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# INDUSTRY

## SOUTHERN AFRICAN DEVELOPMENT COORDINATION CONFERENCE



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# **STRATEGIES FOR THE NEXT FIVE YEARS**

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REVIEW OF SADCC INDUSTRIAL CO-ORDINATION ACTIVITY AND PROGRAMMEFOR NEXT FIVE YEARS 1986 - 1990

## I. INTRODUCTION

The Council of Ministers at Mbabane in January 1985 decided that the theme for the next Annual Consultative Conference to be held in Harare, Zimbabwe be: "SADCC The Next Five Years". This document therefore reviews the industry sectoral programme and strategy since its inception in 1981/82 and presents a programme of action for the next five years. The programme includes specific projects for which support is sought from the international co-operating partners of SADCC so as to facilitate their implementation.

The projects presented in Section VI of this report cover:

- investment for manufactured goods which are shown only as perspective sectoral plans;
- various studies for rehabilitation of existing industries and creation of new capacities within the agreed SADCC industry priorities;
- projects for carrying out a number of industrial support services which are essential for facilitating industrial development in SADCC region and support to the administrative machinery of SADCC Industrial Co-ordination so as to ensure efficiency in the implementation of the programme of activity presented.

## II. EXISTING INDUSTRY SECTOR PROGRAMME AND STRATEGY

The existing industrial sector plan and strategy which was adopted by SADCC Council of Ministers at Blantyre in November 1981 contains five objectives for industrial coordination which meet the development objectives of the Lusaka Declaration:

- the reduction of dependence on external inputs and products;
- increasing the size, scope and diversity of the industrial sector's ability to manufacture goods;
- developing the regional coordination and linkages for industrial activity.

In order to implement these objectives, priority project areas based on the basic needs of the people were selected in Food, Clothing, Housing, Health Care, Water Supply, Power, Transport and Communications and Education. The development of core industries such as iron and steel; basic chemicals, and capital intermediate goods industries also formed an integral part of the Regional Plan. From the list of thirty-five specific industrial sub-sectors identified to satisfy the basic needs of the people, the following nine were selected for the initial programme of action.

- Cement and Cement Products
- Electrical Transmission and Distribution Equipment
- Fertilisers
- Pulp and Paper
- Salt
- Textile chemicals, Pesticides and Insecticides
- Textiles
- Tractor and Farm Implements
- Wool and Mohair

The guidelines for the identification and selection of SADCC projects, to distinguish them from national projects, were laid down by the SADCC Industry Ministers Committee in September 1982.

All projects should:

- contribute to the SADCC goal of economic independence;
- be based on a strong domestic market with the possibility of exports within the SADCC region;
- should have possibility of transportation of raw materials and finished products within the region; and
- should have SADCC linkages and be capable of attracting international co-operative assistance.

It was agreed that the responsibility for implementation of projects is that of the member state in which the projects are located, with the assistance as appropriate, of the co-ordinating state, Tanzania.

Further, in order to facilitate the promotion of SADCC projects with potential investors it was agreed to compile comparable information on investment policies and mechanisms of the member States.

The need for industrial support services was recognised as an essential part of the industrial development programme in order to facilitate sustained implementation of plans and projects according to the priorities of individual member States. Therefore the coordinating State was requested to initiate the development of the following four areas:

- Industrial Products Standardisation
- Industrial Consultancy Services

- Industrial Research and Development
- Appropriate Technology

These areas would provide the necessary support for the development and strengthening of existing enterprises and in the implementation of projects for the establishment of new and rehabilitated capacities.

The active participation of all the SADCC member States in the formulation and implementation of the industrial programme has been ensured by working through the following structure:

- Industry Ministers Committee
- Industry Officials Sub-Committee
- SADCC Industrial Co-ordination Division, Tanzania
- Industry Contact Points in Member States.

Besides the efforts made by SADCC institutions themselves towards the evolution and implementation of the industry programme and strategy as explained earlier, it is of paramount importance to acknowledge the crucial support which SADCC industry sector has received from the Industrial Development Unit of the Commonwealth Secretariat. The status of the current programme appears as an Annexure.

### III. REVIEW OF EXISTING PROJECTS AND ACTIVITIES

The development of the initial nine industry sub-sectors into identified projects was carried out between January and September 1982. This involved the analysis of the supply/demand gap and the identification of existing capacities in each of the sub-sectors followed by the selection of projects for expansion and the location of new manufacturing capacities in the SADCC region.

Thus 88 projects were selected for meeting the identified gaps in the nine sub-sectors involving estimated total investments of US\$ 1,524 million, of which US \$ 1,242 million were the estimated foreign costs of the projects. Of these 88 projects, fifty five were for direct implementation and thirty three required further study to establish their viability.

This initial package of projects was adapted and presented for international co-operative assistance and funding at the SADCC Annual Consultative Conference at Maseru in January 1983. The local costs of some US\$ 282 millions needed to be raised by the project sponsors and implementers in the member states.

The support pledged at Maseru was pursued by the co-ordinating country and the members States involved and the project details were reviewed from time to time by all the parties concerned. In this regard a workshop was held at Harare in January 1984 to further evaluate the implementation of the projects which

were earlier presented at Maseru. This workshop for the first time brought together collaborative partners and project implementors for taking concrete steps in implementing projects. This brought positive and encouraging results, and it was felt that more of these workshops should be held in future. The current position relating to progress made with regard to projects and activities under SADC industry sector is as follows:-

i) Projects for Direct Implementation

As a result of the revisions the number of projects was reduced from 55 to 50.

	No.	Amounts of million US\$	
		Foreign	Total
Projects where funds are secured and under implementation	9	214.682	223.456
Projects which are under negotiations	18	230.940	261.630
Projects which are being revised	15	44.490	66.140
Projects which did not secure funding	8	368.450	576.720
	<u>50</u>	<u>858.562</u>	<u>1127.946</u>

ii) Projects for Studies

Two more projects for studies were added to the initial list of 33 to make the total number of projects 35. These projects required foreign funds to the extent of US\$ 6.10 million. Funds have been secured for all the 35 studies.

iii) Additional Industry Sub-Sectors

As part of the continuous process of project identification and implementation the Industry Ministers Committee adopted eight (8) additional sub-sectors, namely:

- Baby Food and Cereal Processing
- Hospital Equipment and Materials
- Industrial Chemicals
- Irrigation Pumps and Equipment
- Machine Tools

- Mining Equipment
- Pharmaceuticals and Veterinary Drugs
- Railway Wagons, Rolling Stock and Equipment

As a first step, sectoral industry plans are to be prepared in each of the above sub-sectors to identify potentially viable projects and to draw up a plan of action for implementation of selected projects. At the second stage, project implementation will be undertaken after raising the necessary resources both locally and from abroad. In carrying out the first stage of the work, the SADCC industry sector is co-ordinating its work with SATCC with regard to the transport equipment and with the Mining Sector for mining equipment. For work relating to other sub-sectors negotiations are going on with the Commonwealth Secretariat, EEC and UNIDO for undertaking sectoral studies.

iv) Project for Industrial Support Services

Out of the four areas earmarked for organising programmes, work is being carried out in respect of standardisation and quality control. The urgency was felt in this area because SADCC's collective efforts in forging linkages in industrial production called for common manufacturing standards and quality control. Based on technical recommendations, SADCC Industry Ministers have thus approved the setting up of an SADCC Expert Group on Standardisation and Quality Control to carry out a clearly defined programme in this area. This includes the assignment of necessary responsibilities to the Member States where standardisation institutions and activities have reached a more advanced stage. It has been emphasised that facilities for Standardisation and Quality Control will be provided to SADCC industries by first strengthening existing institutions and facilities. New arrangements will be undertaken only after this has been done. Currently arrangements are being made to convene the first meeting of the SADCC Group on Standardisation and Quality Control.

v) Investment Guidelines - Policies and Mechanisms

In order to take an investment decision the potential investor should be aware of the legislation and regulations which govern investments in different countries. At the present moment each SADCC country has its own regulations governing investments. As it was not possible to have a uniform set of regulations in the region, it was found expedient at this stage to compile the investment policies and mechanisms available in each country for the benefit of potential investors. These documents have now been compiled after consultations with the respective member States and will be published in due course.

IV. IMPACT AND APPRAISAL OF SADCC INDUSTRIAL DEVELOPMENT ACTIVITY

Though SADCC was established five years ago the actual programme

of co-ordination in the industrial sector was institutionalised only by the end of 1982. So in fact the impact and appraisal of performance of co-ordination work in the industrial sector cover a period of only three years. Even though this is a short period, it is nevertheless sufficient to enable SADCC to make an evaluation which can contribute towards making the necessary adjustments and corrections aimed at improved performance of the industry sector.

It is evident from the record of progress that a start has been made in resource mobilisation and project implementation. Out of the estimated requirements of US\$ 857.562 in foreign costs, funds have been secured to the order of US\$ 214.682 or 25% of the target in three years time. The projects covered include textiles, tractors, farm implements and pulp and paper.

SADCC has also clearly spelt out the industrial activity programme in terms of policies and organisational framework. By January 1983, the established machinery enabled SADCC to present industry investment projects for promotion during the Annual Consultative Conference held in Maseru, Lesotho. Therefore, SADCC Industry Sector has established all the necessary operational mechanism and institutions which, however, will need to be strengthened so as to achieve better results.

However there are areas of weakness in the SADCC industrial co-ordination mechanism whose removal could pave the way for improved cooperation in industrial development:

- SADCC was initially understood by many institutions in the member State as a source of free external funds. A number of industrial projects submitted to SADCC for external funding could have obtained such funding from internal resources.
- some of the SADCC industry projects did not conform to the criteria to have the pre-requisite for priority regional project selection. In many cases the projects are too small and of insignificant impact at regional level to warrant appeal for international assistance and co-operation. Yet in other cases some projects are submitted for SADCC fund mobilisation forums even without the necessary preparations relating to feasibility studies, identification of entrepreneurs and availability of local resources.
- on the other hand SADCC organs at co-ordinating level and at contact points in the member States have not been appropriately furnished in terms of financial resources for provision of requisite services and personnel.
- there are no clear mechanisms for intra-regional exchange of basic information particularly with regard to areas of industrial production capacities, trade opportunities, interlinkages with other key sectors such as Agriculture, Mining and Transport.
- many of the SADCC economies are facing balance of payments problems resulting in serious foreign exchange scarcities.

This in turn has led to idle production capacities in industrial plants most of which are highly import dependent. The urgency of raising capacity utilisation in industries is a topmost priority in SADCC rather than the creation of new capacities. As a matter of priority SADCC has to put considerably more resources to rehabilitation of idle industrial capacities.

- SADCC has to prepare plans for the development of some of the core industries. These are the key industries for providing basic and intermediate inputs and materials in the areas of: iron and steel including metal and engineering sectors, basic chemicals for production of fertilizers, pharmaceuticals etc.
- SADCC is yet to develop a programme to promote intra-regional trade.
- with regard to support services SADCC has started in a modest way by first taking up standardisation and quality control. There is need for opening up other areas of support services where SADCC's collective efforts could make significant contribution for furthering national efforts in industrial development.

V. SADCC INDUSTRIAL DEVELOPMENT CO-ORDINATION ACTIVITY: PROGRAMME FOR NEXT FIVE YEARS 1986/1990

Having considered the impact of the industrial development activity since its inception and assessed the performance, the programme for 1986-1990 has been made on the following principles:

- The strategy on industrial development adopted at Blantyre in November 1981 by the Council of Ministers and the operational frame which is currently in use provides a sufficient base and mechanism to achieve SADCC objectives in the industries sector. What is required is a more vigorous implementation of the programme envisaged in the memorandum adopted at Blantyre together with clearly defined priorities and accountability.
- The programme on investment projects for manufactured goods as presented at Maseru in January 1983 will continue as part of the five year programme. This refers in particular to those projects where funds are either secured or negotiations are at an advanced stage. The important issue which needs to be stressed is that in the coming five years the process of project promotion and implementation will be streamlined by way of precise sectoral plans which will be implemented systematically sub-sector by sub-sector.
- SADCC activity is to be taken as a catalyst and is not intended to substitute national efforts in industrial development. It should co-ordinate and complement industrial development activities at national level. The bulk of responsibility remains with member States.
- The regional perspective plan of SADCC, especially in the context of meeting the basic needs of the people, calls for a sectorally planned programme for the whole region and the

need to audit performance on a regular basis.

- In undertaking project promotion, SADCC activities should be confined to projects agreed upon on the basis of member States priorities within the adopted sectoral plans. In order to achieve better results in this regard there should be a selective approach.
- The mobilisation of local funding, organisation and advance preparation and clear project details are important requisites for attracting both local and foreign investments.
- Vigorous efforts will be made to familiarise and involve the regional enterprise sector in the SADCC Industrial Development Programme.
- The promotion of commercial industrial projects will be done in a businesslike manner by means of investor-entrepreneur meetings.

The programme of SADCC industry activity for the next five years relates to the following six areas:-

- rehabilitation of existing industries;
- priority industries;
- core industries;
- industrial support services;
- small/medium technology development; and
- investment policies and mechanisms

#### 1. REHABILITATION OF EXISTING INDUSTRIES

##### Outline of the Programme

A workshop for formulating a programme of action for rehabilitation of industries in SADCC countries was held in Arusha on 27th and 28th August 1985. Based on the recommendations of the workshop SADCC Industry Ministers have approved the following programme of action:-

- (i) SADCC is to undertake rehabilitation of industries on a selective basis using the following criteria:-
  - Industries which utilise indigenous resources.
  - Industries which have export possibilities.
  - Priority industries like those related to basic needs in transport, food, shelter and housing, health and education including those related to core industries.

- In undertaking rehabilitation projects, account will be taken of existing and potential interlinkages between the industrial sector and other sectors especially agriculture, and transport.
- (ii) SADCC should provide facilities by way of industrial back-up to enhance utilisation of existing industrial capacities. These relate to training of manpower in industrial skills, research in cost reduction and technology up-grading, standardisation and quality control, preventive maintenance schemes and management services. Existing institutions in the SADCC region will be identified and a programme drawn up to utilise their services for mutual advantage.
- (iii) SADCC should begin building up an information exchange system which will initially concentrate on availability of production capacities, resources and analysis of these to identify possible shortages in particular industries within the SADCC region. This information system will therefore facilitate and promote the needed trade flow among the SADCC member states.

#### Activities

- (i) Studies with a view to launch action plans in respect of the following industrial sub-sectors will be undertaken:
- Cement and Cement Products
  - Fertilisers
  - Leather and Leather Goods
  - Oils and Fats
  - Textiles
- The programmes which will be drawn up by an expert team will be implemented for each of the industrial sub-sectors. The total cost for these five studies is estimated at US\$ 400,000.
- (ii) A plan for industrial back-up service utilising existing management, training and other institutions will be prepared and individual action plans will be designed for implementation. This will be carried out as an Industrial Support Service which will assist not only rehabilitation of existing industries but promotion of new industries as well.
- (iii) As an industry support service the information exchange system will be established at SADCC Industrial Co-ordination Division Dar-es-Salaam which will deal with not only rehabilitation but all matters relating to industrial development. The exchange will work in a wider context to identify industrial inputs and outputs across country frames for the benefit of all SADCC states.

(iv) During the period three investor/entrepreneur meetings for rehabilitating existing industrial plants will be organised. The total cost for all the three workshops is estimated at US\$ 360,000.

## 2. PRIORITY INDUSTRIES

### Outline of the Programme

In order to meet basic needs of the people of the region, SADCC Industries Sector selected 35 sub-sectors under seven categories of basic needs. Since 1983 SADCC has been promoting and implementing industrial plans and projects in nine of the sub-sectors.

In the following sub-sectors plans envisaging specific projects for implementation have already been drawn up:

- Fertilisers
- Pesticides
- Pulp and Paper
- Salt

In the case of Tractors, action plans will be designed based on a Study whose report is being appraised. In the meanwhile the implementation of the projects which are already accepted and in the pipeline will continue.

In the case of the following sub-sectors preliminary studies indicated SADCC requirements up to 1990 and action plans indicating projects for implementation are to be drawn:

- Cement and Cement Products
- Electrical Transmission and Distribution
- Farm Implements
- Textiles
- Wool and Mohair

In addition, efforts will be intensified towards the implementation of those projects in the above sub-sectors which are already approved. SADCC has selected eight new sub-sectors for preparation of industrial plans, promotion and implementation of projects and these are:-

- Baby Food and Cereal Processing
- Hospital Equipments and Materials
- Industrial Chemicals

- Irrigation Pumps and Equipments
- Machine Tools
- Mining Equipments
- Pharmaceuticals and Veterinary Drugs
- Railway Wagons, Rolling Stock and Equipments

During the period sub-sector plans will be prepared and the necessary investigations undertaken in each of the sub-sectors.

#### Further Identification of Priority Industries

In order to continue identifying more sub-sectors for promoting SADCC projects there is need to re-examine the remaining current Blantyre package of industries so as to select further priority areas for project selection.

### 3. CORE INDUSTRIES

#### Outline of Programmes

The Blantyre directive envisaged development of core industries as a long term perspective which is fundamental for providing self-reliance and growth to the industry sector of the region. Some of the industries mentioned are iron and steel, engineering and metal working industries, basic chemicals and capital and intermediate goods industries, based on local resources occurring in various parts of the region.

Preliminary surveys have been carried out in respect of iron and steel manufacture and engineering industries which are as follows:

#### a) Iron and Steel

The consumption of iron and steel products in SADCC countries by the year 1990 is estimated to be over 2 million tones per annum (TPA) and over 5 million TPA by the year 2000. The current and planned production capacity for iron and steel in the Region is expected to be 1.75 million TPA by 1990 and 2.4 million TPA by the year 2000.

Of the existing iron and steel production facilities in the region, only Zimbabwe has an integrated one with a capacity of 1 million TPA. All other facilities are scrap based electric melting plants and rolling mills for bars, rods and light structural sections.

The supply|demand gap indicated would be made up of flat steel products, such as plate, sheet and strip, heavy structural sections, special steels for toolmaking and machinery parts, for all of which there are no existing production facilities within the region. In addition, there are iron and steel

pipes and rails for which there is only limited production capacity available.

The gaps in the product ranges between the existing and proposed iron and steel making facilities on the one side and the demand for them by 1990 on the other side suggest a need for the production of the following items in the region.

- steel plate, sheet and strip mill
- special steels and billets for tools and other special steel products.

#### b) Engineering Industries

The broad category of metal working and engineering industries serving as a base for the manufacture of capital goods, machine tools, hand tools, metal working machinery and equipment, agricultural and transport machinery and equipment and spare parts.

The basic manufacturing units supporting the core engineering industries are the foundry, forging shop, metal coating shop etc.

These industries support major sectors of the economy like food and agriculture, clothing, building and construction, transport and communications, energy, health and education.

Facilities required are:-

- (i) Foundry facilities (ferrous and non-ferrous) for the manufacture of castings required for final machining for specific products;
- (ii) Forging facilities for the manufacture of formed products;
- (iii) Heat treatment facilities for hardening, tempering, stress relieving of parts and components;
- (iv) Machine shop facilities for the manufacture of a wide range of parts and components from castings, forgings and rolled products on mass/batch scale production required for assembly and sub-assembly;
- (v) Toolroom facilities for jigs, tools and fixture manufacture for mass scale production and repair, and maintenance of tools;
- (vi) Fabrication facilities for the manufacture of articulated and fabricated structures and components;
- (vii) Metal coating facilities for protecting the surface of parts and components for longer life.

The nucleus of the above facilities already exist in the SADCC

Region.

c) Machine Tools and Basic Machinery

The priority products amenable to early manufacturing include:-

- conventional machine tools up to 10HP; metal/wood working band saws; drilling machines; grinding machines, presses, bending machines, etc.;
- power operated portable hand tools up to 1 HP; wood working saws; grinders, drills etc. and hand operated equipment; benders, shearers, drills etc.;
- hand tools; shears, hammers, pliers, blacksmith's chisels, etc.;
- cutting tools: hacksaw blades, files, drills, taps, cutters, etc.;
- measuring equipment and accessories.

d) Basic Chemicals

An important area which will be explored for programme action is related to Petro-chemicals, natural gas and chemicals based on them.

Activities

(i) Iron and Steel Manufacture

Indicative plan for iron and steel suggests establishment of the following:-

- a regional steel plate, sheet and strip mill. No one country in the region would have sufficient demand to justify such a facility.
- A regional special steel and billet making facility for tool steels and special steels for machine parts.

A study will be carried out to establish exact demand in these two areas and identify projects for implementation. The cost of the study is estimated at US\$ 170,000.

(ii) Engineering Industries

A study will be undertaken to identify existing facilities and to formulate a programme for developing facilities for engineering industries in SADCC region. The study is estimated to cost (foreign) US\$ 85,000.

(iii) Basic Chemicals

Being a significant sector for production, a comprehensive

study will be made to prepare sectoral plans for priority items within the group of items mentioned above for project identification and implementation. The cost is estimated at US\$ 80.000.

#### 4. INDUSTRIAL SUPPORT SERVICES: OUTLINE OF THE PROGRAMME

Four areas were selected for providing support services for facilitating industrial development in the region. Steps towards implementation of programmes on Standardisation and Quality Control are under way. The categories of programme areas for the support services have been restructured so as to meet realistic and practical requirements of industrial programmes in SADC countries.

##### (i) Standardization and Quality Control

A meeting of SADC Experts on Standardisation and Quality Control formulated the following programme of action:-

Formation of a SADC Expert Group on Standardisation and Quality control with the following functions:-

- liaise with existing SADC machinery for the identification of areas of priority for standardisation.
- harmonisation of existing national standards.
- preparation of a scheme for mutual recognition of inspections and test results.
- carry out other standardisation and quality control activities.
- help in identifying and obtaining assistance in carrying out the functions enumerated above.

Further, the following four activities will be coordinated by the designated states:-

- institutional development and strengthening by Zimbabwe.
- research and development and testing activities related to standardisation by Tanzania.
- information exchange and training by Malawi.
- sub-regional harmonisation of standards and certification systems by Zambia.

The first meeting of the SADC Expert Group on Standardisation and Quality Control is being convened to implement the programme.

(ii) Research and Development

In order to prepare a practical set of activities to provide support to the present industrial development effort in SADCC region, a meeting of existing institutions on Research and Development and technical experts relating to this area in SADCC countries will be convened to formulate an action programme for implementation.

(iii) Engineering Design and Other Product Development Facilities

SADCC countries have already taken initiatives in establishing institutions for engineering designs for manufacture of agricultural and industrial machinery, developing prototypes, training in key engineering skills and other product development. This is a vital service needed for providing self-reliance to SADCC region. During the coming years a study will be undertaken to provide these services in a co-ordinated manner in the region by strengthening existing institutions and also preparing a programme of action.

(iv) Management and Skills Development Services

Management weaknesses in promoting and operating industrial enterprises is one of the reasons for under utilisation of capacities of existing production units and also timely establishment of new units. In order to formulate a programme for providing this essential service to SADCC industry sector, it is necessary to strengthen existing institutions for mutual advantage of the SADCC countries and also to provide these services systematically and in a co-ordinated manner.

A Programme will be prepared during 1986 - 87 to provide these services to SADCC Industry Sector.

The provision of experts and technical skills in industry forms an important component to which SADCC has to give increasing attention. A practical programme will be prepared in coordination with the SADCC Manpower Development Sector.

(v) Intra-Regional Industrial Linkages

The strengthening of industrial linkages within SADCC by widening the market available to each member state, can stimulate increased production, employment and income, and increase the overall level of trade within the region. Industrial linkages can take a number of forms, including information on the supply and procurement of raw materials, intermediate, capital and consumer goods, skills and management capabilities, investment possibilities and transport facilities between one country and another.

A major objective over the next five years will be to develop and strengthen these intra-regional linkages by:-

- identification of resources in these areas for the benefit of industrial establishments, Government and private organisations in SADCC countries. This will not only improve trade possibilities but also enhance industrial production.
- development of regional mechanisms which will monitor and catalyse these services within the SADCC region on a continuous basis.

(vi) Industrial Study and Consultancy Service

Each of the SADCC member states has in varying degree consultancy firms which assist in the preparation of investment projects and monitoring and management of the implementation of these projects. There is urgent need to identify and compile a list of all such industrial consultancy firms in SADCC with a view to exposing existing capabilities in the profession both to ourselves in SADCC and to the outside business community. Later SADCC could organise appropriate meetings of these consultancy firms with a view to exchanging experiences and skills among themselves.

Activities

(i) Standardisation and Quality Control

The establishment of the SADCC Expert Group on Standardisation and Quality control and carrying out the agreed programmes under their direction. The estimated cost to implement this programme will be US\$ 140,000.

(ii) Engineering Design and Other Product Promotional Facilities

A study will be undertaken to prepare a programme of action to provide these facilities for industries in SADCC Region and appropriate implementation action will be taken. This study is estimated to cost US\$ 40,000.

(iii) Management and Skills Development Services

In order to strengthen the existing institutions in SADCC region and to exchange their existing services for mutual advantage and also to firm up a concrete programme in this direction, a study will be carried out, which is estimated to cost US \$ 40,000.

(iv) Intra-Regional Industrial Linkages

In order to establish intra-SADCC flow of resources in raw materials, investments, skills and manufactured goods, an information exchange system will be designed and established first for identifying them and secondly to disseminate and promote the flow of these goods and services through existing and new channels. The information exchange

system is planned to be installed at SADCC Industrial Co-ordination Division Dar es Salaam. A workshop on intra-regional linkages of industrial projects will also be organised during the period.

(v) Industrial Study and Consultancy Services

A compilation of existing industrial consultancy capabilities and facilities in SADCC region will be undertaken for publication and efforts will be made to strengthen SADCC capacities in industrial consultancy by the following measures:-

- training of experts from these institutions.
- deputation of experts from abroad in these institutions for upgrading of their consultancy skills.
- workshops/conferences for sharing of experience and taking action on common areas of consultancy developments.

A programme based on the above will be framed by engaging consultants which is estimated at US\$ 30,000.

5. PROGRAMME FOR SMALL/MEDIUM SCALE TECHNOLOGY DEVELOPMENT

Outline of the Programme

Appropriate technology for promotion of small and medium scale industries has great significance for SADCC economies. All of them have institutions in these areas in varying types and forms. Experiences gained within the national frames are very rich and can be utilised for the benefit of the whole SADCC region. There are also international/national institutions which could be of assistance to SADCC countries. The main activities in appropriate technologies as practised in SADCC countries could be as follows:-

- technical know-how in the manufacture of goods under viable but small scale operations.
- extension services in industrial promotion like preparation of feasibility studies project promotion, marketing assistance and training.
- establishment of national institutions for providing investment capital, entrepreneur development, training facilities, establishment of production cum-training centres in specific technologies, technology transfer and development and facilities like industrial estates, common facility centres and services.
- assistance to national planning apparatus by way of integrating industrial development plans for small scale operation, sectorally and regionally with those of large scale sectors.

### Activities

A workshop of the concerned organisations within SADCC with similar ones from outside SADCC will be organised. Efforts will be made to:-

- strengthen existing national institutions for providing the services more efficiently and to meet other SADCC requirements;
- assist the establishment of such institutions and facilities in other SADCC countries whenever necessary;
- establish a forum for experts from these institutions to share ideas and experiences.

The organisation of this workshop and establishment of the forum will cost US\$ 82,000.

## 6. INVESTMENT POLICIES AND MECHANISMS

### Outline of the Programme

A compilation of existing investment policies, guidelines and regulations in SADCC countries has been completed on a countrywise basis. SADCC could also assist each member State in the preparation, updating and improvements of investment policies and mechanisms which will attract foreign and domestic industrial investments keeping in view the national policies and regulations. An attempt will be made to reconcile and co-ordinate divergencies in investment policies, rules and mechanisms in different SADCC countries so as to give, to the extent possible, an integrated SADCC global picture to the investor.

### Activities

- The compilation of investment of policies and mechanisms of individual SADCC countries will be further edited and published.
- Member States who wish to update, re-structure, and improve the existing industrial investment policies and regulations will be assisted for the purpose.
- A study team will be mounted to prepare ground for reconciling and co-ordinating investment policies and mechanisms prevalent in SADCC member states as a base for long term integration of the policies and mechanisms at SADCC level.

## VI PROJECT PROFILES

## A. PROJECTS FOR MANUFACTURED GOODS

In the past SADCC Industry Sector has been presenting projects for manufactured goods for the interests of investors during the annual consultative conferences. These projects do require detailed feasibility studies. This exercise will have to be done systematically between investors and SADCC project promoters. This is proposed to be achieved through investor/entrepreneur meetings collectively and or bilaterally. The detailed feasibility studies for individual projects for manufactured goods are therefore not included in this document, as no substantial discussion on project details are envisaged in this Annual consultative Conference. However, SADCC has formulated plans for Fertilisers, Pesticides, Salt and Pulp and Paper. In the case of Tractors, the study is being revised. The two tractor projects in the pipe line will continue. During the coming five years these plans will be fully implemented.

The indicative plans for these sectors are presented with a list of projects which will be implemented. In the meantime, SADCC Co-operating Partners and agencies interested in any of these projects will be assisted in obtaining further information by SADCC Industrial Co-ordination Division of Tanzania and by Industry Contact Points of Member States so as to facilitate the necessary investment negotiations with SADCC project owners.

## (1) INDUSTRIAL PLAN FOR FERTILISERS

Current Demand

The SADCC region has relatively fertile soils that have not been intensively farmed. The current demand for fertiliser as given in Table A.1. in the region amounts to 941,000 tonnes (1983/84). The primary requirement being for nitrogenous fertiliser; the demand for phosphatic and potassic fertiliser being relatively small the majority of these are consumed in compound fertiliser. The region's soils do have a requirement for sulphur and this is probably greater than the requirement for potassium, although little data is available on this.

Current Installed Capacity

Nominal nameplate capacity of plants producing finished fertiliser from raw materials or imported intermediates (e.g. ammonia) amounts to over 800,000 tonnes/year. This total excludes the capacity of compounding plants.

The SADCC region's capacity for producing ammonia, the fundamental raw material for all nitrogenous fertiliser is well below the regional requirement. The only two ammonia plants are based in Zambia and Zimbabwe. Neither are based on the currently preferred, least-cost route of natural gas. The Zimbabwe plant uses the costly electrolysis of water process, whilst the Zambia plant uses the coal route which is difficult to operate. The total regional nameplate capacity in ammonia is therefore only 146,000 tonnes/year. The remaining regional capacity in nitrogenous fertiliser is

based on importing low-cost bulk ammonia from extra-regional sources. Some capacity currently existing in member countries is located to serve markets outside the region mainly because of problems relating to the logistics of transport. This consideration reduces the available capacity to below 700,000 tonnes/year.

Taking account of plant not currently operational and requiring extensive rehabilitation (e.g. the plants in Mozambique) total available capacity is therefore about 620,000 tonnes/year.

Table A.1. Annual Fertiliser Demand: Present and Future Forecasts (Tonnes)

Country	Current Demand 1983/84	Project Demand 1989/90
Angola	39,350	62,400
Botswana	4,880	5,800
Lesotho	7,000	72,240
Malawi	107,778	135,800
Mozambique	42,143	99,500
Swaziland	27,347	36,300
Tanzania	89,100	151,000
Zambia	163,536	238,960
Zimbabwe	460,000	557,300
Total	941,134	1,229,300

#### Short/Medium Term Developments:

##### Rehabilitation

Several plants are currently undergoing major rehabilitation schemes and the completion of these is an obvious priority:

(i) The Tanzania Fertiliser Company (TFC)

Parts of this plant's rehabilitation are underway but some areas are still to be taken up. The plant has the capacity to meet a major part of the regional requirement for phosphatic fertilisers.

(ii) Nitrogen Chemicals of Zambia Ltd.

This is currently implementing a major rehabilitation programme to bring output up to nameplate capacity.

##### Expansion

Several projects are proposed for the expansion of existing operations and these have the advantages of existing infrastructure and technical back-up.

## (i) Sable Chemical Industries Ltd. (Zimbabwe)

A major expansion of ammonium nitrate production is planned.

## (ii) Zimphos (Zimbabwe)

A major expansion of phosphatic production is planned.

## A DEVELOPMENT STRATEGY

i) Ammonia/Nitrogen Fertilisers

The region currently has a serious shortfall in ammonia production and has no existing capacity using the low cost natural gas route. The current world market situation is that ammonia is in surplus and can be purchased cheaply from, for example, the Middle East in bulk ocean going tanker vessels.

The region has several natural gas fields that could be developed to feed ammonia plants. These plants would be of regional scale, i.e. 400,000 tonnes per year and could then ship ammonia in relatively small quantities to the ammonia importing units, supplanting the imports from extra-regional sources. The ability to supply ammonia over short sea journeys will enable small ammonia tankers to be economic.

Priority projects for ammonia are thus:

(i) Kilamco, Tanzania

This project is implementable on a relatively short time scale and would be based at Kilwa Masoko using gas from Songe Songo. The project is already well advanced based on exporting the products (ammonia and urea) out of the region. The current shortfall in regional ammonia supplies could be met by this plant if orientated to producing mainly ammonia; 400,000 tonnes per year of ammonia would be produced. Small ocean going tankers could then deliver the product to the fertilizer plants. In this regard, proposed investment at the Tanzania Fertiliser Company on new large bulk storage facilities could be avoided.

The bulk of the proposed urea production at Kilamco would be sold outside SADC since the demand for nitrogenous fertilisers is largely being met from existing plants.

(ii) Mozambique Inhambane

A smaller, natural gas based plant producing a further 100,000 tonnes per year of ammonia could contribute to meeting the medium term shortfall in ammonia production.

If gas reserves prove sufficient a second regional scale plant producing about 400,000 tonnes per year of ammonia would meet the majority of the long term shortfall of ammonia.

(iii) Angola

The ammonia urea project of Angola is based on natural gas. The capacity of the plant will be 1500 tonnes per day of urea. A feasibility study has to be prepared for the project.

To utilise the ammonia produced, nitrogenous fertiliser production units would be required for servicing the consuming market as follows:-

- (i) Malawi - New fertiliser production units to meet Malawi and possibly north Mozambique demand
- (ii) Mozambique - Rehabilitation of Quimica Cereal SARI plant to meet southern Mozambiquan requirement
- (iii) Tanzania - Expansion of production at Tanzania Fertiliser Co.
- (iv) Zambia - Expansion of ammonium nitrate plant at Nitrogen Chemicals of Zambia Ltd.
- (v) Zimbabwe - Expansion of existing plants using imported ammonia.

ii) Phosphatic Fertiliser

Existing regional phosphatic fertiliser facilities are capable of meeting current requirements if planned rehabilitation/expansion projects previously mentioned are implemented. In the long term new facilities could be developed in Zambia to meet potassic fertiliser demand.

Except for certain crops, the region's soils do have a heavy requirement for potassic fertiliser.

In the meantime regional demand could be met from the Botswana Sua Pan project which is capable of producing potassium chloride at a rate of 90,000 tonnes per year as a by-product of the proposed soda ash plant. However, the economics of the project are dependent on the soda ash which is destined for export out of the region.

iii) Sulphuric Acid Plants

In the scheme of manufacture of fertilisers for the region there is need to make available sulphuric acid.

Expansions of sulphuric acid plants in Zimbabwe and Zambia and establishment of new sulphuric acid capacity in Tanzania are therefore proposed.

#### PROJECTS FOR IMPLEMENTATION

The Projects which are proposed for implementation under the plan during the period 1986 - 1990 are the following:-

##### Nitrogenous Fertilisers

- (i) Ammonia Urea, Tanzania 1725 tonnes per day
- (ii) Ammonia Urea, Mozambique 1500 tonnes per day
- (iii) Ammonia Urea, Angola 1500 tonnes per day
- (iv) Calcium nitrate - ammonium nitrate, Malawi
- (v) Expansion of ammonia nitrate plant, Zambia
- (vi) Expansion of existing plants using imported ammonia, Zimbabwe
- (vii) Rehabilitation of existing fertiliser plants in all SADC countries

##### Potassic Fertiliser

Potash extraction, Botswana 90,000 tonnes per year

##### Sulphuric Acid

- (i) Sulphuric Acid Plant, Tanzania
- (ii) Expansion of Sulphuric Acid Plant, Tanzania
- (iii) Expansion of Sulphuric Acid Plant, Zimbabwe

#### (2) INDUSTRIAL PLAN FOR PESTICIDES

##### Introduction

Agriculture provides a strong foundation for the economy of SADC member nations and makes a significant contribution to the GDP and export earnings, while providing employment for the majority of the population. Pesticides provide the required boost for agricultural production.

##### Pesticides Consumption

Pesticide consumption in the SADC region, apart from being erratic, is not high when compared with the consumption standards of developed and some developing countries. The reasons for low consumptions are the following:

- i) Pesticides are mainly utilised by large scale estate and

commercial farmers while the small farmer continues with the traditional approach, resulting in poor crop yields. subsistence farmers do not consume much pesticide because of their lack of knowledge of the advantages of usage, and financial constraints.

- ii) Most of the countries have not been able to import the required quantity of pesticides due to foreign exchange constraints.
- iii) Manufacturing facilities for pesticides are very limited, availability at economic prices has not been possible which has depressed the demand for pesticides.
- iv) The local people have not been able to maintain crop production and yields during recent years. This has caused drastic reduction in crop areas thus affecting the consumption of pesticides.
- v) Pesticide consumption has fallen sharply in recent years due to the severe drought in almost all of the Southern African countries.
- vi) Inadequate marketing efforts by the Pesticide Manufacturers/Distributors and concerned parastatal bodies have also been reasons for low consumption.

#### EXISTING AND PROPOSED TECHNICAL PESTICIDES MANUFACTURING IN THE SADCC REGION

There is not much technical pesticides manufacturing activity in the SADCC region. Only two copper oxychloride plants exist in Zambia and Zimbabwe and one plant in the implementation phase in Tanzania.

##### i) Marina Chemicals Ltd.

Marina Chemicals Ltd., situated in Ndola, has a plant for manufacturing copperoxychloride pesticides and its formulations. The company has an installed capacity of 1,250 tonnes per annum (TPA) of copperoxychloride (COC). Production in 1983 was only 70 TPA. This underutilisation is due to lack of hydrochloric acid and if this could be made available they can export the same quantity of COC to other countries. The company has submitted plans for the phased expansion of copper-oxychloride plant capacity to 2,500 tonnes and 5,000 tonnes.

##### ii) Cecon Enterprises Pvt. Ltd., Zimbabwe

There is one technical pesticide manufacturing plant existing at Bulawayo, Zimbabwe, for manufacturing copperoxychloride and its salts. Its capacity is 750 tonnes per annum. This plant was working at about 50% capacity because management was not aware of the demand from consumers such as tobacco, tea and coffee authorities in Tanzania and Malawi and other SADCC countries.

## PROPOSED PLAN - TECHNICAL PESTICIDES

- A. Establishment of a technical manufacturing unit of copper-oxychloride with 3,000 TPA in Tanzania. The project is already under implementation at Moshi by the National Chemical Industries Ltd.
- B. Technical manufacturing of 1,200 T. Malathion is proposed for the total SADCC region, of which one plant (with a capacity of 600T) can be located in Zimbabwe, which has the maximum consumption of pesticides in the SADCC region and has the required resources of some basic, tried and tested raw materials.

Another Malathion plant with a capacity of 600 T can be located in one of the other SADCC member nations (Malawi or Swaziland) to cater for their own requirements and the requirements of other member countries.

## EXISTING AND PROPOSED FORMULATION UNITS

Zimbabwe, Tanzania, Zambia, Mozambique and Angola have formulation units. Swaziland, Malawi, Lesotho and Botswana have no formulation activity at present.

The details of existing and recommended capacities for the SADCC region are given in the Indicative Regional Plan below:

	Requirement by 1990		Existing Capacity		Recommended Formulation Capacity		Tech. Manuf. Reccmd.	Invest-ments	
	KL	T	KL	T	KL	T	T	US\$'000	
Tanzania	2,655	13,300	9,800	5,300	-	8,000	COC	3,000	20,000
Zimbabwe	5,200	10,900	6,500	5,250	1,000	6,000	Malathion	600	9,640
Zambia	2,658	2,658	900	150	2,000	3,000		-	4,710
Malawi	710	3,190	-	-	1,000	3,000		-	4,010
Swaziland	1,190	1,470	-	-	1,500	2,500		-	3,460
Angola	1,020	1,945	800	500	-	-		-	-
Mozambique	3,420	2,640	5,850	1,400	-	-		-	-
Botswana	89	89	-	-	-	-		-	-
Lesotho	20	64	-	-	-	-		-	-
SADCC Region	16,962	36,156	23,850	12,600	5,500	22,500		-	41,820

Even though there is surplus capacity in liquid formulations a further capacity of 5,500 tonnes are to be established in Zimbabwe, Zambia, Malawi and Swaziland. This is because of the following reasons.

Malawi and Swaziland are two countries with sizable pesticides consumption, but have no formulation plant at present. For logistic reasons one plant each is suggested for both solid and liquid formulations. Zimbabwe has a malathion plant and a formulation plant to utilise technical pesticides but there is also a need

for solid formulation to fill up the gap in this field. Future plans of commercial farming in Zambia will definitely create demand for pesticides over and above current projections; hence one plant for solids and liquids is suggested for Zambia. From a technical angle where solids are formulated there is need for liquids to increase the product range and hence the overlapping in planned capacities of liquids over projected requirements.

Tanzania presently has five formulation plants but again they do not have proper facilities for different formulations such as WDP, granules, etc. In addition to this the copper oxychloride project will need a formulation plant to be combined for formulating the technical pesticides produced. One formulation plant at Moshi for 8000 tonnes of solid is therefore suggested.

### 3. INDUSTRIAL PLAN FOR SALT

#### Demand for Salt

The 1990 estimated demand for salt in the SADCC region is based on the January 1983 SADCC Maseru Report and earlier TISCO and UNIDO/UNDP reports.

Key market factors considered in estimates:

- human consumption in tropical countries to meet minimum nutritional standards 5 kg per capita per year.
- agricultural requirements, assumed 5% of cattle in each country required 2 oz. per head per day.
- industrial requirements are based on a detailed survey and adjusted by a 5% growth factor applied from 1982 to 1990.

(i) Consumption and Demand for Salt in the SADC Region (000's tonnes/year)

COUNTRY	CURRENT POSITION				PROJECTED 1990	
	CONSUMPTION		DEMAND		DEMAND	
	Total	Refined	Total	Refined	Total	Refined
Angola	22	N/A	46	5	60	10
Botswana	5	-	8	1	10	2
Lesotho	6	-	9	1	10	2
Malawi	27	0.2	34	3	45	8
Mozambique	80	1.0	68	7	135	23
Swaziland	2.5	-	4	0.5	5	1
Tanzania	55	2.0	115	10	170	30
Zambia	30	5.0	43	6	55	10
Zimbabwe	54	9.4	54	0.5	70	12
Totals	281.5	17.6	381	43	560	98

Note: Present consumption is severely supply limited as indicated by the 100,000 t/year shortfall between present consumption and demand.

Source: SADC Study on Salt, September, 1982.

(ii) Supply PositionPresent Salt Supply in the SADCC Region ('000's tonnes/year)

Country	TOTAL SALT			PURE REFINED SALT		
	Production	Imports	Exports	Production	Imports	Exports
Angola	22	0	0	0	0	0
Botswana	2.5	2.5	0	0	0	0
Lesotho	0	6	0	0	0	0
Malawi	0	27	0	0	0.2	9
Mozambique	85	0	5.0	1.0	0	0
Swaziland	0	2.5	0	0	0	0
Zambia	0.1	30	0	0	5.0	0
Zimbabwe	0	54.2	0	0	9.4	0
Total	164.6	125.2	5	1.0	14.6	0

Source: SADCC Study on Salt September 1982

(iii) Supply Demand Gap

The gap in demand by 1990 is estimated to be about 296,000 tonnes. The proposed plan envisages projects which will meet the gap to the extent of 255,000 tonnes.

(iv) Indicative Plan for Salt Production in SADCC Region - Projects for Implementation

<u>Capacity (tonnes)</u>	<u>Country</u>
50,000	Mozambique (Maputo)
30,000	Mozambique (Nacala)
15,000	Mozambique (Maputo)
60,000	Tanzania (Uvinza)
40,000	Tanzania (Sadani)
25,000	Tanzania (Kitame)
30,000	Tanzania (Lindi/Mtswara)
5,000	Tanzania (Changwela/Zanzibar)
<hr/> 255,000 <hr/>	

Note: Expansion of Salt Works, Uvinza, Tanzania is already completed. Small refining capacities proposed in Botswana and Lesotho will be implemented under the national programme for the respective countries.

## 4. INDUSTRIAL PLAN FOR PULP AND PAPER PRODUCTION IN SADCC REGION

Paper and Paper Boards

Projected Demand by 1990	245,550 Tonnes
Existing Capacities of Production	81,500 Tonnes
Supply - Demand Gap	164,050 Tonnes

Projects which will be implemented to meet the gap in demand are:-

		Grades	Increase in Capacity Utilisation	New Capacity	
		TPA	TPA	TPA	
CCPA	Angola	Cultural & Industrial	18,000	12,000	ongoing
Fapel	Mozambique	Cultural & Industrial	8,000	-	ongoing
Manica	Mozambique	Cultural	-	35,000	commissioned
Phuzumoya	Swaziland	Tissue	-	6,000	
Mufindi	Tanzania	Cultural & Industrial	-	60,000	
Kibo Match	Tanzania	Industrial	9,000	-	ongoing
Zambesi	Zambia	Tissue & Industrial	8,500	-	
-	Zambia	Industrial & Packaging	-	10,000	
Mutare	Zimbabwe	Cultural	-	22,000	
Hunyani	Zimbabwe	Industrial	11,000	-	
			54,500	145,000	

Pulp

Sufficient capacity for pulp exists in SADCC region hence no new projects for pulp manufacture are recommended.

## 5. INDUSTRIAL PLAN FOR TRACTORS - PROJECTS FOR IMPLEMENTATION

The study on tractors and tractor components prepared by SADCC is being revised. Two projects approved under SADCC plan and under implementation are:-

- Conventional Tractors for 500 units (Expansion) Tanzania
- Low Cost Tractors for 2000 units (Expansion) Swaziland

## B. PROJECTS FOR IMPLEMENTATION OF THE FIVE YEAR PROGRAMME (STUDIES/CONSULTANCIES/ACTION PLANS)

### Introduction

SADCC Industrial Co-ordination Division has been able to implement the programmes for industry surveys, feasibility studies, preparation of action plans, technical scrutinies, implementation of projects etc. by engaging short term consultancies obtained by way of assistance from SADCC's international partners. This was found to be the most practical way to deal with the many technical assignments. This approach to work in the Division is likely to continue for some time.

The implementation of a substantial part of the industry programme during the next five years requires engaging short term consultancies for carrying out studies and or framing up action programmes in particular lines of activity. In order to undertake these short term consultancies, SADCC Industrial Co-Ordination Division will enter into clear understanding with SADCC partners with regard to the necessary terms of reference, operational modality, duration costs and other related issues. In this document, however, only brief outlines of the required consultancies are listed, with indications of approximate costs.

### 1. REHABILITATION OF EXISTING INDUSTRIES

#### 1.1. Sectoral Studies in Rehabilitation

Studies on the Rehabilitation of the following industries:-

- Cement and Cement Products
- Fertilisers
- Leather and Leather Goods
- Oils and Fats
- Textiles

#### Type of Experts

Each of the studies will be carried out by a team of experts of the following categories:-

- Two experts in respective product lines
- One financial analyst
- One Industrial Economist, with extensive experience in industrial planning

Duration

Each of the studies will require 5 to 6 months for preliminary planning, field work and finalising reports.

1. Preliminary briefing - one month
2. Field work - four months
3. Final report writing - one month

<u>Estimated Costs</u>	<u>(Foreign in US \$)</u>
1. Oils and Fats	80,000
2. Leather and Leather Goods	80,000
3. Fertilisers	80,000
4. Cement and Cement Products	80,000
5. Textiles	80,000
	<u>400,000</u>

### 1.2. Workshop for Investors/Entrepreneurs

Organisation of Entrepreneur meetings for project promotion (three).

Stages of Work

- Consultants to prepare the programme frame
- Consultants to do field work and finalise projects
- Preliminary preparations to mobilise participants and documentation.
- Organisation of meetings
- Follow-up section

The types of consultants will have to be selected according to the item/items chosen.

Duration

- |                                |             |
|--------------------------------|-------------|
| Consultancy on field work      | - 3 months  |
| Preparation of documents       | - 1½ months |
| Holding meetings and follow-up | - 2 months  |

Estimated Cost (Foreign)

SADCC Industrial Co-ordination Division has conducted a few workshops at various places in SADCC Region. The total cost need not exceed US \$ 120,000 for one workshop. This takes into consideration local costs which will be borne by the host country. For three workshops which will be organised during the period of five (5) years total cost is US \$ 360,000.

## 2. PRIORITY INDUSTRIES

2.1. Revised Study on Tractors and Tractors Components

The study of Tractors and Tractor components already carried out for SADCC region will be revised in the light of the observations made by Industry Officials Sub-Committee held at Mbanane in January, 1985.

Type of Experts

- Two experts in respective product lines of (i) tractors and (ii) tractor components.
- One financial analyst

Duration - 4 months

Estimated cost (foreign) US \$ 60,000

2.2. Sectoral Plans for 4 Priority Sectors

On the basis of preliminary surveys already carried out by SADCC, further analysis will be made to prepare sectoral plans and programme of action with identified projects for textiles, farm implements, electrical goods, cement and cement products.

Type of Experts

- Two technical experts in respect product lines
- One Industrial Planner Analyst
- Cost Accountant/Financial Analyst

Duration 5 months for each study

Estimated cost (foreign) for one study will be US \$ 80,000 for four sub-sectors, the total cost (foreign) will be US \$ 320,000.

### 2.3. Sectoral Plans for Eight New Sub-Sectors

Industry sectoral plans for eight sub-sectors namely Machine Tools, Irrigation Pumps and Equipments, Railway Wagons, Rolling Stock and Equipments, Baby Food and Cereal Processing, Pharmaceuticals and Veterinary Drugs, Hospital Equipments and Materials, Industrial Chemicals and Mining Equipments. The studies will identify specific projects for existing industries as well as for establishing new capacities.

#### Type of Experts

- Two Technical Experts in respective product lines
- One Industrial Economist/Planner/Analyst
- One Financial Analyst

Duration        6 months for each study

Estimated Cost    (foreign) in US \$

1. Machine Tools	60,000
2. Irrigation Pumps and Equipments	60,000
3. Baby Food and Cereal Processing	70,000
4. Pharmaceuticals and Veterinary Drugs	70,000
5. Hospital Equipments and Materials	70,000
6. Industrial Chemicals	80,000
7. Mining Equipments	70,000
8. Railway Wagons, Rolling Stock and Equipments	60,000
	540,000

### 2.4. Study on Identification of Priority Industries

Report on identification of priority industries in the light of Blantyre directives and on the basis of criteria laid down for the purpose.

#### Type of Experts

- Industrial Economist - One
- Industrial Planning Expert - One

Duration 3 months

Estimated costs in foreign US \$ 40,000

### 3. CORE INDUSTRIES

#### 3.1. Establishment of Steel Plate, Sheet and Strip Mill

Establishment of regional steel plate, sheet and strip mills. The study will provide a survey of the industry and prepare a feasibility study.

Type of Experts

- Three Technical Experts in respective product lines
- One Financial Analyst with training in industrial economics.

Duration 4 months

Estimated Cost (foreign) US \$ 70,000

#### 3.2. Regional Special Sheet and Billet Making Plant

Establishment of a regional special steel and billet making plant/facility.

Type of Experts

- Three Technical Experts on the product lines
- One Financial Analyst with bias in industrial economics

Duration 5 months

Estimated cost of the study (foreign) US \$ 70,000

#### 3.3. Establishment of Facilities for Engineering Industries

Surveying existing facilities and identifying possible new facilities for engineering industries in SADCC region. The study will prepare a comprehensive plan, identify projects and draw-up a time scaled action programme.

Type of Experts

- Four experts in concerned product/process lines
- One Industrial Economist with planning experiences
- One Financial Analyst

Duration 6 months

Estimated cost (foreign) US \$ 85,000

### 3.4. Sectoral Plans for Chemicals based on Petroleum/Natural Gas

Study on chemicals based on petro-chemicals/natural gas. The study envisages preparation of sectoral plans for making the chemicals available with projects identified for implementation.

#### Type of Experts

- Three Experts in broad categories of product lines
- One Financial Analyst
- One Industrial Economist experienced in Planning

Duration        5 months

Estimated cost (foreign) US\$ 80,000

## 4. INDUSTRIAL SUPPORT SERVICES

### 4.1. Programme on Standardisation and Quality Control

Implementation of the programme on Standardisation and Quality Control:

- |  |                |
|--|----------------|
| - convening 5 meetings of the Expert Groups on Standardisation and Quality Control at SAPCC capitals (cost of travel and per diem for delegates) | US \$ 100,000  |
| - Preparation of a programme to identify facilities in SADCC countries and their utilisation for mutual advantage                                | US \$ 20,000   |
| - Preparation of a programme to strengthen the existing institutions in standardisation and quality control                                      | US \$ 20,000   |
|  | <u>140,000</u> |

### 4.2. Plan of Action for Engineering Design and Product Development

Preparing a plan of action for Engineering Designs for products including machinery and equipment, preparation of prototypes and promotional activities with the objective of achieving self-reliance.

Existing institutions in SADCC will be utilised for this purpose.

#### Type of Experts

- One Engineer experienced in these institutions
- One Financial Analyst

Duration

Estimated cost (foreign) US \$ 40,000

4.3. Programme for Management and Skill Development Services

Prepare a programme to provide management and skill development services to SADCC industrial enterprises existing as well as proposed by engaging the services of institutions such as the Eastern and Southern African Management Institute, Arusha.

Team of Experts

Three Technical experts in three specific management lines

Duration 4 months

Estimated cost (foreign) US \$ 40,000

4.4. Establishment of Information Exchange

Prepare a blue print for establishment of an Information Exchange system at SADCC Industrial Co-ordination Division in Dar es Salaam.

Type of Experts

- One programme Co-ordinator
- One Financial Analyst
- One Computer programming specialist

Duration 4 months

Estimated cost (foreign) US \$ 80,000

4.5. Workshop on Inter Linkages of Industrial Projects

Organising a workshop on promotion of Industrial Projects based on sectoral inter linkages especially with Agriculture, Transport and Mining Sector.

<u>Stages of Work</u>	<u>Time Scale</u>
1. Preparation of programme frame	15 days
2. Preparing documents by engaging consultants who will carry out field work	4 months
3. Mobilisation of Participants	1 month
4. Holding the Workshop and Follow-up	1 month

Type of Experts

- Two Experts conversant in project preparation
- Two Consultants conversant with documentation and mobilising participation including canvassing.

Duration        5 months

Estimated cost (foreign)    US \$ 120,000

4.6. Programme for Development of Industrial Consultancy

Preparation of a report on ways and means to develop indigenous industrial consultancy capabilities in the SADCC region.

Type of Experts

- Two experts in the line

Duration        3 months

Estimated cost (foreign) US \$ 30,000

## 5. PROGRAMME FOR SMALL AND MEDIUM SCALE TECHNOLOGIES

5.1. Workshop for Small and Medium Scale Technologies

Organisation of a workshop of Institutions in SADCC and SADCC Governments.

Stages of Work

- |  |          |
|--|----------|
| - Consultations to draw-up a programme                       | 20 days  |
| - Preparatory work for visits in the field and documentation | 3 months |
| - Holding of workshop including arrangement for follow-up    | 10 days  |

Duration

Estimated cost (foreign) US \$ 82,000

Local costs will be borne by SADCC.

## 6. INVESTMENT POLICIES AND MECHANISMS

Study on Co-ordination of Investment Policies and Mechanisms

A study team to explore the possibilities of co-ordinating divergent investment policies, regulations and incentives prevalent in SADCC countries and suggest ways and means to reconcile them so as to

give a global view to the investor in the SADCC region.

Team of Experts

- Legal expert with bias in international/tax laws
- Industrial Economist experienced in investment policies, mechanisms, and operations.

Duration

Estimated cost (foreign) US \$ 90,000

## SUMMARY OF PROJECTS

## PROJECTS FOR IMPLEMENTATION OF FIVE YEAR PROGRAMMES

A. STUDIES/SHORT TERM CONSULTANCIES/PROGRAMME FRAMES/ACTION PLANS  
FOR THE PERIOD 1986 - 1990I. Rehabilitation of Industries

US \$

## 1. Sectoral Studies on:-

- Oils and Fats	80,000
- Leather and Leather Goods	80,000
- Fertilisers	80,000
- Cement and Cement Products	80,000
- Textiles	80,000

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400,000

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2. Workshop for Investor/Entrepreneur meetings  
(three)

360,000

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760,000

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II Priority Industries3. Revised study on tractors and tractor  
components

60,000

## 4. Sectoral Plan for:

Textiles	80,000
Farm Implements	80,000
Electrical goods	80,000
Cement and Cement products	80,000

## 5. Sectoral plans for eight new sub-sectors

540,000

## 6. Identification of priority industries

40,000

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960,000

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<u>III. Core Industries</u>	
7. Establishment of steel plate, sheet and strip mill	70,000
8. Regional special steel and billet making plant	70,000
9. Establishment of facilities for engineering industries	85,000
10. Sectoral plans on chemicals based on petroleum/natural gas	80,000
	<u>305,000</u>
<u>IV. Industrial Support Services</u>	
11. Programme on Standardisation and Quality Control	140,000
12. Plan of action for Engineering Design and Development	40,000
13. Programme for Management and Skill Development Services	40,000
14. Establishment of Information Exchange	40,000
15. Workshop on Inter-Linkages of Industrial projects	120,000
16. Programme for Development of Industrial Consultancy	30,000
	<u>410,000</u>
<u>V. Small and Medium Scale Technologies</u>	
17. Programme for small and medium scale technologies	82,000
	<u>82,000</u>
<u>VI. Investment Policies and Mechanisms</u>	
Study on co-ordination of Investment and Mechanisms in SADCC Region	90,000
	<u>90,000</u>
 GRAND TOTAL	 <u>2,607,000</u>

## STATUS OF PROJECTS

## A. PROJECTS FOR IMPLEMENTATION

## A.1 PROJECTS WHERE FUNDS ARE SECURED AND UNDER IMPLEMENTATION

	<u>Investment in US\$ in Million</u>	
<u>Textiles</u>	<u>Foreign</u>	<u>Total</u>
1. Knitting Projects - Botswana	0.75	1.55
2. Knitting Project - Zambia	7.00	3.50
3. Polyester Blend Integrated Weaving Plant - Zambia	10.00	14.50
<u>Tractor and Farm Implements</u>		
4. Tractor Assembly leading to manufacture - Zambia	8.70	8.70
5. Agricultural Implements - Angola	1.21	3.65
6. Artisan Implements Plants - Botswana	0.01	0.02
7. Artisan Implements Plant - Lesotho	0.006	0.021
8. Artisan Implements Plant - Tanzania	0.006	0.024
<u>Pulp and Paper</u>		
9. Mufundi Pulp Paper	<u>187.00</u>	<u>187.00</u>
	214.682	223.465
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## A.2 PROJECTS FOR WHICH NEGOTIATIONS FOR FUNDING ARE GOING ON

Salt

10. Small Scale Refining Plant - Botswana	0.05	0.05
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Textile ChemicalsPesticides and Insecticides

11. Textile Processing Chemicals - Botswana	1.50	3.00
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Tractors and Farm Implements

12. Tractor Assembly leading to Manufacture - Tanzania	1.60	2.60
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Fertilizers

13. Ammonia Project - Panda - Mozambique	176.00	198.00
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Cement

14. Rehabilitation of Cement Project - Mozambique	21.25	25.00
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Textiles

15. Powerloom Project - Botswana	1.21	2.90
16. Powerloom Project - Lesotho	1.41	3.29
17. Powerloom Project - Malawi	0.90	1.70
18. Powerloom Project - Swaziland	0.60	1.41
19. Powerloom Project - Tanzania	2.20	4.18
20. Powerloom Project - Zambia	2.00	3.50
21. Knitting Project - Malawi	2.50	3.10
22. New Polyester Staple Plant - Zimbabwe	9.00	12.00

Wool and Mohair

23. Wool Spinning Plant - Botswana	<u>0.75</u>	<u>0.90</u>
	<u>220.97</u>	<u>261.63</u>

## A.3 PROJECTS WHICH ARE BEING REVISED

Textile

24. Knitting Project - Lesotho	2.50	3.10
25. Blankets - Zimbabwe	6.01	7.04

Textile ChemicalsPesticides and Insecticides

26. Textile Processing Chemicals - Tanzania	2.00	4.00
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Tractor and Farm Implements

27. Expansion of Farm Implements - Zambia	2.00	4.00
28. Agricultural Implements - Botswana	1.41	3.00
29. Agricultural Implements - Lesotho	1.41	3.00
30. Agricultural Implements - Malawi	1.41	3.00
31. Agricultural Implements - Tanzania	0.45	1.00
32. Agricultural Implements - Zambia	0.45	1.00
33. Agricultural Implements - Swaziland	0.45	1.00

Fertilizers

34. Rehabilitation of Matola Plant - Mozambique	3.50	6.30
35. Sulphuric Acid Plant - Zimbabwe		

Pulp and Paper

36. Mutare Board Paper Mill - Zimbabwe	3.50	6.30
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Cement

37. Cement Asbestos Products - Mozambique	12.00	16.00
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Salt

38. Salt Development Project at Changela/Zanzibar - Tanzania	0.40	1.70
	<u>44.49</u>	<u>66.14</u>

## A.4 PROJECTS WHICH REQUIRE FUNDING

Salt

39.	Expansion of Saltworks, Nacala - Mozambique	4.62	4.62
40.	Expansion of Saltworks, Maputo - Mozambique	2.66	6.00
41.	Development of Saltworks, Sadani - Tanzania	5.00	5.50
42.	Development of Saltworks, Kitani - Tanzania	1.00	2.00

Textiles

43.	Polyster Fabrics and Texturised Yarn - Tanzania	49.10	53.60
44.	Knitting Project - Mozambique	3.60	5.60

Wool and Mohair

45.	Wool Scouring Plant - Lesotho	0.75	2.90
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Tractor and Farm Implements

46.	Tractor Assembly Leading to Manufacture - Swaziland	0.59	6.10
47.	Expansion of Special Steel and Billet Casting - Zimbabwe	5.10	12.40

Fertilizers

48.	Ammonia Nitrate/Calcium Nitrate Plant - Malawi	109.00	132.00
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Pulp and Paper

49.	New Paper Mill - Zambia	70.00	180.00
50.	Pulp and Paper Mill, Manica - Mozambique	<u>126.00</u>	<u>156.00</u>

		<u>377.42</u>	<u>576.72</u>
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## B. PROJECTS FOR STUDIES

<u>Project</u>	<u>Investment US\$ Million</u>		<u>Status</u>
	<u>Total Cost</u>	<u>Foreign Cost</u>	
1. <u>Salt</u> Upgrading of Existing Salt Works - Angola	0.08	0.08	To be undertaken.
2. Development of Saltworks Lindi/Mtwara - Tanzania	0.17	0.17	To be undertaken.
3. Expansion of Saltworks - Mozambique	0.17	0.17	Completed.
4. Development of Saltworks - Kasempa - Zambia	0.20	0.20	To be undertaken.
5. Small Scale Refining Plant - Lesotho	<u>0.05</u>	<u>0.05</u>	To be undertaken
	<u>0.67</u>	<u>0.67</u>	
<u>Textiles</u>			
6. Polyester Polymerisation and Staple Fibre Plant - Zambia	0.50	0.50	Completed.
7. Development of Petrochemical Complex - Angola	<u>1.00</u>	<u>1.00</u>	Undertaken by source other than SADCC.
	<u>1.50</u>	<u>1.50</u>	
<u>Wool and Mohair</u>			
8. Buttons from Horn - Botswana	<u>0.10</u>	<u>0.10</u>	Completed.
	<u>0.10</u>	<u>0.10</u>	
<u>Textile Chemicals</u>			
<u>Pesticides and Insecticides</u>			
9. Textile Chemical Plant - Angola	0.12	0.12	Taken to the grouping under the new sub-sector Industrial Chemicals
10. Textile Chemical Plant - Mozambique	0.12	0.12	
11. Textile Chemical Plant - Tanzania	0.12	0.12	
12. Textile Chemical Plant - Zambia	0.12	0.12	
13. Textile Chemical Plant - Zimbabwe	0.12	0.12	

**Pesticides and Insecticides**

14.	Upgrading and expansion of pesticides, insecticides formulation plant - Angola (4 units)	0.12	0.12	Study is Completed
15.	Upgrading and expansion of pesticides, insecticides formulation plant - Mozambique (3 units)	0.12	0.12	"
16.	Upgrading and expansion of pesticides, insecticides formulation plant - Tanzania (3 units)	0.12	0.12	"
17.	Upgrading and expansion of pesticides and insecticides formulation plant - Zimbabwe (2 units)	0.12	0.12	"
18.	Upgrading and expansion of pesticides, insecticides formulation plant - Zambia (3 units)	<u>0.12</u>	<u>0.12</u>	"
		<u>1.20</u>	<u>1.20</u>	

**Medium/Small Scale Plants**

19.	Pesticides/Insecticides Formulation Plant - Malawi	0.12	0.12	Study is Completed.
20.	Pesticides/Insecticides Formulation Plant - Swaziland	0.10	0.10	"
21.	Pesticides/Insecticides Formulation Plant - Zimbabwe	0.10	0.10	"
22.	Pesticides Chemicals Plant - Tanzania	0.12	0.12	"
23.	Pesticides Chemicals Plant - Zimbabwe	<u>0.10</u>	<u>0.10</u>	"
		<u>0.54</u>	<u>0.54</u>	

**Tractor and Tractor Implements****Tractor**

24.	Tractor Assembly Leading to Manufacture - SADCC region	0.16	0.16	Completed.
25.	Study for Manufacture of Tractor Components using existing capacities in SADCC region	<u>0.13</u>	<u>0.13</u>	Completed.
		<u>0.29</u>	<u>0.29</u>	

Farm Implements

26.	Rationalisation and Development of farm equipment and testing facilities - SADCC region.	<u>0.50</u>	<u>0.50</u>	Completed.
		<u>0.50</u>	<u>0.50</u>	

Fertilizers

27.	Study on the market for fertilizers and drawing up of an integrated production plant for SADCC region	<u>0.12</u>	<u>0.12</u>	Completed.
		<u>0.12</u>	<u>0.12</u>	

Pulp and Paper

28.	Paper Mills - Swaziland/Angola	0.20	0.20	Completed.
29.	Pulp and Paper - Sofala - Mozambique	0.09	0.09	To be undertaken.
30.	Chemicals for Pulp and Paper - SADCC region	0.12	0.12	Shifted to new sub- sector.
31.	Demand Study of Pulp and Integrated plan for production	0.10	0.10	Completed.
32.	Study for integrated paper mill - Zimbabwe	<u>0.25</u>	<u>0.25</u>	Study is Completed.
		<u>0.76</u>	<u>0.76</u>	

Cement

33	Study of Rehabilitation of existing Units, Malawi/Zambia	0.19	0.19	Completed except in the case of Malawi
34.	Study of alternative use of cement products - SADCC region	<u>0.19</u>	<u>0.19</u>	To be undertaken

