i) scientific and research department; (ii) technical services; and (iii) a design department.

The PTA secretariat has already approached some donor countries to assist in the preparation of a project document for the establishment of the Centre and to consider providing technical and financial assistance for its implementation. One of those donor countries has submitted a proposal whose total cost is estimated at \$32,950,000. The Member States have decided to establish a Steering Committee consisting of experts from Ethiopia, Tanzania and Zimbabwe as well as PTA, UNIDO and the ECA secretariats, to determine the required facilities and prepare a work programme for the Centre, due account being taken of the experience already gained in other developing countries/regions.

PROJECT PROFILE NO. S9 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Promotion of spare parts production in PTA countries (Kenya/Tanzania/Zimbabwe)
 2. Objective: To assist the consumers of spare parts in PTA countries to establish a regional centre for the promotion of cast and machined spare parts.
-

3. Promoter/sponsor:

PTA secretariat.

4. Location:

Selected countries of PTA. The following countries possess the potential for spare part production: Kenya, Tanzania and Zimbabwe. The eventual location of the centre will be decided upon by the Member States on the basis of the results of preparatory work.

5. Estimated total cost:

\$143,000 for preparatory activities. The UNDP has, on the basis of a submission by the PTA and UNIDO secretariats, approved this amount from its regional programme for Africa. The cost of the centre will be determined during the preparatory phase of the project.

6. Project description and additional information:

One of the major constraints on industrialization in the PTA subregion and Africa as a whole is the inadequate development of technology. Africa relies on foreign sources for technology, machinery and equipment and spare parts. Africa's heavy reliance on imported machinery and equipment is a veritable source of foreign exchange leakage. According to the ECE Bulletin of Statistics on World Trade in Engineering products, the region's bill for engineering products, mainly machinery and transport equipment, was \$40 billion FOB in 1981, of which \$4.1 billion was for spare parts. During the period 1980-1985, it is estimated that imports of spare parts was approximately \$25 billion. Eastern and Southern Africa is believed to have spent approximately \$6 billion FOB on imported spare parts.

In the light of the above and given the gross shortage of spare parts for industrial plants, machinery and equipment, there is a growing tendency in the PTA subregion to encourage the domestic manufacture of spare parts within the existing forging, heat treatment and machine shop facilities. In Kenya, for example, the Kenyan Railway Workshop in Nairobi produces spare parts for the railways and sugar mills and other orders on specification; Margat Singh

Engineering works produces spare parts such as gears and rollers. Ndume Ltd concentrates on the production of spare parts for agricultural implements. In Tanzania, the Tanzania-Zambian Railway Authority manufactures essential spare parts for the railway. The main products of the National Engineering Co. Ltd range from road pullies, roll bodies for sisal and sugar factories to wheels for mining wagons. Zimbabwe, on the other hand, has a good number of engineering firms, integrated foundry, forging and machine shop facilities capable of producing a wide range of spare parts for industrial plants, agricultural machinery and implements, transport equipment, mining and quarrying equipment, etc.

There is, however, a need to harmonize these activities in an integrated subregional programme with the aim of promoting the production of spare parts of the right quality and quantity to meet the needs of consumers. It is estimated that with proper specifications and careful analyses, design and manufacturing parameters, the prices of locally produced spare parts could be 40-50 per cent lower than imported spare parts. In order to do this, it is necessary to establish the local technological base or a centre necessary to advise and orientate both consumers and producers and through which technical assistance and training could be given to both consumers and producers of spare parts in the subregion. Such a centre would also specify materials, production processes and engineering data, and offer technical assistance to consumers and manufacturers of spare parts.

PROJECT PROFILE NO. S10 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Tanzania Institute of Leather Technolcgy (Tanzania)
 2. Objective: To provide training facilities for both domestic and subregional leather industries.
-

3. Promoter/sponsor:

Tanzania Leather Associated Industries, P.O. Box 5640, Dar-es-Salaam, Tanzania.

4. Location:

Mwanza, Tanzania.

5. Estimated total cost:

\$1.2 million.

6. Project description and additional information:

The leather and leather products industries sector in Tanzania is considered to be one of the country's major processing industries catering for the people's basic needs in footwear and other leather products. Export of semi-processed leather and leather products from the existing production units contribute to the economy as an important source of foreign exchange revenue.

The efficient running of the leather and leather products industries depends not only on the top management of the enterprises but also (and above all) on the availability of efficient middle and lower technical personnel and management executives. With this objective in mind, it was decided to establish the Institute of Leather Technology in Mwanza. Implementation of the project started in 1980. It was financed through the Government and through contributions from UNIDO which supplied the equipment under project US/URT/79/240 and supervised its installation. In addition to training, the Institute will provide research and development facilities. It will also undertake such work as to assist the overall development of the subsector.

Construction work was completed at a cost of ShT34 million. The equipment supplied by UNIDO under project US/URT/79/240 is valued at \$500,000. However, the Institute is not yet operational for lack of expatriate tutors and teaching aids during the initial operational phase. Mobilization of resources amounting to \$1,224,000 (ShT118,728,000) is needed to finance expatriate tutors, train local tutors and provide text books and other teaching equipment that is being sought from external sources. The project is included in a regional project on a hides and skins, leather and leather products improvement scheme being implemented with the assistance of UNIDO.

The Institute is located on a site easily accessible by air, road and rail. Water and electricity are available. Given the major demand for training opportunities in Tanzania and in neighbouring countries, the Institute is expected to serve all the SADCC and PTA countries. At present, its capacity is 48 graduates in leather technology per annum (30 at the diploma level and 18 at the certificate level). However, consultations between the various leather technology institutes in the subregion should be held under the auspices of SADCC and PTA, with the assistance of UNIDO and ECA.

PROJECT PROFILE NO. S11 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Consolidation of the Institute of Cement Technology (Tanzania)
2. Objective: To meet the fast growing technological requirements in the fields of cement, glass ceramics and clay associated products.

3. Promoter/sponsor:

Tanzania Saruji Corporation, Dar-es-Salaam, Tanzania.

4. Location:

Klazo Hill, Dar-es-Salaam, Tanzania.

5. Estimated total cost:

To be determined.

6. Project description and additional information:

Saruji Training Institute was established to serve the companies belonging to the Tanzania Saruji Corporation, a holding parastatal for companies engaged in the production of building materials and allied products. These are: Tanzania Portland Cement Company, Tanga Cement Company, Mbeya Cement Company, Tanzania Sheet Glass Company, Morogoro Ceramics Wares Ltd, Nyanza Glass Works, Tanzania Clay Products, Saruji Trucking Company, Tanzania Gypsum Company and Pre-fabricated Concrete Manufacturing Plant.

The Institute consists of the following centres:

1. Training centre.
2. Research and Development centre.
3. Central workshop.

The training centre is fully established, while the other two centres pertain to future plans. The training centre offers courses in the areas of production, mechanical and electrical engineering, and maintenance of transport and quarry machinery in the cement industry. The Institute can accommodate up to 80 participants at a time. Some of the course pertaining to cement production include: general introduction course for technical personnel, mill operators' course, quality control testers' course, quality control analysis, chemical industrial technicians' course and in-plant training. Graduates of the Saruji Training Institute are awarded a professional certificate on successful completion of specific series of course and final examinations. The Institute requires strengthening in the field of staff development, including provision of teaching materials and equipment. It has the potential to fulfill training needs pertaining to the cement industry in the subregion.

PROJECT PROFILE NO. S12 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Establishment of a pilot and demonstration physical manufacturing facilities at TEMDO (Tanzania)
2. Objective: To provide essential support service facilities to the engineering and allied metalworking industries on a national and subregional basis.

3. Promoter/sponsor:

Tanzania Engineering and Manufacturing Design Organization (TEMDO),
Arusha, Tanzania.

4. Location:

Arusha, Tanzania.

5. Estimated total cost:

\$3.9 million.

6. Project description and additional information:

The activities of the engineering and allied metalworking industries subsector have been affected and retarded by the non-availability of precision parts, dies, moulds, tools, jigs, fixtures, simple and special purpose tools, gauges and large number of engineering items that cannot be manufactured owing to lack of urgently needed support service facilities in the country. TEMDO is a national centre for engineering design and manufacturing that is expected to be well equipped with physical facilities in order to assist local industries in:

- Adapting designs best suited for local manufacture.
- Supplying prototype machinery, equipment and spare parts.
- Providing trained manpower, particularly practical designers for local manufacture and improvement.
- Supplying precision parts and component tools, dies, moulds, etc.
- Undertaking applied R & D in metal and engineering development aspect.
- Supplying technical information on design and manufacturing and providing consultancy services for general promotion of the industrial sector.

The existing facilities at TEMDO, which is accessible by air, road and rail, include office block and workshop premises with a total floor area of 5,039m². The office block is ready and about 60 per cent of the workshop has been completed for installation of machinery and equipment. Electricity and water are available.

The existing administrative and design support service structure consists of:

- A design department with six design engineers and three draughtsmen.
- A prototype development and testing section (without machinery and equipment).
- A technical extension services and consultancy section with four engineers.
- An administrative and finance section with 12 staff, headed by the Director-General as the Chief Executive of TEMDO.

The activities of TEMDO have been slowed down by the non-provision of machinery, equipment and physical facilities. The project proposal involves provision of: (a) a pilot and demonstration forge and heat treatment shop; and (b) a pilot and demonstration toolroom.

Sponsor is to follow-up resource mobilization for the supply of the machinery and equipment etc. and completion of the civil works. Furthermore, TEMDO is to contribute the local component cost of the project amounting to \$102,950 to cover national staff, land and building, furniture and fittings, office equipment and facilities, common service facilities, internal travel, operating funds, storage facilities and miscellaneous expenses. Technical assistance amounting to \$3.8 million to pay for international staff and training, as well as some machinery and equipment are being sought from subregional, regional and international organizations.

The provision of these facilities will provide local industries with inputs to facilitate the improvement of capacity utilization as envisaged in the Government's economic recovery programme. Furthermore, the services to be offered are in great demand by all engineering and allied metalworking industries, and the Centre is expected to serve all the industries in the country and SADCC/PTA member countries.

PROJECT PROFILE NO. S13 (new proposal)

SUBREGION: Eastern and Southern Africa

INDUSTRIAL SUPPORT AREA: Institutional infrastructure development

1. Project Title: Establishment of a pilot demonstration toolroom and engineering design centre (Zimbabwe)

2. Objective: To contribute to self-sufficiency in engineering design and local tool supply to local industries.

3. Promoter/sponsor:

Ministry of Industry and Technology, Zimbabwe.

4. Location:

Bulawayo, Zimbabwe.

5. Estimated total cost:

Z\$7,659,000 (Government inputs) and \$5,000,000 (UNDP inputs).

6. Project description and additional information:

The pilot and demonstration toolroom and engineering design centre will be the focal point institution for the development of indigenous capability in engineering design for capital goods, intermediate goods, durable consumer goods and local manufacture of precision spare parts for the Zimbabwean industries, and production of highly skilled designers and operatives for the multisectoral needs in the engineering and allied industries sectors, agricultural machinery and equipment industries, transport industries and mining. It will also contribute to establishing local design standards and enhancing local consultancy services.

Establishment of the centre will contribute to resolving some of the institutional, engineering, technological, management and manpower constraints on local industries. It will also help create a self-sustained engineering base as well as provide scope for considerable savings in terms of foreign exchange that would otherwise be spent on toolroom products from abroad.



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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

Harare, Zimbabwe, 31 October - 4 November 1988

REVISED INTEGRATED INDUSTRIAL PROMOTION PROGRAMME
FOR THE EASTERN AND SOUTHERN AFRICAN SUBREGION

Corrigendum

Page 4

Paragraph 16, line 1: for in July 1981 read on 1 April 1980

Paragraph 17, line 7: for land development by Angola read land
utilization by Lesotho; energy by Angola

Page 5, paragraph 20, lines 1 to 5

For the existing text substitute

One of the major functions of SADC's Sector Coordinating Units is to initiate project identification and to follow up the project through the entire project cycle, including implementation. Consultation between the Member State on whose territory the project is being implemented and the Sector Coordinator continues until the project is completed and becomes operational. The Sector Coordinating Unit's role is, therefore, not fulfilled the moment financing is secured. This modus operandi applies to the Industry and Trade Sector just as it does to all the other sectors in the SADC Programme of Action.

Replace pages 39-42, 49 and 59 by the attached text.

ANNEX 11

STATUS OF IMPLEMENTATION AS AT 31 OCTOBER 1988 OF
PROJECTS INCLUDED IN THE INITIAL INTEGRATED INDUSTRIAL PROMOTION PROGRAMME

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
<u>I. - CORE PROJECTS</u>				
<u>METALLURGICAL INDUSTRY</u>				
1. Upgrading and diversification of products from ZISCOSTEEL, Zimbabwe.	Government of Zimbabwe	Detailed market and feasibility studies.	Pre-feasibility studies completed and overall project consultants appointed.	Costs have since escalated and the total cost of the project is currently estimated at \$150 million, 80 million of which are needed to purchase a reconditioned mill from Sweden. Negotiations for funds are at an advanced stage. The project basically entails product diversification, switching from the export of billets to the manufacture of flat products, thus achieving higher value-added. Market studies have revealed a current demand for flat products in the domestic and subregional markets of some 298,000 tons rising to 529,000 tons by the year 2000. The following items will be produced: 192,000 tons of plates (6-25 mm thick); 76,800 tons of cold rolled coil (0.1-0.2 mm); and 96,000 tons of hot rolled sheets (1.8-6.0 mm). The project is in the process of being revised. Project should be retained in the revised programme in the short term.
2. Expansion of iron and steel mill, Uganda.	Ministry of Industry	It was agreed to include the project in the initial programme since the existing steel plant utilizes imported billets/ingots and local scrap whereas expanded plants would utilize locally extracted iron.	Project is still at conceptual stage.	The mill expansion envisaged in the Original project has been initiated. Funds have been secured and the project is underway. A new facility has been in operation since 1983, and its possible expansion is being considered. Studies have been undertaken in respect of a third (sponge-iron) project that is being promoted by the PTA and the Government of India which has received samples for testing purposes. Project should, therefore, be retained in the revised programme for implementation in the medium term.
3. Integrated iron and steel mill in Kenya.	Ministry of Industry	It was agreed to promote the project under the long-term option because there was sufficiently high domestic consumption of iron and steel products to justify establishment of an integrated complex (432,000 tons in 1985.)	Austroplan's feasibility study (1982) was reviewed by the Commonwealth Secretariat team in October 1984 for PTA Secretariat. An inter-ministerial task force was set up in June 1988 to examine all aspects of the development of the iron and steel industry in Kenya.	The Austroplan's feasibility study has been studied and analysed by both the PTA and the interministerial task force. The original integrated nature of the project as originally conceived is no longer acceptable. The new project concept is to produce basic iron and steel raw material in the form of billets and hot rolled coils. These products will serve as inputs to existing steel mills.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
ENGINEERING INDUSTRY				
4. Manufacture of diesel engines for tractors, trucks, lorries and buses, Zimbabwe.	MULPOC Council of Ministers	The project was to be located in Zimbabwe or Kenya and pre-investment studies were recommended.	Project approval has since been obtained from the Ministry of Industry. The joint venture approach has also been approved for the project which will be expanded to cover the subregion. T.A. Holdings Ltd of Zimbabwe has entered into a joint venture with a company to assemble diesel engines and for repowering, refurbishing, repairing and servicing all makes of trucks.	Local content is estimated to reach a level of 30 per cent and implementation of the project is expected to commence before the end of 1988. The output would include stationary diesel engines and marine engines as well. A similar project is being promoted by SADCC for the manufacture of mining spares, in which diesel engines could be of use to off-road vehicles. The project, which has the capacity to supply the PTA and SADCC subregion, should be retained in the revised programme for implementation in the short term.
5. Manufacture of diesel engines mounted chassis for lorries, trucks and mini-buses.	MULPOC Council of Ministers	The project was to be located in Ethiopia, Mozambique and Tanzania and pre-investment studies were to be undertaken.	Tanzania is restricting its project to the national level at present. In Ethiopia, subsequent studies indicated that it would be more feasible to establish a plant manufacturing trailers or trucks that could also produce chassis. A joint venture with a foreign partner is being promoted along those lines.	This project in its original form did not have a real sponsor or promoter. It was <u>not</u> recommended for retention in the revised programme.
6. Manufacture of low-cost standard multi-purpose vehicles, Madagascar.	Institut Malgache d'Inno- vation	The project was retained in the initial programme for implementation by Botswana, Madagascar, Mozambique, Uganda and Zambia.	Project completed in Madagascar and has been operational since November 1987. Total investment cost was FMG3,670 million. Botswana is working with a Scandinavian company on a related project, while Zambia is trying to standardize low-cost vehicles.	The plant in Madagascar has an annual production capacity of 300 vehicles. Promoter is looking for local or subregional partnership to market the vehicles in other countries in the subregion. Project should be retained in the revised programme for implementation in the short term.
7. Manufacture of agricultural machinery (four-wheel tractors).	MULPOC Council of Ministers	The project was to be located in Zimbabwe and follow-up action entailed the preparation of pre-investment studies.	No action taken because Zimbabwe already manufactures agricultural machinery.	The project did not have a real sponsor as Zimbabwe was already manufacturing agricultural machinery for which it required assistance in marketing the machinery in the subregion. The project was <u>not</u> recommended for retention in the revised programme.
8. Irrigation equipment plant, Zambia.	Industrial Development Corporation (INDECO)	No particular follow-up action was recommended.	It has been included in the fourth national development plan that will start in January 1989. To date, only the feasibility study has been completed.	Negotiations on financing the project which will be implemented by INDECO are currently under way. The project should be retained in the revised programme for implementation in the short term.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
9. Re-rolling mills for sections and bars for high-tension electricity transmission in Eastern and Southern Africa.	Meeting of PTA Committee of Experts	Project was to be located in Zimbabwe and pre-feasibility studies were recommended.	No action taken.	Since there was no specific promoter for the project, it was recommended that it <u>not</u> be retained in the revised programme. However, the project concept will be taken into account in the programme for the expansion and diversification of ZISCOSTEEL.
10. Copper fabrication plant for Eastern and Southern Africa, Zambia.	FTA Committee of Experts	Project was to be located in Zambia and follow-up action entailed the preparation of pre-feasibility studies.	INDECO and a Polish company were undertaking a new feasibility study which would determine the final scale of production.	Initially the scale of production might have to be reduced in order to bring it within the financial reach of Zambia, thus ensuring implementation of the project. The project was included in both the fourth national development plan and the industry chapter of the SADCC programme for the subregion. Therefore, it was recommended that the project be retained in the revised programme for implementation in the short term.
11. Manufacture of transformers, Zambia.	INDECO Zambia	Project was to be located in Zambia and follow-up action included feasibility study.	Feasibility study undertaken and project scaled down to national level.	Included in the industry chapter of the SADCC programme, the project is the second phase of a project for the manufacture of electric motors for which a feasibility study has been carried out and negotiations are being held with potential partners. The size of the project would be determined by the express wish to begin with a plant of manageable size that was within the financial means of the country. It was therefore recommended that the project be retained in the revised programme for implementation in the medium term.

Project number, title and location of the project	Promoters/ Sponsors	Conclusions and recommendations of the Addis Ababa meeting November 1983	Action taken since November 1983	Observations and recommendations
CHEMICAL INDUSTRY				
12. Ethiopian potash, Ethiopia/Libya.	Ethio-Libyan Joint Mining Co. (ELMICO)	Project retained in initial programme given the abundance of potash deposits, (at present not exploited) and in order to meet multi-country/subregional demand.	First phase of feasibility study completed in 1987.	The study concluded that project was technically feasible, but that an economic study was also needed. Phase II of studies was temporarily suspended owing to logistical problems in the project area, but will be resumed as soon as situation improves. Project should be retained in the revised programme for implementation in the long term.
13. Tanzania multinational ammonia/urea project, Tanzania.	Government of Tanzania	Final decision on construction of plant.	Action taken to mobilize financial assistance, particularly pledges, some of which have been outstanding for 4 years.	Definitive courses of action need to be taken on the basis of a well-articulated strategy for implementing the project which is a priority project for the Government. It is also included in the industry chapter of the SADCC programme. Costed at some \$425 million, with a local input of \$20 million, the project would initially be export oriented. Despite several countries' expressing interest in participation, no firm commitment has as yet been received. It was also recognized that the demand for fertilizers far outstripped local supplies, thus justifying the establishment of new capacity. That notwithstanding, efforts should be rationalized not only in terms of plant location and economies of scale, but also in terms of production processes and feedstocks used. None of the four plants currently operational in the PTA countries use natural gas, the preferred feedstock. It should be retained in the revised programme for implementation in the medium term.
14. Phosphate fertilizer plant, Uganda.	Government of Uganda	Project retained in initial programme in view of local abundance of basic raw materials (phosphate rock and pyrites).	Updating of comprehensive study of 1984 to include manufacture of triple super phosphate being carried out by outside consultants and will be completed by December 1988. ADB had agreed to participate in co-financing, its share being established once the study was complete. Government looking for equity partner.	In view of established demand for phosphate fertilizers, the project is recommended for retention in the revised programme on a short-term basis.
15. Phosphate fertilizer plant, Zimbabwe.	African Explosives and Chemical Industries Ltd	Located at Msasa in Harare and follow-up action recommended was expansion of plant.	Project as originally conceived has been scaled down to national level.	Project was never conceived as a subregional project. It had, in fact, been scaled down and was likely to meet local demand only. It was therefore <u>not</u> recommended for retention in the revised programme.

PROJECT PROFILE NO. 3

SUBSECTOR: Metallurgical industry (iron and steel)

1. Project Title: Integrated iron and steel mill (Kenya)

2. Objective: To establish a new corporation for the manufacture of basic iron and steel raw materials, including hot rolled coils and billets.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Ministry of Industry, Kenya.	5. Feasibility study was prepared in June 1982 by Austroplan and reviewed by Common- wealth Secretariat in October 1984.	7. Iron ore, manganese ore and coking coal are to be imported. Limestone fluorspar and scrap are locally available.
4. Mombasa, Kenya.	6. Feasibility study needs updating in the light of change in the project concept.	8. Energy requirements to be worked out in new study.
		9. Available.

PRIORITY: long-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. 324,600 tons in 1990; 735,800 tons in 1995; and over 1 million tons in 2000.	12. Proposed production programme: a) <u>Non-flat products:</u> 103,650 tons in 1995 and 241,250 tons in 2000. b) <u>Flat products:</u> 316,400 tons in 1990; 445,000 tons in 1995; 611,400 tons in 2000.	14. (a) No collaboration arrange- ment entered into yet. (b) Participation and assistance sought in respect of: (i) Preparation of a feasibility study; (ii) External loan and credit financing for the project; (iii) Supply of necessary technology.
11. Mainly geared to domestic market, but export oppor- tunities to neighbouring countries exist.	13. Needs to be worked out in the light of the new project concept.	

PROJECT PROFILE NO. 13

SUBSECTOR: Chemical industry (basic chemicals)

1. Project Title: Production of caustic soda (Kenya)

2. Objective: To establish a caustic soda production enterprise.

3. Promoter/ sponsor	5. Project status	7. Raw materials
4. Location	6. Immediate follow-up	8. Energy
		9. Physical infrastructure

3. Alkali Industries (K) Ltd.	5. Feasibility study carried out in 1978. Alkali (K) Ltd have revised the study in 1988 and propose to implement it.	7. (a) <u>Locally available</u> : Limestone and soda ash. (b) <u>Imported</u> : Sodium nitrate, sulphur and hydrochloric acid.
4. Kajiado district, Kenya.	6. The proposal has been approved by the Ministry which is waiting to see whether the proposers implement the project.	8. Per ton of caustic soda: steam at 8.5 ATA, 3,300 kg; electricity for lighting only: 250 kWh; and coke for lime-burning: 300 kg (approximate figures).
		9. Rail and tarmac road set up to facilitate exploitation of natural soda ash in the district.

PRIORITY: short-term

SUBREGION: Eastern and Southern Africa

10. Projected demand by product	12. Capacity by product	14. Additional information including collaboration arrangements already made and type of participation sought by Member States
11. Market	13. Total investment	

10. No information.	12. 40,000 tons.	14. (a) Manpower requirements are estimated at 50 technical staff;
11. Local: 2,000 tons. Region: 30-40,000 tons.	13. Estimated at \$5.8 million, including land, buildings, machinery, equipment, shake-down costs, contingencies and working capital.	(b) A joint venture between Binla Technical Services (India) and Alkali Industries (Kenya) has been recently formed with production expected to start in 1988.