

6) Long-term assistance by foreign experts

In the future, foreign experts with expertise in advanced industrial technology and management who will stay 1-2 years in Kenya should be considered. A long-term assistance programme, which will provide technical and management-related instruction and advice to improve product quality and plant productivity, should be introduced under foreign aid programmes. The companies who want to apply for assistance programme should bear a portion of the costs incurred.

Japan Overseas Development Corporation (JODC) was established in 1970, as a non-profit organisation, with the objective of promoting economic and technical cooperation in developing countries of the world, thereby contributing to industrial development, export promotion and improving technical standards in these countries.

Based on requests from companies and private economic organisations in the developing countries, JODC dispatches experts and engineers with expertise in industrial technology and management with the assistance of the Japanese government for the purpose of providing technical and management-related assistance to local companies.

#### 4.2 Trade Training Activities

- (1) Priority should be given to training staff of TPO and commercial attaches to help them respond to intensified trade promotion activities. Both basic and advanced courses on practical trade business, and export marketing management courses should be held for company employees, staff and managers engaged in trade business. Training courses for the improvement of export products should be provided for upgrading export products. To this end, it is necessary to develop a comprehensive training curriculum, to increase the number of instructors, and to purchase better training equipment. As occasion demands, foreign businessmen well-versed in practical trade business should be invited as resource speakers and advisors.
- (2) TPO should accept trainees from the 21 countries in East South Africa with the cooperation of the East South Africa Trade Promotion and Training Centre (ESATPTC). Then TPO has functions of an international training organisation.

(3) In the long term, an international business school offering overseas training programmes should be established in order to make future managers familiarize with international business. If an export inspection scheme is introduced, training courses for inspectors should also be added.

(4) Establishment of a training programmes

1) For the time being, training courses for trade business in the KIBT should be expanded.

To this end, a training planning committee should be set up within KIBT to make a comprehensive training programme immediately. In the future, a comprehensive trade training programme should be developed by the new Trade Promotion Organisation (TPO) which will take over the function of KIBT.

2) The training planning committee should be composed of the representatives from MOC, KIBT, KETA, MOC, KNCC&I, KAM, ESATPTC, and Nairobi University as well as staff members from foreign trade promotion organisations.

3) To keep up the increasing number of training courses, equipments and facilities should be upgraded.

Projected scale of facilities and training equipment are as follows:

Training room (capacity: 25-30 persons)	3
Lecture hall (capacity: 150 persons)	1
Instructors' office	3
Training and AV equipment	1 set

4) Besides full-time instructors, suitable candidates will be recruited from MOF, MOC, KETA, the Central Bank, Customs and other government-related organisations, and Nairobi University as part time instructors, who will be in charge of teaching basic courses.

Experts in shipping companies, customs brokers, insurance companies and foreign exchange banks will be invited as part time instructors. Foreign governments should be asked to send instructors under their assistance programmes. It is advisable to request countries like Japan, where the role of trading companies and trading company functions are quite advanced, to send experts in trade business as long-term instructors.

#### Instructors

	Full-time	Part-time
Practical trade business	4	4
Export marketing management	4	4
Staff training	2	2
Export product improvement	3	3

5) During the preparation of the curriculum, lectures should be supplemented with case studies to help the trainees learn to deal with actual business.

(5) The prospective training courses are shown below.

Part or all of the training expenses should be charged, in principle, to the trainees or their employers.

1) Practical trade business courses

(a) Basic course for export business

Students are to gain an understanding of the theory and practice of trade transactions and master basic knowledge of export business.

Target : Those who are or will be engaged in actual business

Duration and frequency : Five days, held twice a year

Number of trainees : 20-30, total 40-60 per year

Scope of training : Basic trade business

- Course content** :
- Overview of export transactions
    - Structure of export business
    - Finding the right exporters
    - Types of exports and export negotiation
    - Drawing up export contracts
  - Conditions for export transactions
    - Trade terms, conditions and prices
    - Settlement of export price
    - Shipping and insurance
    - Quality and claims
  - Rules and regulations for export
    - Rules and regulations for export and import
    - Customs procedures and tariffs
    - Export inspections and import restrictions

**(b) Advanced Course for Export Business**

Mid-level management at export firms with basic trade expertise will master actual trade practices through case studies for conducting international transactions.

**Duration and frequency** : Three days per course, held once a year

**Number of trainees** : 20 per course, total 120 per year

**Scope of training** : Overall trade practices

**Course content** : (Course 1) Export contracts

- Establishment of an export contract
- Export contract content
- How to draw up an export contract

(Course 2) Necessary knowledge of export shipment

- Current export procedures
- Export packaging and shipping marks
- Export inspections
- Booking space for a vessel
- Delivery to the buyer
- Verification by foreign exchange banks
- Insuring the cargoes
- Loading
- Preparation of shipping documents

(Course 3) Settlement of export payment

- Ways of settlement of payment
- Export financing
- Foreign exchange
- Avoiding foreign exchange loss
- Receiving payment

(Course 4) Export terms, conditions and price

- Negotiation over terms and conditions
- Sales contract
- Cost analysis and market price
- Setting terms and conditions and prices

(Course 5) Quality and the transaction

- Quality conditions and the standards for quality
- Quality standards required for sale and quality guarantees

(Course 6) Commercial claims and their resolution

- Commercial claims between the buying and selling parties
- Commercial claims against a third party
- Prevention and resolution of commercial claims

2) Export marketing management

Managers in the export divisions of firms will be given the opportunity to master export marketing required for overseas market development using the case study method.

Period and frequency : Five days per course, held once a year

Number of trainees : 20, total 100 per year

Scope of training : Export marketing overall

Course content : (Course 1) Export marketing management

- Overview of export marketing
- Analysis of the market environment and selection of target markets
- Marketing planning
- Export product strategies and product adaptation to a market
- Selection of distribution and sales channels
- Ways of export promotion

(Course 2) Overseas trade fairs

- Selection of overseas trade fairs
- Preparation for participating in overseas trade fairs and PR activities
- Management of stands at overseas trade fairs
- Business negotiation at overseas trade fairs
- Display and decoration

(Course 3) Export strategies

- Export strategies
- Selection of an agent and how to use the agent effectively
- Sales promotion incentives and sales techniques
- Product planning and manufacturing
- Management of staff in charge of export
- Sales promotion expenses and appropriate budgets

(Course 4) Export marketing survey

- Selecting potential markets
- Market survey methods and planning of survey
- Selection of market survey companies
- Desk and field survey

(Course 5) Making export promotion plans

- International trade and trend analysis
- Export policy and sales incentives
- Utilisation of public trade promotion organisations' activities
- Surveys of customer's preferences
- Selection of appropriate distribution channels

3) Training of staff members

(a) Training for trade promotion organisation staff

- |                        |   |   |
|------------------------|---|---|
| Trainees               | : | Mid-level government officials and staff members at trade and economic-related organisations. |
| Duration and frequency | : | Two weeks, held once a year   |
| Scope of training      | : | Export promotion activities, international business, etc.                                     |

- Course content : . World trade structure and trade policy
- . Kenya's trade policy and trade rules and regulations
  - . Roles and activities of trade promotion organisation
  - . Ways and means of export promotion
  - . Export market surveys and collecting information
  - . Export marketing techniques
  - . Trade transactions and trade practices
  - . Using programmes of foreign trade promotion organisations

(b) Commercial attaches, newly appointed

Trainees : Commercial attaches newly appointed will be offered training before being posted abroad so that they can effectively carry out export promotion activities at their local posts.

Period and frequency : Two weeks, held once a year

- Course content : . World economic and trade trend, trade policy
- . Kenya's trade policy and trade rules and regulations
  - . Trade policy and trade rules and regulations in the country where he will be posted.
  - . Trade transactions and trade enquiry services
  - . Overseas public relations activities
  - . Investment promotion activities and the EPZ



#### 4) Export product improvement

- Trainees : Manager of export product development
- Duration and frequency : One to two weeks per course, held once a year
- Number of trainees : 10 per course, 40 per year
- Scope of training : Trainees will be provided with training necessary to improve export design and packaging standards, develop products suited to the export market, and recognise the importance of quality control for export products. In the future, long-term training overseas will also be incorporated in order to allow the mastery of more specialised expertise.
- Course content :
- (Course 1) Export product development and design
    - Product development process
    - Product creation and development system
    - Product planning
  - (Course 2) Design management
    - Design as a management strategy
    - Export marketing and design
    - Design management techniques
    - Training of designers and personnel in change of product development
  - (Course 3) Export packaging and labelling
    - Packaging design and materials
    - Cost analysis for packaging materials
    - Legal requirements on packaging and labelling
    - Consumer images of packaging and labelling
  - (Course 4) Export transactions and quality
    - Quality standards and quality guarantees
    - market development and product design

### 4.3 Public Relations and Exhibition Activities

#### 4.3.1 Participation in Foreign Exhibitions and Trade Fairs

Participation in foreign exhibitions should be encouraged. Selection of the exhibitions to be participated in should be based on the following policies.

- (1) Expansion of existing markets and development of new markets
- (2) Increasing the share for industrial export goods
- (3) Encouraging publicity activities for traditional export products
- (4) Measures for attracting buyers

A planning committee composed of experts and representatives of related organisations and industry associations should be formed to make an annual participation programme. The programme would include dispatch of missions, carrying out publicity activities and other related activities.

For the time being, traditional export products, and other exportable products such as horticultural products and clothing should be displayed at major international trade fairs in Europe and the United States. Industrial products should be displayed at international trade fairs in the PTA and neighboring countries.

Participation in about six trade fairs a year should be planned. A presence at the same fair for at least three consecutive years is necessary in order to expand the existing markets. In order to develop new markets, it would not be necessary to participate in the same fair for three years running. Rather, Kenya should aim to participate in the relevant trade fairs of the major promising markets once over a three-year period. For example, Kenya would participate in a trade fair in USA this year, a trade fair in Japan next year.

When Kenya participates in overseas exhibitions, an office should be set up to take on responsibilities for decoration, public relations, negotiations with trade fair organisers, customs and other related agencies, and dismantling the booth.

Careful selection of exhibits and exhibitors at a trade fair must be done taking into consideration such factors as the manufacturer's export potential and export performance in the past when the trade fair has many applications. Care should be taken not to display too many similar products.

A tentative list of suggested major trade fairs is given below for reference:

(1) Foodstuffs

- 1) Anuga International Food Fair  
(Colonge, Germany; October 9-14, 1993)
- 2) SIAL (International Food Products Exhibition)  
(Paris, France; October 25-29, 1992)
- 3) Foodex Japan  
(Tokyo, Japan; March 12-16, 1991)
- 4) Gulf Food Exhibition  
(Dubai, United Arab Emirates; held every other year; May 12-15, 1991)
- 5) International Food Fair of Scandinavia  
(Copenhagen, Denmark; held every other year; January 1993)
- 6) International Food and Drink Exhibition (IFE)  
(London, U.K.; April 28 - May 2, 1991)

(2) Clothing and Consumer Goods

- 1) Poznan International Fair  
(Poznan, Poland; May 10-13, 1992)
- 2) Helsinki International Trade Fair, Consumer Goods  
(Helsinki, Finland; held every other year; November 1992)
- 3) International Trade Fair for Consumer Goods (Frankfurtesmesse)  
(Frankfurt, Germany; August 22-26, 1992)
- 4) Import Fair Berlin 'Partners for Progress'  
(Berlin, Germany; June 10-13, 1992)

- 5) International Light Industries and Handicrafts Fair Munich  
(Munich, Germany; March 14-22, 1992)

(3) Leather Products

- 1) Leather & Associated Trade Show  
(London, U.K.; April 9-11, 1991)
- 2) Leather Make-up Goods Fashion Show  
(Barcelona, Spain; January 20-23, 1991)
- 3) MIPEL -- International Leathergoods Market  
(Milano, Italy; March 17-20 & October 20-23, 1991)
- 4) International Leather Week  
(Paris, France; September 21-24, 1991)
- 5) International Footwear Fair  
(Dusseldorf, Germany; March 17-20 & September 22-25, 1991)
- 6) PLW-Pirmasens International Leather Exhibition  
(Pirmasens, Germany; November 5-7, 1991)

(4) Industrial Goods

- 1) PTA International Trade Fair  
(held in even-numbered years at major cities in the PTA region)
- 2) Dal-es-Salaam International Trade Fair  
(Tanzania; July 5-14, 1991)
- 3) Zimbabwe International Trade Fair  
(Harare, Zimbabwe; April 25 - May 1, 1991)
- 4) Agricultural and Commercial show  
(Lusaka, Zambia; July 26-30, 1992)

(5) Horticultural Products and Cut Flowers

- 1) International Trade Fair for Horticulture (Plantec)  
(Frankfurt, Germany; October 3-6, 1991)
- 2) Trade Fair for the Potato, Vegetable and Fruit Trade  
(held every other year at various cities in the Netherlands; September 9-12, 1991)
- 3) International Green Week Berlin  
(Berlin, Germany; January 31 - February 9, 1992)
- 4) Floristing and Garden Centres Trade Show (FLORISTA)  
(Madrid, Spain; April 4-7, 1991)
- 5) International Flower and Plant Trades Exhibition (Htex)  
(London, U.K., September 28-30, 1991)

An international gardening exhibition sponsored by the AIPH (International Association of Horticultural Producers) is held once a year at locations around the world. Kenya participated in the 1990 "Flowers and Greenery" exhibition held in Osaka, Japan, and it is desired that Kenya will keep participating in major exhibitions and try to promote Kenya's horticultural products and flowers.

Of the garden product exhibitions scheduled from now through the year 2006, the schedule for the next five years is as follows (international exhibitions only):

Year	City / Country	Name	Duration
1991	Genova	Euroflora (short-term international exhibition)	April 20 - 28
1992	Nederland	Floriabile (long-term international exhibition)	—
1993	Stuttgart	Lga (long-term international exhibition)	April - October
1994	Nantes	(long-term international exhibition)	—
1996	U.K.	Garden Festival (long-term international exhibition)	—
	Genova	Euroflora (short-term international exhibition)	April 20 - 28

#### Scale of participation:

The standard booth will be 100-150 m<sup>2</sup>. Main exhibits are to be decided on a case by case basis so as to present balanced pictures of Kenya's exportable products.

#### Participation costs:

The principle of payment by beneficiaries should be introduced and exhibitors will be required to bear their due share (half the amount) of expenses.

#### Joint programmes:

Various programmes should be carried out simultaneously such as, 1) invitation of importers, 2) dispatch of market development missions, 3) business meetings, 4) sales campaigns for Kenya's products through sampling foods and beverages, and 5) collection of high-quality product samples. The results of these activities should be fed back to Kenyan companies.

#### 4.3.2 Sponsoring and Participating in Domestic Trade Fairs

First, efforts should be made to expand and strengthen the export functions of existing trade fairs. In the future, establishment of facilities such as a multi-function event hall

where various events including fashion shows can be held and a permanent exhibition hall, should be necessary. Business meetings, trade fairs and a diverse range of other export-related events can be held at these facilities. Kenya should expand export functions using them. These facilities will accelerate Kenya's export promotion considerably.

(1) Existing exhibitions

1) The Nairobi International Show

Efforts should be made to further expand and strengthen the export promoting function of the Nairobi International Show, Kenya's main international trade fair (sponsored by ASK). This should be done by stepping up measures for attracting foreign buyers and by providing various services for business talk.

Suggested measures to attract importers:

- (a) Introducing a registration system for foreign buyers and distributing invitations to registered firms.
- (b) Publicising Kenya's products to potential importers through public relations activities overseas.

2) The New Kenya Trade Exhibition

The New Kenya Trade Exhibition, held by KNCC&I every year, should be transformed into an export oriented exhibition. Importers should be attracted to the exhibition so as to make it one of the famous international trade fairs in the world.

Based on the principle of self-support, participation fees including expenses for public relations activities will be collected from the exhibitors.

Taking advantage of this exhibition, the shift in the orientation of Kenya's industry from import substitution to exports should be publicised.

Outline of this trade fair would be as follows:

- Size : About 3,000 m<sup>2</sup>, with 100-130 booths and participation by 100-150 firms
- Exhibits : Exportable products in general
- Exhibition fee : For the time being, the projected fee is Ksh 4,000 per booth

(2) Holding Meetings for Export Business and Trade Fairs (Second phase)

- 1) Export business meetings and trade fairs specialising in certain items should be held for creating more business chances for promising export products in addition to the Nairobi International Show and the New Kenya Trade Exhibition.

It is important to attract importers from abroad to the trade fairs. To this end, it is necessary to consider carrying out various public relations activities such as: public relations activities when participating in domestic and overseas exhibitions, providing information to influential importers and related organisations, advertisements in business papers and magazines, and inviting influential importers from the major exporting markets as the occasion demands.

Suggested categories of exhibits : Trade fairs for furniture, processed foodstuffs, textiles, handicrafts and industrial goods are thought to be promising.

Scale : Usually around 2,000 m<sup>2</sup> for three to four days, but it can vary depending upon various factors including the nature of exhibits.

Expenses : In principle, exhibitors should bear the expenses needed for exhibiting their products.



Joint programmes : Seminars should be held for exporters on the improvement of export products, with foreign experts, including designers and merchandisers, to be invited as lecturers. On the spot advice should also be provided by above mentioned experts to exporting firms and cooperatives. A fashion show can also be planned in case of the textiles trade fair.

2) Sponsoring of PTA trade fair in Nairobi

The PTA trade fair is currently held every two years on a rotation basis in one of the member countries. A new trade fair specialising in export products should be held in Nairobi every two (odd-numbered) years, in cooperation with KNCC&I and the PTA Chamber of Commerce Federation, located in Lusaka.

Under the current sixth development plan, construction of a PTA permanent exhibition hall in Jamhuri Park is envisioned. The contemplated export product fair should be planned in conjunction with this hall.

Objective : Promotion of trade within the PTA region

Duration : Four to five days in odd-numbered years

Scale : 1,000 - 1,500 m<sup>2</sup>

Type of fair : Comprehensive export exhibition

(3) Establishment of Permanent Exhibition Hall (Third phase)

A permanent exhibition hall should be established within TPC to display promising Kenya's export products, thereby facilitating trade business with visiting importers.

The following points should be kept in mind concerning the operation of this hall.

- 1) The items on display should be limited to products from companies and organisations capable of exporting.

- 2) The exhibits should be changed at least twice a year. Full consideration should be paid to decoration.
- 3) Efforts should be made, in particular, to attract importers through public relations activities at Kenya and overseas trade fairs and exhibitor's list should be distributed among concerned circles.
- 4) Catalogues of exhibits, profiles of exhibiting firms and other related information should be published. In association with trade enquiries services, these materials should be used to assist exporters.
- 5) The size of a booth is one square metre. A total of 60-100 booths will be needed for the time being.
- 6) Exhibition fees should be charged annually.
- 7) TPC's staff and exhibitors should try to obtain the necessary know-how needed at the time of participating overseas trade fairs, through the experience at this exhibition hall.
- 8) Utilisation of the permanent exhibition and event halls

If a permanent exhibition hall and an event hall are provided within the TPC, means must be made for the operation and management of these facilities taking into account the following points.

(a) Establishment of conditions for use

The conditions for use should be established so as to maintain high prestige of the facilities.

(b) Designation of bonded exhibitions

The facilities will be designated as bonded area by customs thereby facilitating the display of products from abroad and promoting the development of international trade fairs.

(c) Introduction of usage fees

A fee should be kept at reasonable amount to assist private corporate activities. Discounting of fees should also be considered for small- and medium-sized businesses.

(d) Provision of regulations

Regulations should be provided in order to facilitate smooth operation and management of the facilities, prevent dispute, and maintain the facilities, as per their status as an international event hall.

Concerning maintenance in particular, users should be clearly informed that they have the obligation to restore the premises to their original state upon completion of an exhibition.

(e) Renting the facilities

The facilities can be used by outside parties only when the schedule permits.

(f) Management and maintenance of the facilities

In principle, cleaning, security, maintaining utilities (i.e., electricity and water), may be contracted out. Basic expenses for such services will be borne by TPC, while costs incurred during the course of events will be borne by the users.

To this end, management and maintenance supervisors must be employed for maintaining the facilities. They will be responsible for supervising the exhibitors and contractors mentioned above.

(4) Enhancement of Public Relations Activities

Public relations activities related to export promotion both at home and abroad should be carried out actively and efficiently.

1) Distribution of materials for the Kenya's export industry

Materials publicizing the Kenya's export industry and pamphlets highlighting specific industrial sectors will be prepared for distribution to economic and trade organisations and leading importers in the main countries of the world. The materials will be published continuously under the supervision of economic and trade associations and marketing boards.

Projected publishing expenses:

- (a) Materials publicising the Kenya's export industry  
20,000 copies  
(A4 size, 16pp, including English, German and French translations)
- (b) Pamphlets highlighting specific industrial sectors  
Six sectors, 2,000 copies each  
(A4 size, 8-10pp)

2) Advertisement of promising export goods in various industries

Industry-specific public relations activities should be developed systematically for Kenya's export products. In particular, sales campaign for coffee, tea and other traditional export items should be continued in cooperation with the relevant marketing boards.

- (a) When participating in overseas exhibitions, social exchange with key persons at industry and chamber of commerce should be encouraged by holding receptions and courtesy calls.
- (b) Improved consumer awareness should be developed through in-store campaign such as displaying and sales events at department stores (through tie-ups with leading importers and retailers), work shops, and beverage sampling. A "tea party" (for which a fee is charged) is a monthly campaign held by the Japan Tea Association and the Kenya's Embassy in Japan. At these meetings, participants enjoy movies introducing the Kenya's tea industry or scenic spots, talks by photographers on safari parks and wildlife, etc., followed by tea serving demonstration.

3) Linkage with the Ministry of Tourism and Wildlife

With the cooperation of the 22 overseas offices of the Ministry of Tourism and Wildlife and the sales offices of Kenya Airlines, public relations activities for Kenya's culture and tourism should be carried out. Posters and samples of Kenya's export products should be displayed in an attempt to increase awareness of Kenya's export products.

4) Carrying of advertisements and articles in leading business periodicals

For the time being, schedules for Kenya's trade fairs and advertisements for strategic export products should be advertised in business periodicals.

Active efforts should be made to send materials to business journals and ask them to write special columns about Kenya's products.

Advertising should be done efficiently in coordination with participation in international trade fairs and the dispatch of trade missions.

5) Local public relations activities

Export promotion seminars should be held with cooperation from domestic trade fairs, Ministry of Commerce District Office (DTO), the KNCC&I and its branches. All other opportunities should also be taken advantage of in order to promote the shift from inward-looking industries to outward-looking or export oriented industries.

6) Setting up spot sale corners

At this corner, visitors will purchase the exhibits and taste Kenyan coffee and tea. It would be recommended that a demonstration of how to make handicrafts is given to the visitors. Public relations activities should be done to more than 700,000 foreign tourists who come to Kenya each year.

#### 4.3.3 Estimated Expenditure for Trade Consultation Services, Trade Training and Public Relations and Exhibitions

1.	Handling trade enquiries	
1)	Publishing trade enquiries news	will be included in the budget for publishing Trade News
2)	Publishing trade directory	1,000,000
3)	Publishing of export product catalogue	1,000,000
4)	Trade consultations by outside experts	30,000
	<b>Total</b>	<b>Ksh 2,030,000</b>
2.	Missions and seminars	
1)	Dispatching missions	3,500,000
2)	Receiving missions	400,000
3)	Holding seminars	3,600,000
	<b>Total</b>	<b>Ksh 7,500,000</b>
3.	Improving quality of export products	
1)	Collecting high quality samples of foreign products	900,000
2)	Collecting catalogues	450,000
	<b>Total</b>	<b>Ksh 1,350,000</b>
4.	Trade training	
1)	Remunerations for instructors	550,000
2)	Making equipment needed for training courses	1,150,000
	<b>Total</b>	<b>Ksh 1,700,000</b>
5.	Participating in foreign exhibitions	
1)	Space fee	2,600,000
2)	Traveling expenses	1,350,000
3)	Advertisement	2,010,000
4)	Setting up booths and others	3,120,000
	<b>Total</b>	<b>Ksh 9,080,000</b>
6.	Holding trade fairs in Kenya	Ksh 2,340,000
7.	Public relations activities	
1)	PR materials for Kenya's export industry	1,600,000
2)	Pamphlets highlighting specific industry sectors	1,750,000
3)	Placing advertisement	2,340,000
	<b>Total</b>	<b>Ksh 5,690,000</b>
	<b>Grand Total</b>	<b>Ksh 29,690,000</b>

Outline of the activities	Detailed activities	First stage (1-2 years)	Second stage (3-5 years)	Third stage (5-years)
<p>[Trade Consultation Services] Expansion and strengthening of offices on trade enquiry</p> <p>Strengthening of consultation and guidance</p> <p>Strengthening of export product improvement</p>	<p>Filing export-related data Publishing trade news Setting up communications network Introducing computer system Expansion and improvement of functions of commercial attaches Introduction of system for credit standing investigation Entry into overseas information network</p> <p>Setting up trade consultation corner Trade consulting by outside expert Sponsoring trade seminars Dispatch of trade missions</p> <p>Collection of good product samples overseas Introduction of export inspection system</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>
<p>[Trade Training] Expansion and strengthening of function of existing organisations Drawing up of comprehensive training system Implementation of comprehensive training</p>	<p>Training on practical trade business and training of staff members and commercial attaches</p> <p>Expansion of training on practical trade business and training of TPO's staff &amp; commercial attaches Training on export product improvement Setting up international business school</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>
<p>[Public Relations and Exhibition] Participation in overseas trade fairs Holding and participating in domestic trade fairs Establishment of permanent exhibition hall Publicity activities</p>	<p>Participation in overseas trade fairs Expansion and improvement of existing trade fairs Holding business meetings and trade fairs</p> <p>Public relations activities for individual types of industry</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p> <p>○</p>

Fig. 4.3.1 Development of Action Programme for Trade Consultation Services, Trade Training and Public Relations and Exhibition Activities





## CHAPTER 5 ACTION PROGRAMMES FOR IMPROVEMENT AND EXPANSION OF EXISTING EXPORT INDUSTRIES

### 5.1 Key Subjects for Action Programmes

The general directions for improving and expanding the six subsectors of existing export industries are given in the master plan presented in Part II. After a comprehensive investigation, the Study Team selected specific subjects for action programmes. These key subjects were selected because they are comparatively easily accomplished, and have an impact on Kenya's export industry.

Table 5.1.1 Action Programmes for Existing Export Industries

Existing export industries	Action Programmes
(1) Agro-based industry	Improvements in packing and packaging
(2) Textile and garment industry	Forming garment manufacturing groups
(3) Leather industry	Improvements in the quality of hides and skins
(4) Chemical industry	Development of medical supplies (starting with infusion solutions)
(5) Metalworking industry	Diversification of metal construction materials
(6) Non-metal mineral industry	Development of ceramic products (starting from the re-evaluation of industry)

### 5.2 Selection of the Key Subjects and Action Programmes

#### 5.2.1 Agro-based Industry (Action programme: Improvements in Packing and Packaging)

##### (1) Selection of Subject

##### 1) Background

All industries require packing and packaging, but the demand from the food processing industry is especially high. An example of this demand can be seen in Japan where 55% of the machines used in packing and packaging

are used for the food processing industry. Packing and packaging of agricultural products is important for Kenya where these goods account for a large share of Kenya's exports.

2) Possibilities for small- and medium-scale firms

The goods that are packed and packaged are diverse and require various forms of packing and packaging. Consumers, too, are demanding more variety. Both of these needs create a market for small quantities of a wide range of packing and packaging products. This market is especially suited for small- and medium-scale firms.

3) Adding value to the products

Packing and packaging of agricultural products is important for preserving the quality of the contents and increasing the attractiveness to customers. The former depends on the environment of the market, such as in the Middle East where the temperatures are high, and the latter depends on the cultural preferences of the people. For this reason, various kinds of materials, including paper, wood, cellophane, plastics and metal foil are used.

4) Expected effects

Improving the packing and packaging materials and designs can upgrade the image of products, helping expand their markets. Improved materials can also be exported to the PTA countries.

(2) Action Programme

1) Targets for improvement

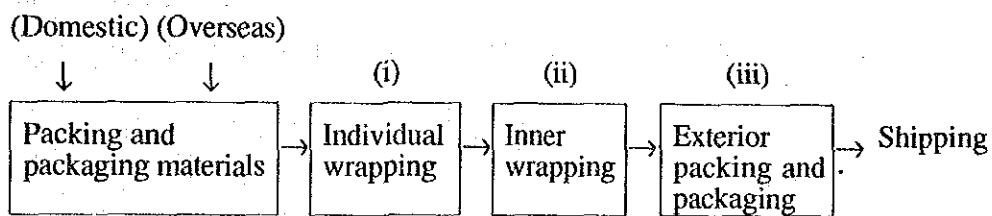
To improve packing and packaging, the action programme should target materials, packing and packaging processes and technology, and designing based on consumer needs.

(a) Materials

There is a wide variety of packing and packaging materials including paper and cardboard, plastics, aluminum and other metals, wood and bamboo, glass, and various combinations of these basic materials. Improvement and development of these materials should be promoted.

(b) Packing and packaging processes and technology

Packing and packaging processes include individual wrapping, inner wrapping, and exterior packing and packaging for shipment. The processes have become increasingly mechanized while the technology for these processes has expanded. This technology also differs depending on the products used. For inner wrapping, the material technology covers packing and packaging for damp-proofing, heat sealing, skin wrapping, heat shrinking, vacuum packing, sterilizing and rust-proofing, as well as printing.



- (i) Wrapping of individual products (protection of contents)
- (ii) Inner wrapping of wrapped products (prevention against damage from water, light, heat or shock).
- (iii) Exterior packing and packaging for shipping (boxes, bags, barrels and cans).

Fig 5.2.1 Packing and Packaging Processes

(c) Designing based on customer needs

Information related to packing and packaging must be collected from around the world in order to make improvement in the materials and design to meet the needs of the consumers.

2) Formation of industrial associations

Forming industrial associations is an important tool in the improvement of packing and packaging materials, technology, processes and designs. Within the framework of these associations, manufacturers have an opportunity to exchange information with other manufacturers, leading to advancement in manufacturing.

3) Cooperation in research and development

Development of new materials, technology and designs for packing and packaging is difficult and beyond the resources of most individual manufacturers. KIRDI should take the lead in research and development in cooperation with the industrial associations mentioned above.

4) Development of new products

KIRDI should lead in the development of new products and the improvement of existing products.

5) Commercial development

After the initial development of new materials, technology or designs is accomplished, production should take place at a designated factory. This factory will, with the cooperation of KIRDI and industrial associations, bring these products through the initial production stages by finding appropriate processing technology and methods to upgrade production efficiency and reduce costs. These methods and products will then be shared with other manufacturers.

When manufacturers, as a result of their own research and investigation, develop new products, materials, technology or designs, studies should be made by KIRDI and the industrial associations to evaluate if the innovation can be used by other manufacturers or can be applied to other products.

6) Marketing and sales promotion

Public organisations and industrial associations should cooperate in vigorous marketing and sales promotion campaigns to expand Kenya's market share and establish a reputation for Kenyan products.

(3) Implementation Schedule of the Action Programme

The implementation schedule of the Action Programme is shown in Table 5.2.1.

Table 5.2.1 Action Programme for the Agro-based Industry

Improvements in Packing and Packaging

	Short Term (Research and preparation stage)	Medium Term (Guidance and trial stage)	Long Term (Commercial stage)
Organisations, firms	Agro-processing manufactures under the guidance of KAM and MOI	MOI, KIRDI, private manufacturers and the new associations	Private manufacturers and the new associations
Measures	1) Target for improvements 2) Formation of industrial associations	1) Cooperation in research and development 2) Development of new products	1) Commercial development 2) Marketing and sales promotion
Supporting organisations	1) KETA, KNCC & I: Provide international information	1) TPO, KNCC & I, KAM: Provide international information and guidance for sales promotion	1) IPC, KNCC & I, KAM: Marketing and sales promotion
Locations	Nairobi and Mombasa areas	Nairobi and Mombasa areas and manufacturers	Nairobi and Mombasa areas and manufacturers
Essential points and requirements: Kenya	1) Establish packing and packaging industrial associations. 2) Gather and analyze information about packing and packaging from around the world. 3) Plan improvements for packing materials, production technology and designs.	1) Give guidance for the improvement of materials, technology and design based on research and marketing studies. 2) Development and diversification new products cooperation with private manufacturers and associations.	1) Effectively use developed technology and designs. 2) Upgrade the image of Kenya's brands through sales promotions.
Essential points and requirements: Foreign aid	Guidance for the action programme	Guideline for the programme and technical guidance for materials and products	Guideline for the programme and technical guidance for materials and products

## 5.2.2 Textile and Garment Industry (Action programme: Forming Garment Manufacturing Groups)

### (1) Selection of Subject

Kenya's textile industry is a key industry but is not internationally competitive because it was established as a substitute for imports, and is protected from outside competition. To promote competitiveness, the textile industry must improve its manufacturing equipment, technology, product quality and price. Forming garment manufacturers' groups was selected as an action programme for promoting the textile industry's exports and international competitiveness. This can be easily achieved because the garment industry does not require large-scale capital investments for upgrading existing equipment and facilities, and the implementing of manufacturing groups will encourage further industrial development and improvement.

Industrial development basically requires favorable markets, availability of high-quality products, low-cost labor, unrestricted capital transfer and a stable social structure. The garment industry was selected because these conditions already exist or can be further improved. The following list denotes some of these basic conditions:

- (a) Technological innovation is cost-effective and relatively easy. Equipment can be upgraded without large-scale capital investments.
- (b) Under Kenya's import liberalization and export promotion policies, it is easy to secure raw materials.
- (c) There are strong potentials for forming groups.
- (d) After the local garment industry has developed, there is a possibility of further development with foreign companies operating within EPZs.

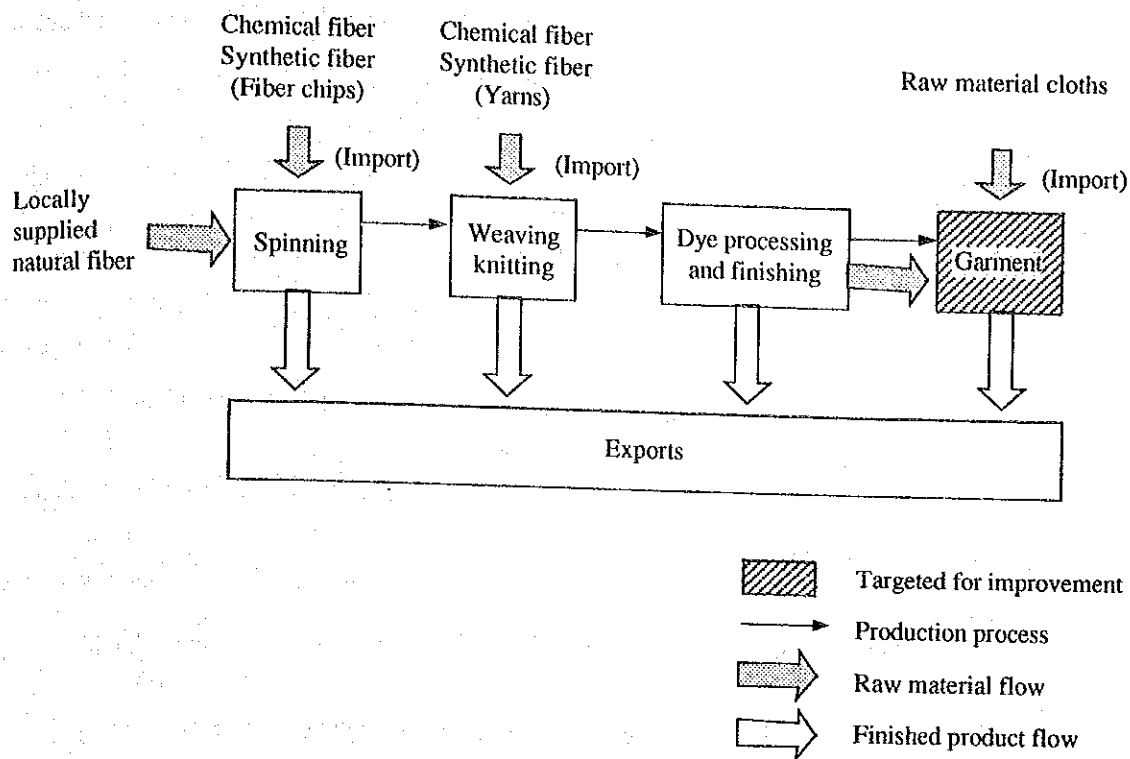


Fig. 5.2.2 Targets of Improvement in the Textile and Garment Production

1) Easiness in technological improvement

Unlike other areas in the textile industry, garment production does not require extensive processes or expensive machines. This means that the garment manufacturers can update facilities and technology at less cost than manufacturers in other areas. Technological improvement ensures better products, and better products lead to increased consumer demand.

2) Flexibility in securing raw materials

Currently the materials produced by Kenya's textile industry are not competitive internationally in cost and quality. These materials may be acceptable for use in the domestic garment industry, but not as direct exports or as raw materials for export-oriented garment industries. Developing an export-oriented industry will require the import of better quality, low cost materials until domestic manufacturers are able to become competitive. This should be part of the national policy of promoting exports

and be granted the same considerations as other imports of raw materials used for export production. This will strengthen the garment industry's ability to obtain necessary and vital raw materials.

3) Potential for growth envisaged in forming manufacturing groups

Kenya's garment industry is dominated by small- and medium-scale manufacturers that use similar production methods and facilities. This industry is ideal for forming manufacturing groups by using joint facilities for the purpose of reducing overall manufacturing costs. Another benefit is the pooling of fund to use for collateral in loan application. Because the manufacturers are small, often with weak financial conditions, it is difficult to obtain bank loans individually. Also, individual output is low, raw materials are purchased in small quantities at higher costs, and companies are limited in ability to market products internationally. Forming manufacturing groups would help alleviate these constraints.

This method was successfully implemented in Japan as part of the restructuring of the textile industry and as a means of surviving the business slump faced in the late 1960s. Government support was essential in the beginning. Since that time manufacturers' groups have greatly helped the industry and are actively used today.

4) Potential for growth expected by linking with foreign firms

As seen in the Asian NIEs, linking with foreign textile firms is also an important way to develop local industries. As Kenya's garment industry improves, it is expected that manufacturers will be able to make further improvement through joint ventures with foreign firms in EPZs.

(2) Action Programme

1) Preparation stage

(a) Cooperation of public and private sectors

KAM should act as the coordination organisation, bringing representatives of industry, MOI and MOF together to discuss and



study this subject. If foreign assistance is necessary, experts and study missions can be invited to assist in the initial programme development.

These discussions and studies will help clarify the best forms of management for the groups and areas of government assistance. Given technical and financial limitations, it will certainly be impossible to provide government assistance to all garment manufacturers in the beginning. It is recommended that the initial target should be given to exporting manufacturers, particularly to MUB manufacturers.

(b) Formation of model groups

The second stage requires formation of model groups within MUB manufacturers. Large groups are more difficult to manage than small groups; starting with small groups will lessen the likelihood of difficulties. Model groups should have five to ten firms or may be a little larger, but the number of member firms should be determined by the manufacturing groups.

(c) Group registration and financial support

To ensure eligibility for government incentives, export insurance and financial aid, groups should be required of formal registration with the government either under existing laws covering cooperative associations, or by obtaining corporate status under a new foreign trade manufacturing group law.

Furthermore, MOI and MOF should consult to find methods of providing low-interest loans for equipment and establishing joint workshops for the model groups.

(d) Government incentives

There are various government incentives (such as raw materials import allocations, tax exemptions at the time of joint stockholding, and tax reductions or exemptions when new machines and equipment are

imported) given to general manufacturers. These same incentives should be made available to the garment manufacturing groups.

Also, MUB manufacturing groups should be given equal treatment as other companies located within EPZs. For example, the group should be allowed to market surplus goods in the domestic market, and the raw materials procured for MUB manufacturers in the domestic market should be treated as exports.

(e) Financial support

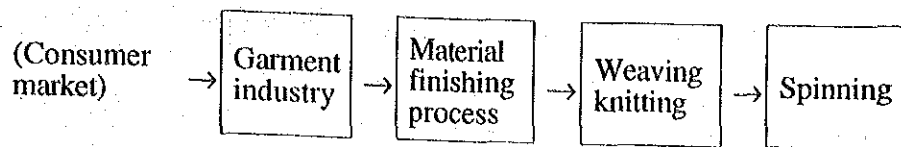
By forming manufacturing groups and obtaining corporate status, the member manufacturers can pool funds for collateral, thereby strengthening their ability to obtain credit from banks and facilitating procurement of operating funds. When groups establish joint workshops, the development banks should actively support the projects and be ready to provide low-interest loans for equipment.

These loans should be supported by government financing. The government should set up a fund with the development banks. The funds should be invested by the development banks and the profits obtained used for loans.

2) Boosting exports

The remarkable growth in exports by the NIEs and Mauritius started with garment industries. The situation has changed since that time, higher-grade goods in smaller quantities of greater variety are more popular today, and the cycle of demand for a particular product has shortened. It is difficult for a single manufacturer to cope with these trends. Since cottage, small- and medium-scale manufacturers account for a majority of the garment industry in any country, the only way the industry can achieve sustained growth and meet market needs, is to form manufacturing groups that can combine individual capabilities.

The demand for quality products originates from the consumer. Because the garment industry is the closest to the consumers, this industry can feel the impact earliest.



As implied in the above chart, a developing the garment industry will affect the spinning and weaving (knitting) industries and trigger further improvement while providing an expanded market for these industries.

3) Developing and increasing the number of manufacturing groups

Manufacturing groups must first be formed from MUB manufacturers and gradually be expanded to include all of the garment industry. This will strengthen the financial structure of the industry, enable technological upgrading, boost new product development capacity, improve relations with transacting parties, and help accumulate strategic data.

Groups may start from five to ten firms, but can be increased to more than 100 members in a few years, thus becoming the leading industry of respective regions.

4) Licensed production of famous brands

Most famous brands today are under OEM or licensed production. This is expected to occur in EPZs by foreign-affiliated manufacturers. If strong groups develop, this will encourage linkage with foreign-affiliated manufacturers.

5) Entry into the international fashion market

African folk costumes are popular in America and Europe. And yet, clothes with distinctive designs of African origin are manufactured in other countries. Kenya's garment industry could remedy this situation in the near future with a strengthened industrial base. In this regard, too, formation of manufacturing groups could handle everything from production to marketing.

6) Implementation Schedule of the Action Programme

The implementation schedule of the Action Programme is given in Table 5.2.2.

Table 5.2.2 Action Programme for the Textile and Garment Industry  
Forming Garment Manufacturing Groups

	Short Term (Study and preparation stage)	Medium Term (Implementation stage)	Long Term (Propagation and development stage)
Organisations, firms	Groups of garment manufactures under leadership of KAM	Garment manufacturers	Garment manufacturers
Measures	1) Preparation stage a) Cooperation of public and private sectors b) Formation and support for model groups c) Government incentives and financial support	1) Boosting exports	1) Developing and increasing groups 2) Licensed production of famous brands 3) Entry into the international fashion market
Supporting organisations	1) MOI, MOF: Guidance for laws and regulations a) Existing cooperative manufacturing law or write a new law b) Legislation for funding scheme 2) MOCD: Guidelines for finance 3) ICDC, KIE: Study of financing	1) MOI, MOF: Guidance on legislation 2) ICDC, KIE: Financing 3) TPO: Market data and sales promotion	1) TPO: Market information. 2) KNCC & I, KAM: Promotion in international markets
Locations	Nairobi and Mombasa	Garment manufacturers	Garment manufacturers and EPZ
Essential points and requirements:  Kenya	1) Under leadership of KAM, MUB manufacturers should consult and study model groups. 2) Study application of cooperative manufacturing law or legislation of a new foreign trade manufacturing group law. 3) Prepare specific programme for financing by develop- ment banks.	1) Give corporate status to the groups 2) Start joint purchasing and joint sales 3) Give groups all export incentives 4) Promote joint facilities for groups a) Cutting b) Finish processing	1) Strengthen relationship with EPZ manufacturers 2) Promote entry into EPZs by groups 3) Set up of voluntary inspection and development facilities within groups 4) Reinforce linkage with international markets for improving designs
Essential points and requirements: Foreign aid	Advisors and study missions	Specialists in cooperative group management.	Joint ventures

### 5.2.3 Leather Industry (Action programme: Improvements in the Quality of Hides and Skins)

#### (1) Selection of Subject

##### 1) Possibilities for improvements

Prices of hides and skins are greatly influenced by freshness and flaws. Flaws on hides and skins are classified as "closed heal," wounds that have been healed, or "open scratch," which are tears or cuts made during skinning. Closed heal flaws are tolerated in EC markets, but open scratch flaws reduce the value of the hides in all markets.

This action programme was chosen because the value of hides and skins are easily improved by assuring freshness and the grade of skins and hides. In addition, improvement from the skinning to the leather tanning stage can also increase the value of finished products.

##### 2) Marketability

Competition in the natural leather market intensified with the development of synthetic leather, but there remains a large demand for natural leather.

Kenya's leather exports are primarily to Europe and consist of cow hides, sheep skins, goat skins and tanned leather (wet blue).

According to UNIDO, the processing ratio (the percentage of total hides and skins tanned) of hides and skins in Kenya is quite high; 60% of cow hides and 90% of sheep and goat skins are tanned (processed to wet blue). Semi-finished products constitute the leading leather exports. Finished products (mainly shoes) are also exported by some large-scale manufacturers, but the percentage of processing to the finished stage for hides (15%) and skins (4%) remains low.

#### (2) Action Programme

The processing of hides and skins is illustrated below.

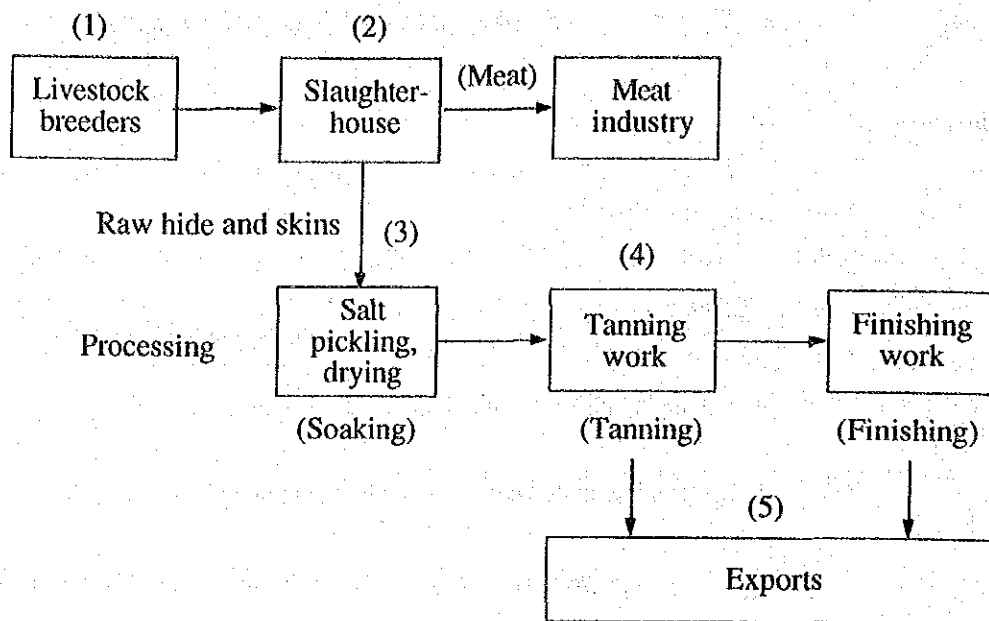


Fig. 5.2.3 Hides and Skins Processing

The following measures are proposed.

1) Educating breeders

The major objective of livestock breeding is to produce meat, and many local small-scale livestock breeders lack awareness of the value of hides as a by-product.

In order to obtain high-quality hides and skins, animals should be slaughtered at slaughterhouses and the hides and skins cured by brine soaking and then drying. Slaughtering at slaughterhouses facilitates collection of skins and hides and helps alleviate the problem of their insufficient supply. Government and the industry should work together to persuade breeders to change traditional customs of doing the slaughtering by themselves.

2) Improvement of skinning techniques

A major problem of Kenya's hides and skins is the flaws occurring during the skinning stage (open scratches). This can be overcome by improving skinning techniques of slaughterhouse workers.

The first step is to educate the workers about the economic value accrued by the quality of hides and skins. An effective method is to award bonuses or other incentives to workers who produce better-quality hides and skins.

3) Improvement in collection system

A system for effectively collecting hides and skins produced at local slaughterhouses and brought to tanneries in Nairobi, Thika, Sagana and Limuru should be developed. Cooperation between the slaughterhouses and the tanneries is vital. Where it would be difficult for individual tanneries to undertake this, it is recommended to establish joint collection systems by the group of tanneries.

4) Improvement of tanning technology and methods

Leather exported to EC is not tanned satisfactorily. According to businessmen, re-tanning at the export destinations is necessary. UNIDO is now providing technical guidance to solve the problems associated with poor tanning quality.

5) Export of quality grades

Because many of the hides, skins and tanned leather goods exported from Kenya have flaws, below market prices are paid for hides, skins and tanned leather. If, however, exported leather products are sorted and graded according to the quality, the higher quality products could command better prices. Obtaining higher prices gives incentives to exporters and tanners to improve the quality of the goods.

6) Marketing promotion

After the quality of hides and skins are improved, and the tanning level has been up-graded, exporters can further increase existing market shares and expand into new markets.

(3) Implementation Schedule for Action Programme

The implementation schedule for the above measures is given in Table 5.2.3.

**Table 5.2.3 Action Programme for the Leather Industry  
Improvements in the Hides and Skins Quality**

	Short Term (Improvement promotion stage)	Medium Term (Development)	Long Term (Development and expansion stage)
Organisations, firms	Private groups under leadership of KAM and MOI	Private Manufacturers	Private Manufacturers; KNCC & I affiliated trading firms
Measures	<ol style="list-style-type: none"> <li>1) Educating breeders</li> <li>2) Improvement of skinning techniques</li> <li>3) Improvement in collection system</li> </ol>	<ol style="list-style-type: none"> <li>1) Improvement of tanning technology and methods</li> <li>2) Export by quality grades</li> </ol>	<ol style="list-style-type: none"> <li>1) Improvement of tanning technology and methods</li> <li>2) Marketing promotion</li> </ol>
Supporting organisations	<ol style="list-style-type: none"> <li>1) MOLD: Guidance to livestock breeders</li> <li>2) KNCC&amp;I: Public relations on the value of leather</li> </ol>	<ol style="list-style-type: none"> <li>1) TPO, KNCC &amp; I, KAM: Marketing and sales promotion</li> <li>2) MOI: Guidance for prevention of pollution</li> </ol>	<ol style="list-style-type: none"> <li>1) TPC, KNCC &amp; I, KAM: Marketing and sales promotion</li> </ol>
Locations	Nationwide	Nationwide	Kenya and international market
Essential points and require- ments:  Kenya	<ol style="list-style-type: none"> <li>1) Have livestock breeders understand the value of leather as a by-product, encourage them to use slaughterhouses.</li> <li>2) Assure good quality of hides and skins by improving skinning techniques.</li> <li>3) Establish industrial associations and collecting system.</li> </ol>	<ol style="list-style-type: none"> <li>1) Have tanners understand that improving technology and methods increases value of leather.</li> <li>2) Increase value of goods by ranking by quality.</li> </ol>	<ol style="list-style-type: none"> <li>1) Expand export market by upgrading quality.</li> </ol>
Essential points and require- ments:  Foreign aid	Guidance in skinning and primary processing	Guidance in leather tanning techniques  Technical and financial cooperation for pollution protection facilities	



#### 5.2.4 Chemical Industry (Action programme: Development of Medical Supplies (Starting with Infusion Solutions))

##### (1) Selection of Subject

The development of medical supplies (starting with infusion solutions) is proposed for the following reasons.

##### 1) Marketability

Africa has about 14% of the world's population but consumes only about 2% of medical supplies. Kenya has a high demand for medical supplies and jointly produces some medical supplies with foreign manufacturers, but it is dependent on imports for most of its needs. According to the United Nations International Children's Emergency Fund (UNICEF) specialists assigned to Kenya and the two other East African countries (Uganda and Tanzania), infusion solutions are in chronically short supply.

There is only one manufacturer, "Infusion, Ltd."; presently producing infusion solutions in Kenya. It produces about 120,000 units (500 ml per unit) a year. The domestic demand for infusion solutions and that in the PTA countries is larger than the supply, which means there is potential for growth in this industry. Growth is likely since Kenya has advantages in production and transportation costs over other EC manufacturers.

##### 2) Availability of raw materials

There are two types of infusion solutions. One is the dextrose-sodium chloride injection made by adding dextrose as a nutrient supplement to a sodium chloride injection base consisting of salt dissolved in distilled water, and the other is a Ringer's injection made by adding electrolyte as the extra-cellular liquid supplement to the base. The ingredients for both solutions include refined physiological salt, dextrose and electrolytes such as sodium chloride, potassium chloride, calcium chloride and sodium lactate. Imports are needed for some of these ingredients, but relatively small amounts are needed.

### 3) Economy of scale

The scale of production is determined in part by the amount of equipment and facilities required. Most of the equipment required for producing infusion solutions is for treating water (distilling) and for manufacturing plastic bottles. Plastic bottles can be produced at relatively small-scale facilities. New facilities for these processes will also be required. The most important things are sanitation and quality. An annual output of about three million bottles is considered the most economical production scale. Kenya alone generates demand large enough to support this level of production.

### 4) Availability of technology

Water can be distilled or purified using a combination of reverse osmosis, ultra-filters for removing bacteria, and ultraviolet lamps for disinfecting. The purification method has lower running costs and can prove effective in the long run. Plastic moulds are required for manufacturing the bottles, but the equipment is easy to operate and does not require high-level of technology. Again, assuring quality control and proper sanitation is necessary in all facilities and with all equipment.

### 5) Health benefits

Supplying sufficient quantities of infusion solutions is important in the successful treatment of disease and the preservation of human life. Africa is subject to cholera and malaria epidemics -- infusion solutions will greatly contribute to fighting these diseases.

## (2) Action Programme

### 1) Review of the current situation

In light of the existing state of dependency on imports for a majority of medical supplies, the prospects for production and the likely demand for infusions should be reviewed. After confirming the possibilities for the production of infusion solutions, a feasibility study should be conducted.

2) Feasibility study on infusion solutions

A feasibility study should be conducted, examining the following.

(a) Demand of domestic and international markets

The demand of Kenya and PTA countries needs to be studied to determine the level of production. The capacities of plants operating in other PTA countries should also be taken into consideration.

(b) Production system and scale

The most difficult problem will be obtaining water of good quality as the primary raw material. That, and the scale of production will determine whether to use water purification method (using the reverse osmosis and filter system) or distillation method. A production system for vinyl bags for exporting the solutions should also be studied.

(c) Production site

A proper plant site should be selected, taking into consideration the availability of water of good quality and transportation cost. The Mombasa EPZ should be examined because of the availability of sea water and its advantageous location for shipping.

3) Pilot plant

Detailed plans should be made for a pilot plant including the management system for that plant. Forming a joint venture with a foreign company should be considered to obtain better technology economically. A joint venture or a Build-Operate-Transfer (BOT) would be desirable for management and the training of personnel.

4) Commercial production

Full-scale commercial production should be undertaken based on the detailed implementation programme and marketing should be done in PTA countries.

(3) Implementation Schedule for the Action Programme

The implementation schedule is given in Table 5.2.4.

Table 5.2.4 Action Programme for the Chemical Industry

Development of Medical Supplies (starting with infusion solutions)

	Short Term (Study and preparation stage)	Medium Term (Designing and implementation stage)	Long Term (Commercial production stage)
Organisations, firms	MOI, MOH and private Manufacturers	Private Manufacturers	Private Manufacturers
Measures	1) Review of current situation 2) Feasibility study on infusion solutions	1) Pilot plant	1) Commercial production
Supporting Organisations	1) KETA, KNCC & I, KAM: Export market research	1) IPC: Foreign technology and capital 2) TPO, KNCC & I, KAM: Marketing	1) TPC, KNCC & I, KAM: Market development
Locations	Mainly Nairobi	Depends on result of F/S	Same as the left
Essential points and require- ments: Kenya	1) Feasibility study: a) Internal and external demand. b) Production system and scale c) Suitable site for production	1) Detailed design and implementation on the basis of the feasibility study (utilizing EPZs). 2) Linkage with foreign manufacturers	1) Development of related materials
Essential and requirements Foreign aid	Technical cooperation	Corporate linkage	Corporate linkage

## 5.2.5 Metalworking Industry (Action programme: Diversification of Metal Construction Materials)

### (1) Selection of Subject

#### 1) Marketability

##### (a) External market

The production of metal construction materials lags behind in the PTA countries except for Zimbabwe, and these countries are unable to supply enough materials to meet current demand. Kenya currently exports some construction materials (round bar, pipes, corrugated steel plates, etc.) to neighboring countries, but can increase its export share of this markets.

##### (b) Domestic market

Kenya is forced to import an increasing amount of round bar, section steel, screws, bolts, tools, and non-ferrous metals such as aluminum. Kenya's metalworking industry also imports a large amount of raw materials (especially iron) needed to process into metal construction materials. The industry also has difficulty meeting the domestic demand for finished steel products. Fostering the subsector in steel materials will help the metalworking industry.

#### 2) Existing technology

The technology for processing raw materials is available not only in Nairobi and Mombasa, but also in other major cities. The basic technology exists, although there are problems due to the lack of standardisation and the need for improvement in quality control. This industry has the potential for enhancing its competitiveness by improving its technology.

#### 3) Potential benefits

(a) Improving this industry will contribute to foreign currency savings.

- (b) Kenya has a geographical advantage for exporting to PTA countries, making it easier to increase exports.
- (c) Metal construction materials are necessary for the building of infrastructures; improving this industry will contribute to build Kenya's infrastructures.
- (d) Production of metal construction materials by recycling scrap metal can effectively utilize resources.

(2) Action programme

1) Analysis and evaluation of the metal construction materials industry

The production of metal construction materials should be evaluated and concrete measures to improve problems should be discussed. The analysis and evaluation should include:

- (a) the types and quantities of metal construction materials currently produced,
- (b) the types and quantities of metal construction materials PTA countries are importing,
- (c) possibilities for diversifying the types of metal construction materials produced (production capacity, technology), and
- (d) estimations of the annual scrap metal recycling capacity and the amount of pig iron that would need to be imported.

2) Strengthening of manufacturing associations

Kenya's metalworking manufacturing associations are loosely organised. Strengthening these associations will allow manufactures to work together to exchange market data, establish subcontracting systems, and improve general conditions. This will help overcome problems that independent manufacturers alone cannot solve. Also including manufacturers that specialize in the processing of raw materials will prove beneficial.

### 3) Feasibility study

A feasibility study should be conducted with the focus on the following three areas.

#### (a) Steel industry

In Kenya, steel manufacturers cannot meet the demands of the metalworking industry. As a result, a number of metalworking factories are engaged in small-scale production of steel because of the shortage of materials. This is not cost effective and deteriorates the competitiveness of the finished products. Creation of specialized steel manufacturers would increase production in large quantities and reduce overall costs.

If these specialized manufacturers are developed, this can lead to expand the steel industry. Expansion of scrap metal recycling will allow the steel industry to grow.

#### (b) Heat treatment

Heat treatment technology conforming to the quality of materials is required for metal processing. Development of this technology is not difficult because Kenya already produces leaf springs for automotive use.

#### (c) Metal presses

The shearing and bending process technology for metal presses are widely used (but the tools must be imported). The next step will be the introduction of drawing process technology. Industrial products such as automotive parts could be manufactured with these technology, but products that require moulding will need to be imported.

#### 4) Establishing specialized workshops and centres

##### (a) Raw materials industry

##### a) Casting (pig iron)

There are some large-scale factories that have casting workshops, but there are no independent specialized casting factories (such as the casting shop of Kenya Railways). Establishing specialized manufacturers is needed. The following areas should be studied:

- a. Market needs by region.
- b. Melting system based on the location and a factory's capability.
- c. Moulding system.
- d. Efficient method for the transfer of technology from the manufacturers possessing relevant technology.

##### b) Forging

As in the case of casting, there are a few specialized forging workshops. In the future, encouraging specialized manufacturers such as the two types mentioned below will be important.

- a. Free forging manufacturers (non-mass production) for supporting manufacturers of shipbuilding and construction equipment.
- b. Stamping and forging plants for producing agricultural equipment and automotive parts (mass production).

Manufacturers with the forging technology used in shipbuilding, agricultural machinery, tools and jigs should organize study groups for discovering the most efficient methods of transferring technology (and train personal of) to specialized manufacturers.



(b) Heat treatment

Further development of heat treatment technology is important for the benefit of the productivity of the metalworking industry. It is recognised that Kenya's industry should establish a heat treatment technology centre that will facilitate development of this technology. The technology centre could be established utilizing the Kenya Railways workshop under the condition that it is open to private sector use.

(c) Drawing

There are two methods of drawing: mechanical and spinning. Introducing this technology requires determining which method is best suited to the industry's needs after estimating the types and quantities of manufactured products. Primarily, oil hydraulic presses and metal mould equipment are needed; both of which will need to be imported. Engineers trained in the industrialized countries with the necessary technical expertise are needed to facilitate the proper installation and use of this equipment.

5) Development of new product

Manufacturing associations should conduct market research to determine the need for new products that could be manufactured in Kenya. Market development studies for new products requires collecting vital information about the technology and market position of competing manufacturers in other countries.

6) Marketing and sales promotion

While independent marketing efforts by individual manufacturers are important, marketing by the industry is more cost effective and profitable.

**7) Renovation of facilities**

Government financial support should be given for the development of new products. This support could be used for renovation of factories and new production equipment.

**(3) Implementation Schedule for the Action Programme**

The implementation schedule for the action programme is given in Table 5.2.5.

**Table 5.2.5 Action Programme for the Metalworking Industry**  
Diversification of Metal Construction Materials

	Short Term (Study and preparation stage)	Medium Term (Design and development stage)	Long Term (Implementation stage)
Organisations, firms	Metal construction material manufacturing associations under leadership of KAM	Private manufacturers and manufacturing associations	Private manufacturers and manufacturing associations
Measures	<ol style="list-style-type: none"> <li>1) Analysis and evaluation of of the metal construction materials industry</li> <li>2) Strengthening of manufac- turing associations</li> <li>3) Feasibility study</li> </ol>	<ol style="list-style-type: none"> <li>1) Establishing specialized workshops and centres</li> <li>2) Development of new products</li> <li>3) Marketing and sales promotion</li> </ol>	<ol style="list-style-type: none"> <li>1) Renovation of facilities</li> </ol>
Supporting Organisations	<ol style="list-style-type: none"> <li>1) MOC: Guidance on procurement of raw material</li> <li>2) MOI: Domestic market data and guidance on industrial standards</li> <li>3) KETA, KNCC &amp; I: Foreign market data</li> </ol>	<ol style="list-style-type: none"> <li>1) MOF: Financial support</li> <li>2) MOI: Production guidance</li> <li>3) TPO, KNCC &amp; I, KAM: Marketing and sales promotion</li> </ol>	<ol style="list-style-type: none"> <li>1) MOF: Financial support</li> <li>2) MOI: Production guidance</li> <li>3) TPO, KNCC &amp; I, KAM: Marketing and sales promotion</li> </ol>
Locations	Around Nairobi and Mombasa	Around Nairobi and Mombasa and locations of manufacturers	Around Nairobi and Mombasa and locations of manufacturers
Essential points and require- ments: Kenya	<ol style="list-style-type: none"> <li>1) Item-by-item evaluation of metal construction material exports</li> <li>2) Analysis and evaluation of production technology for metal construction material</li> <li>3) Evaluation of existing scrap metal recycling system</li> <li>4) Feasibility study based on above point concerning new technology</li> </ol>	<ol style="list-style-type: none"> <li>1) Marketing in PTA countries based on market research to expand market</li> <li>2) Introduce quality control, rationalization for cost reduction, from design to finished products</li> <li>3) Rationalization and renovation of facilities</li> <li>4) Development of new varieties of construction material by manufacturer linkage</li> </ol>	<ol style="list-style-type: none"> <li>1) Government financial support to periodically renovate facilities</li> <li>2) Promote quality improvement, product diversification and cost reduction through manufacturer linkage</li> </ol>
Essential points and require- ments: Foreign aid	Technical cooperation	Capital and technical cooperation	Capital and technical cooperation

## 5.2.6 Non-Metal Mineral Industry (Action Programme: Development of Ceramic Products)

### (1) Selection of Subject

Reasons for selecting ceramics development as the action programme for the non-metal mineral industry are given below.

#### 1) Availability of raw materials

Clay, the principal raw material (kaolin, feldspar, etc.), is produced in small quantities in Kenya. Ceramics have been made in Kenya using clay from the western and central regions (Valley Province). A mineral resources survey needs to be conducted for confirmation of the raw materials. It seems that Kenya has clay appropriate for producing high-quality ceramic ware.

#### 2) Low capital requirements

Establishing factories for ceramics products does not require large capital investment. The kiln is the principal piece of equipment used and is relatively inexpensive to purchase and operate. Kilns require fire-brick, but these are produced in Kenya and are readily available.

#### 3) Availability of technology

Kenya produces coffee cups and roofing tiles. Improvement in the basic ceramic products technology is needed. Kenya could easily obtain the technology and technical expertise for producing ceramic kitchenware and high-grade construction tile.

#### 4) Marketability

Tableware are favorable ceramics products that can meet domestic and international market needs. There is tableware made from four kinds of materials found in Nairobi: plastic, glass, metal and ceramic. Plastic tableware is made in Kenya but the others are imported. Ceramic tableware is predominantly imported from China.

As net incomes for workers increase, consumers are changing from inexpensive plastic products to glass or ceramic products. This trend will continue and implies that there is potential for expansion of the ceramics market.

5) Export possibilities for small- and medium-scale firms

Low capital investment and minimum production costs make ceramics production attractive to small- and medium-scale producers. If price and quality are competitive, Kenya can meet domestic needs and in the PTA countries. In addition, further improvement in quality and design could provide export markets to Europe and the Middle East.

(2) Action Programme

Ceramics production should be promoted following these steps.

1) Feasibility study

(a) Mineral survey for raw materials

Conduct a survey of underground resources producing or demonstrating production potential for the raw materials used in ceramics. Initiate marketing surveys in the PTA countries to discover the ceramic industry's appropriate manufacturing scale.

(b) Revitalisation of CIL

Ceramic Industries (E.A.), Ltd. (CIL), the largest factory for ceramics in Kenya, is affiliated with ICDC. However, CIL currently is not in production because of management problems. In developing the ceramics industry, CIL should be revitalised. Private management of CIL should be considered.

## 2) Model factory

For the long-range development of the ceramics industry, a model factory should be established for analyzing raw materials, improving products, changing designs and developing new products. This model factory could serve as a stimulus to the entire ceramics industry.

The model factory should also provide training through the on-the-job training (OJT) scheme. It is especially important to train instructors who, in turn, can train workers in other factories, particularly in rural areas. OJT can allow the dissemination of technical knowledge for small-scale production of ceramics to factories in small cities and rural areas. Because English may not be understood in these areas, training local people as instructors is vital to providing instruction in the local language.

## 3) Marketing

Marketing should be focused on domestic and PTA countries and, in the long term, on Europe and the Middle East.

## 4) Development of high-grade products

The realization of the commercial production of quality ceramics takes place once the industry begins the pragmatic process outlined above. But development of high-grade ceramic products that can be sold in domestic and foreign markets will require capital investments, technology and technical expertise from abroad.

## (3) Implementation Schedule of the Action Programme

The implementation schedule of the action programme is given in Table 5.2.6.

**Table 5.2.6 Action Programme for the Non-Metal Mineral Industry**  
**Development of Ceramic Products**

	Short Term (Study and preparation stage)	Medium Term (Trial stage)	Long Term (Commercial production stage)
<b>Organisations, firms</b>	ICDC, MOI	ICDC, KIE	Private Manufacturers
<b>Measures</b>	1) Feasibility study a) Mineral survey for raw materials b) Revitalisation of CIL	1) Model factory	1) Marketing 2) Development of high-grade products
<b>Supporting Organisations</b>	1) MOF: Support for research 2) MOENR: Re-evaluation of existing plants	1) MOI: Plant construction plans	1) TPC: Market development 2) IPC: Foreign capital and technology
<b>Locations</b>	Nationwide	Nationwide	Nationwide
<b>Essential points and requirements:</b>  <b>Kenya</b>	1) Confirm clay for ceramics 2) Market research both at home and abroad 3) Revitalise CIL 4) Evaluate ceramics products	1) Design plants 2) Build plants 3) Renew operations at CIL 4) Train technical instructors	1) Expansion of market internationally 2) Linkage with foreign manufacturers, production of high-grade ceramics
<b>Essential points and requirements:</b>  <b>Foreign aid</b>	Technical cooperation in underground resource survey	Plant planning, aid in construction capital (Plant construction, renovation of existing plants)	





## **CHAPTER 6 ACTION PROGRAMMES FOR DEVELOPMENT OF LEADING INDUSTRIES**

### **6.1 Process of Selection**

In the previous chapter, action programmes for existing industries were proposed to improve and expand specific areas in each industry. In this chapter, action programmes for the leading industries are proposed to develop new core industries for improvement of the trade balance based on the cooperation of the public and private sectors.

As shown in the master plan, the selection of leading industries is a means of developing new core industries as a long-term perspective. The textile and garment industry and the metallurgical and metalworking industry were selected in the master plan as the best candidates as leading industries.

### **6.2 Development Measures for the Leading Industries**

#### **6.2.1 Textile and Garment Industry**

The textile and garment industry has the following characteristics:

- (1) A primary role affecting the quality of people's lives that reinforces a constant demand for its products.
- (2) In a country's initial stage of industrial development, the textile industry makes a significant contribution towards economic expansion.
- (3) This industry is labour intensive with comparatively small capital investment; an important factor for the development of small- and medium-scale firms.
- (4) Markets for this industry are easily established and closely related to daily life.

In Kenya, establishment of this industry under the import substitution policy achieved expected levels of development. Technically, the textile and garment industry operates at a basic level, short of international standards. The 1988

labour figures for this industry were quite high in terms of numbers of workers actually employed. Comparing the levels of productive output and export quantities, this industry demonstrates potential as a leading export sector in Kenya in terms of the following:

- 1) Number of enterprises and employees ranks second after the food processing industry.
- 2) Output ranks fifth and export quantity fourth among the manufacturing industries.

**(Problems Facing the Textile and Garment Industry)**

This industry is burdened with the remnants of the import substitution policy, and as the production system is driven by domestic demand, it is not internationally competitive in price and quality. These common problems can also be seen in the textile industry whether it is natural or synthetic fibres.

From an analysis of production capabilities, the following problems are noted:

- 1) Most of Kenya's factories in the textile and garment industry do all processes, from production of yarn to finished products. The factories may not have a balanced capacity for each process. The process with the least capacity restricts the amount and lowers the efficiency.
- 2) Due to the above problems, ensuring adequate cost reductions is difficult.
- 3) Kenya's manufacturers reliance on protected domestic markets provides insufficient motivation for promoting product innovations and for increasing competitiveness.

In summary, Kenya's textile and garment industry faces difficult economic growth under present structural and economic conditions. Reliance on individual manufacturers without the firm national policy that enables changes will not succeed.

**(Recommendations)**

Immediate enforcement of industrial restructuring and the initiation of a fact-finding survey of industrial circles is required. This action can lead to the proper

scaling of production factories, streamlining of equipment specialisation and foster closer linkage among various enterprises. In addition, cost reduction and quality improvement can increase the industry's international competitiveness.

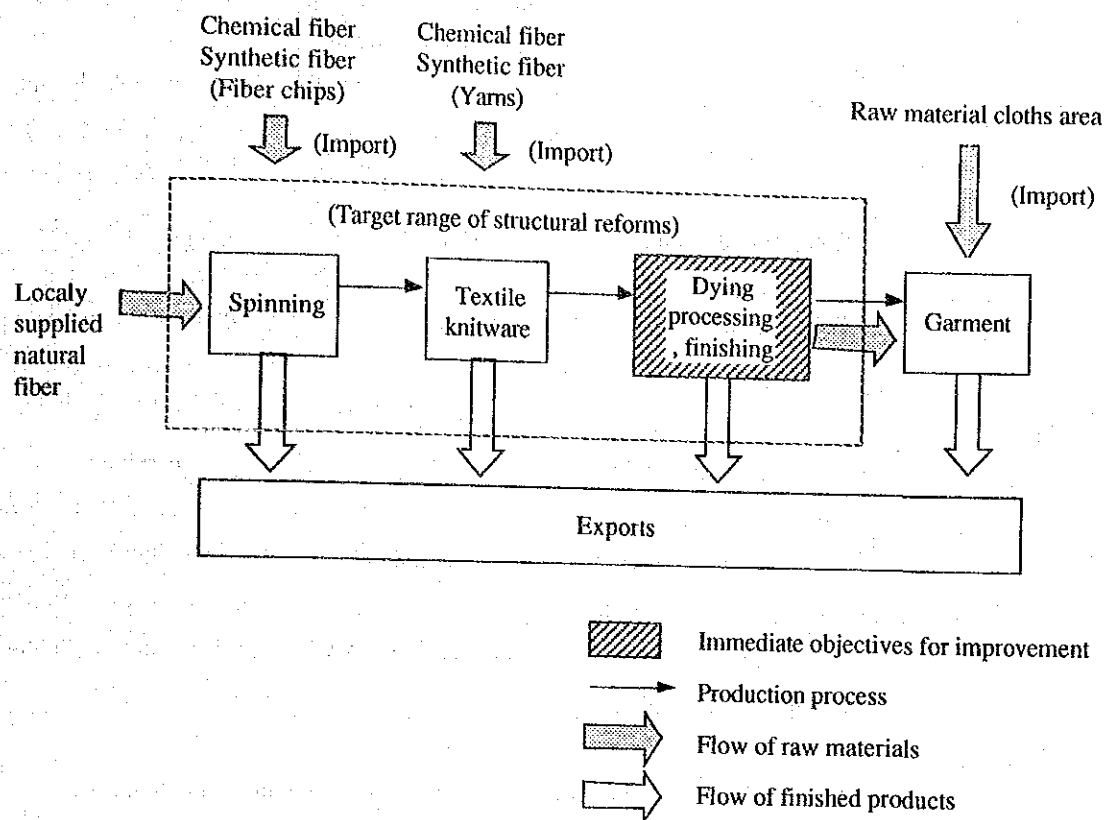


Fig. 6.2.1 Textile and Garment Production Process and the Target of Structural Improvement

### (1) Implementation of Subsector Study

The current textile and garment industry is likely to face difficulties in meeting the changing business environment; this suggests that successful development of this subsector requires structural reforms.

For this reason, a subsector study conducted with financial assistance from foreign aid sources and under the guidance of MOI and KAM is strongly recommended. This study should find solutions for modernisation and streamlining of production systems.

## 1) Review and reform of industrial structure

It was stated that Kenya's textile industry has a domestic-oriented market and that individual companies operate as autarkic producers. This system of production results in under utilization and slows the process by which manufacturer's change production requirements to meet new demands for finished products. The international demand for textile products is moving towards more sophisticated fashions, high grades of quality and diversified products. Consumer's requirements are becoming more selective. Accordingly, the textile industry should provide a new specialised production system which will meet the requirements of consumers, i.e., production of more varieties with less quantities of products to cope with the ever changing consumer fashions.

Under these conditions, expanding production capabilities to meet the demand of more variety in less quantities should be subject to significant restructuring. Specialisation and subcontracting should be promoted within the textile industry as a step in this direction. Achieving this will require the industry's efforts.

The methods for accomplishing the above recommendations are:

1) joint business activities; 2) formation of strong business associations; and 3) the encouragement of joint-ownership of companies. Also, studies must be done to identify structural problems related to production costs and implement adequate quality control for each phase in the production cycle.

## 2) Promoting anti-pollution measures

Establishment of anti-pollution measures is a global responsibility. Kenya must ensure adequate anti-pollution technology to protect its natural resources and to guarantee the viability of its tourism industry. Generally, the sources of environmental pollution found in the textile industry are from the waste drainage produced at the finishing stage. Although anti-pollution measures should be taken by individual enterprises, a lack of funds and the costs associated with installing anti-pollution equipment that are then passed on in higher product prices, makes implementation economically difficult.

A streamlined textile industry will promote structural reform and facilitate implementation of anti-pollution measures. In the subsector study, it should be clarified what the sources of pollution, costs to manufacturers and exporters are. Additionally, effective countermeasures should be discovered that are compatible with structural reform policies.

## (2) Cooperation of Public and Private Sectors

Significant improvement can be accomplished by representatives of KNCC & I, KAM and the industrial circles under the initiative of MOF. The issues resolved after careful consultation should cover equipment renewal and combination, specialisation and establishment of firms, and the formation of a business association. The entry of Kenya's enterprises into the textile industrial complex of the EPZ and the promotion of exports for the textile industry should also be studied.

To implement the above, the following areas should be closely examined.

### 1) The following guidelines should be pursued by the government and industrial associations or business associations for the restructuring of this industry:

- MOI should prepare legislation for low interest loans, subsidies and create special funds for the restructuring plan.
- MOF should provide financial support in consultation with MOI.
- MOC should prepare administrative guidance for importing raw materials and equipment related to the restructuring plan.
- MOCD should create guidelines for loans in consultation with MOF.

### 2) Finance

ICDC should determine financial arrangements regarding details of funds procurement and application procedures for loans.

(3) Forming a Textile Manufacturers' Group

The textile manufacturers affiliated with KAM should become an independent group enabled to function as the source of promotion of structural reform within the industry. This executive organisation will, in undertaking structural reforms, adjust the application procedures for loans. In some instances, such organisation supervises modernisation of the industry, while adjusting the interests of individual enterprises.

After completion of the subsector study, a study team organised by the government and private sector should be dispatched to other countries where restructuring has been successfully implemented. The team will study up-to-date operations and necessary procedures relevant to Kenya's industry and make recommendations accordingly.

If necessary, financial and technical cooperation can be solicited from other countries.

(4) Streamlining Production System

To create a streamlined production system, it is necessary to consider scrapping some production facilities and arranging others for a newly organised production process, especially at the finishing stage. For this purpose encouraging new joint ventures is recommended.

For example, scrapping several old facilities used for the finishing process stage and establishing a new modernised factory as a joint venture of current owners is a rational method for streamlining production.

During this process, a strengthened textile business association will take the initiative in order to minimise the conflict among firms. Also, the executive organisation could solicit foreign technical assistance that could be valuable in the development of a restructuring plan.

(5) Utilisation of EPZ and MUB

A subcontracting system with foreign companies in the EPZ regarding the supply of materials should be established. Preference should be given to MUB

enterprises in the EPZ as well. Increased EPZ utilization and cooperation with MUB will further the development of the textile industry.

**(6) Implementation of Restructuring**

It is necessary to develop the industry as a core export-oriented industry and to convert the industrial structure from the domestic market orientation to the "market-in approach", which requires manufacturers to consider the marketability of products in the export market.

After the proposed subsector study identifies those factors adversely affecting textile export, restructuring should be implemented.

**(7) Implementation Schedule**

The implementation schedule for the above action programmes is given in Table 6.2.1.

Table 6.2.1 Action Programme for the Development of the Textile and Garment Industry

	Short to Medium Term	Medium to Long Term
Organisations, firms	Manufacturing groups under leadership of MOI and KAM	Same as the left
Measures	<ol style="list-style-type: none"> <li>1) Subsector study               <ol style="list-style-type: none"> <li>a) Review and reform of industrial structure</li> <li>b) Promoting anti-pollution measures</li> </ol> </li> <li>2) Cooperation of public and private sectors</li> <li>3) Forming a textile manufacturers' group</li> </ol>	<ol style="list-style-type: none"> <li>1) Streamlining production system</li> <li>2) Utilization of EPZ and MUB</li> <li>3) Restructuring</li> </ol>
Supporting organisations	<ol style="list-style-type: none"> <li>1) MOF: government financing (various incentives)</li> <li>2) MOI: Study of and guidance for legal aspects</li> <li>3) MOC: Guidance in exporting and importing raw materials, resources and products</li> <li>4) MOCD: Preparation of financial guideline</li> <li>5) KNCC &amp; I: Provision of market information</li> </ol>	<ol style="list-style-type: none"> <li>1) ICDC, KIE: Low-interest loans for capital investment</li> <li>2) TPC: Marketing in foreign markets and sales promotion</li> </ol>
Locations	Nation-wide	Same as the left
Essential points and requirements:  Kenya	<ol style="list-style-type: none"> <li>1) Establishment of joint committee for improvement and implementation of subsector study</li> <li>2) Clarification of problems relating to the industrial structure for cost reduction and improvement of quality</li> <li>3) Clarification of capacity, quality, cost and anti-pollution measures for each production process</li> <li>4) Planning of support measures by the government (legal and monetary)</li> <li>5) Strengthening the textile manufacturers' group</li> </ol>	<ol style="list-style-type: none"> <li>1) Equipment recombination and new company establishment by the industrial circles</li> <li>2) Establishment of legal system</li> <li>3) Low-interest loans</li> <li>4) Provision of anti-pollution preventing system</li> <li>5) Establishment of joint institution for research and testing development</li> <li>6) Promotion of marketing by TPC and other institutions</li> </ol>
Essential points and requirements:  Foreign aid	Technical cooperation for survey	<p>Dispatching of study mission on industrial restructuring</p> <p>Technical cooperation through TPC</p>



## 6.2.2 Metallurgical and Metalworking Industry

### (1) Cooperation of Public and Private Sectors towards Development of a Leading Industry

The metallurgical and metalworking industry is specified as a core industry under the national policy and must be developed. In order to do this, public and private sectors should cooperate under a common strategy considering the following key points:

- (a) Fostering the capital goods industry is an important goal of industrialization. The metallurgical and metalworking industry is a key capital goods industry.
- (b) The steel industry is indispensable for building and maintaining infrastructures, and necessary for economic development.
- (c) Recycling of scrap metal in Kenya is important from an economic perspective due to limited resources of iron and steel.
- (d) The steel industry is closely linked to the manufacturing industries but requires large-scale capital investments. (Refer to Fig. 6.2.2).

### (2) Implementation of Subsector Study

#### 1) Review of the industrial structure

Exposed to international competition and subject to the effects of fluctuations in the international marketplace, this industry is usually supported by the governments in the cases of the industrialized countries. It is advisable to undertake a study of the metallurgical and metalworking subsector as a precondition for the planning of its restructuring.

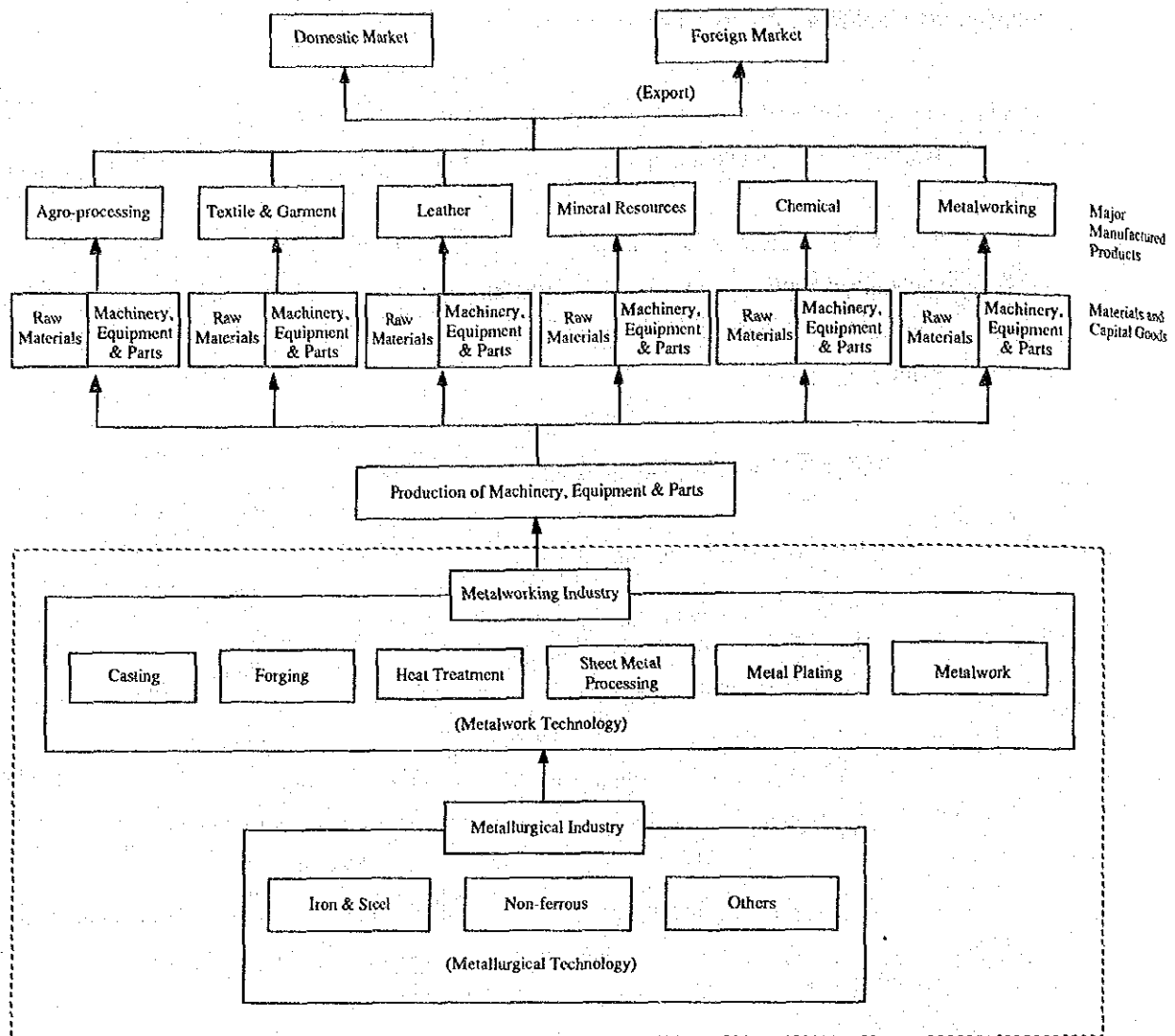


Fig. 6.2.2 Industries Supported by Metallurgical and Metalworking Industry

(a) Kenya's domestic and PTA steel market demand

In Kenya, the total demand for iron and steel is estimated to be about 300,000 tonnes per year; domestic output, about 100,000 tonnes and import, about 200,000 tonnes. Consequently, Kenya is importing about 70% of its steel demand.

At present, Kenya is exporting steel as construction materials to PTA markets in Uganda, Tanzania and Rwanda. Kenya is likely to face competition with South Africa for PTA markets in the future.

(b) Capacity and operation of existing plants

Some of Kenya's steel manufacturers have electric furnaces, rolling equipment and rolling mills. The total number of steel manufacturers is ten.

The capacity of rolling mills in Kenya is 186,000 tonnes per year, but output is about 100,000 tonnes per year. The current rate of rolling mills production is about 46% (Refer Table 6.2.2).

The billet output in Kenya is about 35,000 tonnes per year and the furnace capacity is about 100,000 tonnes per year. The rate of operation is about 35%.

Table 6.2.2 Kenya's Demand for Steel and Output

(Unit: tonn)

	Equipment capacity (1)	Output (2)	Difference (1)-(2) (Shortage)
1. Electric furnace	(A) 100,000	(B) 35,000	(C) 65,000 (65%)
2. Rolling mill	(D) 186,000	(E) 101,000	(F) 85,000 (36%)
3. Difference (1-2) (Shortage)		(G) 66,000 (65%)	

(Note) Estimates by the Study Team

(C) = (A) - (B) : Demand for scraps (65,000 tons)

(F) = (D) - (E) : Demand for billets and ingots (85,000 tons)

(G) = (E) - (B) : Demand for billet/ingot under existing situation (66,000 tons)

(c) Procurement methods of raw material

The World Bank report reveals that the low operation ratio of Kenya's steel manufacturing equipment is attributable to the shortage of domestic scraps or scrap iron. Encouragement and development of the ship breaking business is cited as a realistic means of overcoming this shortage of steel materials.

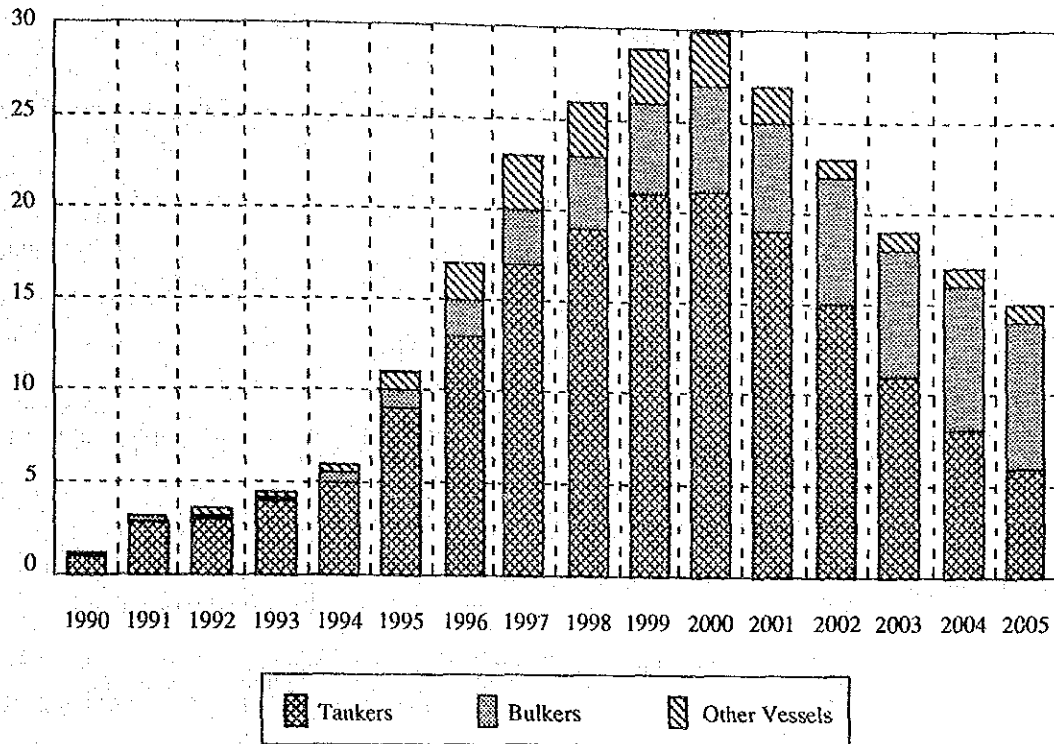
About 70% of the tankers and bulkers presently in operation were built around 1975, when the marine transportation industry was favorable. While the average life of the ships ranges between 15 and 20 years, recent market forces in the marine transportation industry have extended the ship's life-span to about 30 years. But it should be noted that the tanker/bulker ships commissioned around 1975 have reached the end of service. This increased demand for the scrapping of ships has led the International Maritime Industries Forum (IMIF) and ship owners to find solutions to this growing burden.

Estimates of scrapping demand are given in Fig. 6.2.3. According to the estimates, the scrapping of tankers is expected to increase rapidly from around 1995, and the scrapping volume is likely to reach about 30 million dead weight tons by the year 2000.

Because scrapping requires large tracts of land and is labour intensive, it is more cost effective and profitable to locate this industry in developing countries. The cost of labour and land in industrialised countries is prohibitive.

At present, developing countries like India, Bangladesh, China and Thailand have ship breaking business, but because of the small scale of their scrapping yards, these countries are unable to cope with the scrapping of large-scale tankers. The possibility still remains for Kenya to establish ship breaking business due to the large demand for scrapping if large yards in the coastal area are provided. The Study Team believes Kenya can develop an economically viable ship breaking industry to meet its steel scrap needs.

(Unit: Million DWT)



(Source: Research Division of Mitsui O.S.K. Lines, Ltd., Japan)

Fig. 6.2.3 Estimate of Scrapping Demand

## 2) Preventive measures to control environmental pollution

Scrapping yards must establish safeguards and help prevent environmental pollution. For example, a plan must consider disposal and containment of wastes such as spilled oil, scraps of heat-insulating asbestos and ship-bottom paints. Also this plan must consider pollution levels associated with noise and vibrations, and the emissions of dust, smoke, noxious fumes and vapours. Further, the Study Team recommends that scrapping yards be located away from residential areas, fishing zones and resort beaches.

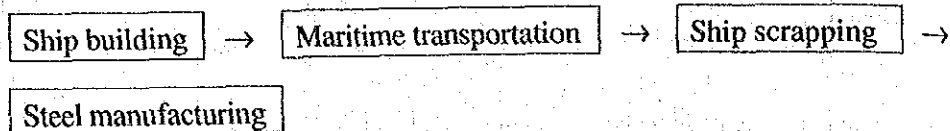
## (3) Feasibility Study on the Construction of Special EPZ for the Metallurgical and Metalworking Industry

The metallurgical and metalworking industry is important for Kenya's future economic growth. But due to large amounts of capital investment required in an EPZ for the metallurgical and metalworking industry, it is recommended to

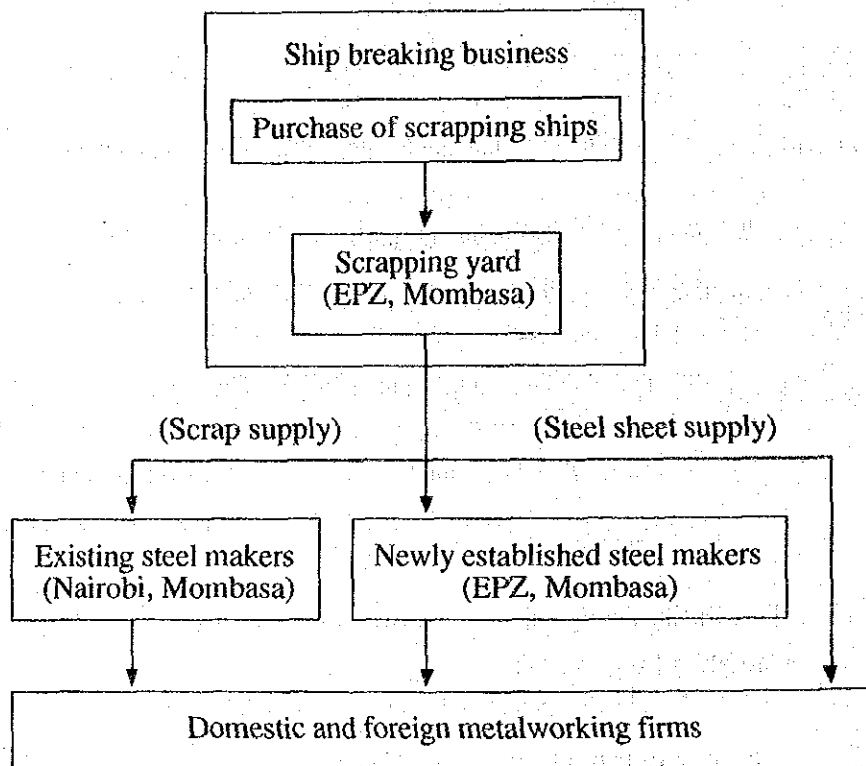
conduct a feasibility study to determine the economic viability and scale of such a plan.

- 1) A study that investigates the possibility of combining the functions of the ship scrapping with electrical furnace processes.

A study of the ship breaking business should examine and consider the linkage of ship building, maritime industry, the scrapping of ships and the recycling of steel products. This linkage is expressed as follows:



The ship breaking business thus can give a strong economic impact on Kenya's existing steel industry; for example, economic consequences related to import substitutes. If the ship breaking and steel smelting are done in an EPZ, the cost of transportation will be reduced and the overall efficiency of operations will be increased.



Steel Industry and Ship Breaking Business in an EPZ

The establishment of this type of EPZ will increase the production capabilities, thus providing the scrap and steel for domestic consumption as well as for consumption by PTA countries.

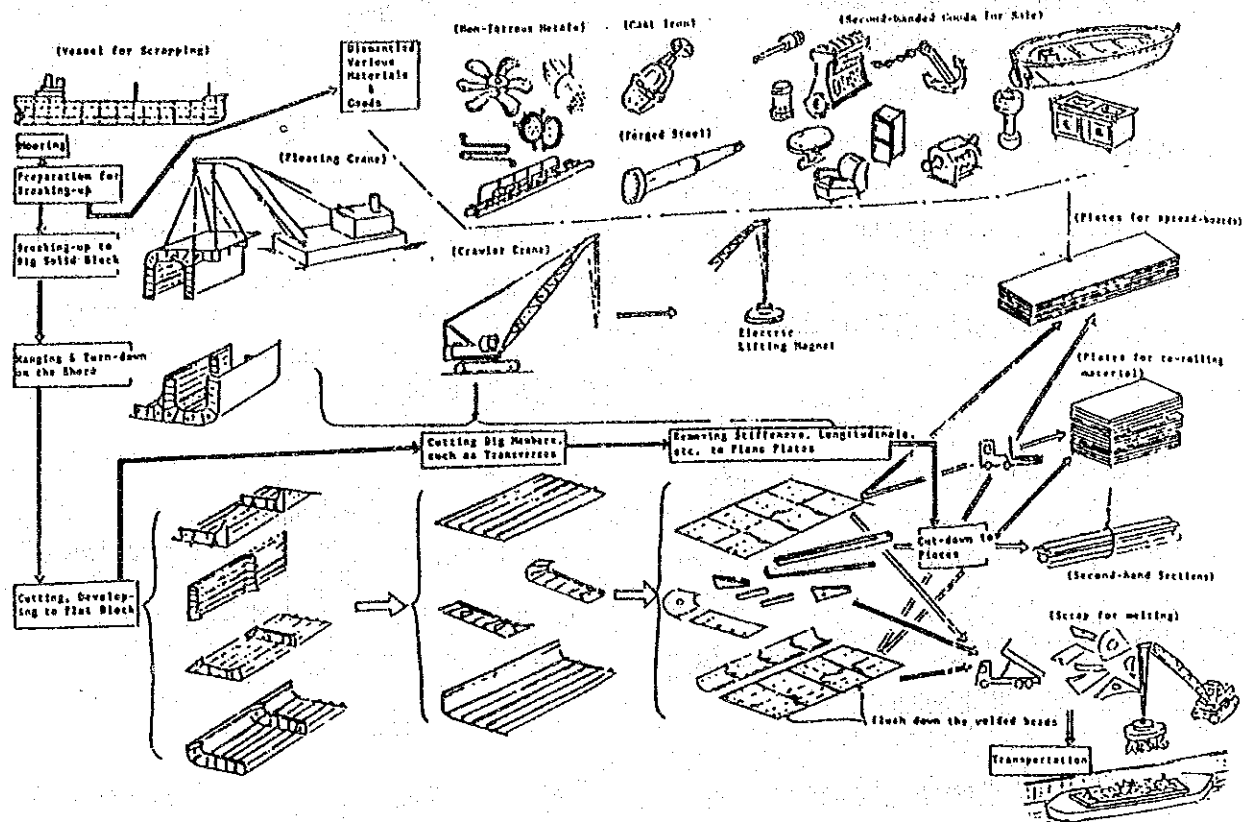
In addition, it is recognised that the ship breaking business will require the establishment of technical training centres that will benefit Kenyan workers and workers in neighbouring countries. In this regard, too, the utilisation of the Kenya Railway Workshop should be re-considered.

2) Use and merits of steel scrap

About 90% to 95% of a scrapped ship's hull is constructed of steel plates that can be marketed directly for construction sites, as well as materials for building steel structures. And if rolling mills are available, materials can also be processed into various steel products, such as round bars, deformed bars and flat steel.

If scrapping ships can be procured at low prices, and Kenya's labour costs remain stable, the products manufactured should be competitive in price. Also, refrigerators, washing machines, desks, beds, doors and other recyclable materials salvaged from scrapped ships can be sold and provide profits.

Ship scrapping work procedures are given in Fig. 6.2.4:



(Source: Japanese Association of Ship Scrapping Promotion)

Fig 6.2.4 Work Flow of Ship Scrapping



(4) Consolidation of Association between Steel Manufacturers and Metal Processing Manufacturers

For the development of the metallurgical and metalworking industry, a consolidation of diversified technology is necessary. For this reason, reinforced cooperative relations between steel manufacturers and metal processing manufacturers are critical. The benefits derived from the association of these two manufacturing industries will be great.

(5) Streamlining of Production Facilities

Existing production facilities must be enhanced according to the result of the subsector study. With regard to material suppliers, steel production processing covering scrap collecting to melting and rolling should be streamlined and consolidated. With regard to the metal processing manufacturers, supplementary functions between parts manufacturers and finished product manufacturers requires adjustment and cooperation to promote productivity. Implementation of this programme may require the government's financial support.

(6) Construction of EPZ

Construction of the EPZ for the metallurgical and metalworking industry will follow the results of the feasibility study. Because a large-scale investment is called for, it is desirable to develop an EPZ with the cooperation of the public and private sectors. Additional cooperation by foreign enterprises should be solicited. It is possible to obtain foreign aid for the construction of the EPZ's infrastructure. Foreign steel makers should be invited to bid for the construction of factories.

In parallel with the EPZ construction, consolidation of related infrastructures, such as water supply, electric power supply and communications, should be undertaken in collaboration with relevant government offices. The construction of EPZ should also accompany the establishment of relevant administrative organisation.

(7) Implementation Schedule of the Action Programme

The action programme relative to the above measures is given in Table 6.2.3.

**Table 6.2.3 Action Programme for the Development of the Metallurgical and Metalworking Industry**

	Short to medium term	Medium to long term
Organisations, firms	Grouping of Metal industries under leadership of MOI and KAM	1) Same as the left 2) Foreign enterprises
Measures	<ol style="list-style-type: none"> <li>1) Cooperation of public and private sectors towards development of a leading industry</li> <li>2) Implementation of subsector study               <ol style="list-style-type: none"> <li>a) Review of industrial structure</li> <li>b) Preventive measures to control environmental pollution</li> </ol> </li> <li>3) Implementation of F/S on the construction of special EPZ for the metallurgical and metalworking industry.</li> <li>4) Consolidation of associations among related manufacturers</li> </ol>	<ol style="list-style-type: none"> <li>1) Streamlining of production facilities</li> <li>2) Construction of EPZ for metallurgical and metalworking industry</li> </ol>
Supporting organisations	<ol style="list-style-type: none"> <li>1) MOF: Financial support</li> <li>2) MOI: Legal guidance, industrial standards and production</li> <li>3) MOE, MOPW, MOTC: Support for EPZ-related infrastructures (water, power, communication, etc.)</li> </ol>	<ol style="list-style-type: none"> <li>1) Same as the left</li> <li>2) Same as the left</li> <li>3) Same as the left</li> <li>4) IPC: Introduction of foreign capital</li> </ol>
Locations	Nairobi and Mombasa	Nairobi and Mombasa (EPZ)
Essential points and requirements:  Kenya	<ol style="list-style-type: none"> <li>1) Subsector study related to import substitute and export-oriented industries               <ol style="list-style-type: none"> <li>a) Scale of domestic demand and PTA market</li> <li>b) Operating situations of existing plants</li> <li>c) Study of methods of raw material procurement (including ship scrapping)</li> </ol> </li> <li>2) Study of production scale of new factories in EPZ</li> <li>3) Reinforcement of tie-up relations among metal material-related enterprises centered around electric furnace</li> <li>4) Consolidation of tie-up among metal processing enterprises</li> <li>5) Implementation of F/S for EPZ</li> <li>6) Cooperation of public and private sectors</li> </ol>	<ol style="list-style-type: none"> <li>1) Financial aid for streamlining production facilities</li> <li>2) Implementation of measures against environmental pollution</li> <li>3) Consolidation of consensus for EPZ construction and operation</li> <li>4) Establishment of this industry compatible with national policy</li> </ol>
Essential points and requirements:  Foreign aid	<ol style="list-style-type: none"> <li>1) Financial and technical cooperation for subsector study</li> <li>2) Financial and technical cooperation for F/S</li> </ol>	<ol style="list-style-type: none"> <li>1) Financial and technical cooperation with streamlining of production facilities</li> <li>2) Financial and technical cooperation with metal EPZ</li> <li>3) Participation of foreign capital-affiliated enterprises</li> </ol>

## **CHAPTER 7 ACTION PROGRAMMES FOR ENFORCEMENT OF STANDARDISATION AND PROMOTION OF QUALITY CONTROL**

### **7.1 Improvement in Common Factors in Industries**

The technology and methods of Kenya's industries can be improved by the following measures.

- 1) Improvement of the process technology and methods of promising export products. (This can upgrade the quality of products so that they can become internationally competitive.)
- 2) Development of new export products by combining existing technology and methods (inter-manufacturers linkage).
- 3) Production of new goods by introducing new technology and methods from advanced countries.

The first step is to make use of available technology and methods to manufacture quality products in each factory. For the second step, manufacturers should cooperate and share specialised technology and methods; this will improve over-all technology and reduce costs for each manufacturer. Finally, new technology and methods should be imported to raise the industrial level to that of industrialised countries.

It would be difficult to effectively execute these measures without first implementing the following four common factors of improvement discussed in Part II, Chapter 7. The next section discusses the Study Team's recommendations for action programmes specifically related to the second and third factors.

- 1) Improvement of industrial information services
- 2) Enforcement of standardisation
- 3) Introduction and promotion of quality control
- 4) Introduction of new technology

## 7.2 Action Programmes

Action programmes for improving such common factors are vital for Kenya's industry and require coordinated implementation by governmental organisations, business associations and private firms. In the future a coordinating organisation to take this role should be set up as governmental organisations such as MOI and MOTTAT.

### 7.2.1 Enforcement of Standardisation

#### (1) Guidance for Standardisation

Enforcement of standardisation is one of the most important factors in promoting industrial development in Kenya. Standardisation has not been strongly enforced in Kenya. Production facilities and component parts imported from industrialised countries follow the industrial standards of the respective countries. This has hurt attempts by Kenya Bureau of Standards (KBS) (the institution in charge of standardisation in Kenya) at domestic unification and enforcement of standardisation.

Standardisation should be enforced in international trade, domestic sales and within firms. In the short term, KBS should take the leading role in enforcement, looking to KIRDI for support and technical guidance when needed. In the future, a coordinating committee with members from KBS, KIRDI, KIBT, KAM, KNCC&I and other relevant institutions should be established to find ways to enforce standardisation. This committee should assign roles and responsibilities to each institution.

#### (2) Establishing Industrial Standards

KBS has not yet set many industrial standards, thus making it difficult for firms in Kenya to follow industrial standards. Although it is desirable to establish complete industrial standards, the first priority should be to adapt international standards for measurement units not yet established in Kenya. After this has been accomplished, international standards for other areas should be adopted where possible.

### (3) Measures for Enforcement

Standardisation should be enforced over a wide range of industrial activities. KBS should take the following measures in cooperation with other institutions.

#### 1) Educational institutions

Education about standardisation should be given at schools and technical training centres in cooperation with the Ministry of Education (MOE) and the Ministry of Technical Training and Applied Technology (MOTTAT).

The following guidelines should be employed:

- (a) Curriculum related to standardisation should be established at universities and other technical schools. The necessity and effectiveness of standardisation should be taught to students.
- (b) Teaching materials and practices in universities, other technical schools and technical training centres should follow industrial standards.

#### 2) Technical advisory services

KBS should cooperate with MOI, KIRDI and KIBT to provide the following services:

- (a) holding technical seminars for personnel of private firms,
- (b) provide technical advisory services to give guidance on standardisation, and
- (c) provide instructions for standardised labelling of quality specifications of products.

3) **Export products**

KBS, in cooperation with KETA at present, and TPC in the future, should instruct exporters on how to indicate the quality of export products and instruct exporters to use either KIS or international standards.

(4) **Application of Standardisation**

The following standardisations should be made to production activities to upgrade Kenya's industrial technology.

- Quality indication
- Product drawings
- Quality control
- Parts and material procurement
- Utilization of standard parts
- Measurement control
- Manufacturer linkage

(5) **Evaluation and Feedback**

After standardisation has started to be enforced, the standardisation program should be evaluated. There should be a feedback and improvement mechanism for any problems found.

(6) **Implementation Schedule for the Action Programme**

The implementation schedule for the above action programme is given in Table 7.2.1.

**Table 7.2.1 Action Programme for Enforcement of Standardisation**

	Short and medium term	Medium and long term
Organisations, firms	KBS, KIRDI	KBS, KIRDI and manufacturers
Measures	<ol style="list-style-type: none"> <li>1) Guidance for standardisation</li> <li>2) Establishment of industrial standards</li> <li>3) Education and technical advisory services on standardisation</li> </ol>	<ol style="list-style-type: none"> <li>1) Education and technical advisory services on standardisation</li> <li>2) Application of standardisation</li> <li>3) Evaluation and feedback</li> </ol>
Supporting organisations	<ol style="list-style-type: none"> <li>1) MOI: Guidance for legal aspects</li> <li>2) MOE: Promotion of standardisation through school education</li> <li>3) MOTTAT: Promotion of standardisation through training</li> <li>4) KNCC&amp;I, KAM, KIBT: Promotion of standardisation through training</li> </ol>	<ol style="list-style-type: none"> <li>1) MOI: Guidance for legal aspects</li> <li>2) MOE: Promotion of standardisation through school education</li> <li>3) TPC: Technical information on export products</li> </ol>
Locations	Major towns	Nationwide
Essential points and requirements:  Kenya	<ol style="list-style-type: none"> <li>1) Decide role for and give resources to KBS</li> <li>2) Prepare concrete measures for enforcement of standardisation</li> <li>3) Promote manufacturer linkage</li> </ol>	<ol style="list-style-type: none"> <li>1) Curriculum related to standardisation should be provided for different levels of schools.</li> <li>2) Educational training based on standardisation should be done at technical training centres.</li> <li>3) Curriculum related to standardisation should be prepared for different types of businesses.</li> <li>4) Technical instructions to firms should be made mainly by KBS and KIRDI.</li> </ol>
Essential points and requirements:  Foreign aid	<ol style="list-style-type: none"> <li>1) Overseas training of leaders</li> <li>2) Financial and technical cooperation</li> </ol>	<ol style="list-style-type: none"> <li>1) Overseas training of leaders</li> <li>2) Financial and technical cooperation</li> </ol>

## 7.2.2 Introduction and Promotion of Quality Control

### (1) Guidance for Quality Control

Quality control is one of the important factors used in controlling processes from product planning through completion (the processes as set by standardisation). (Refer to Fig. 7.2.1.) Many methods and control systems are required for upgrading the quality of products. Guidance should be given by KIRDI, KIBT and KBS. These institutions should be in charge of the following areas.

- 1) KIRDI : Drawings, operation standards, maintenance of facilities and process designs
- 2) KIBT : Marketing and cost control
- 3) KBS : Drawings, inspection standards and labeling of quality

### (2) Establishing a Coordinating Organisation

KAM should take charge as the coordinating organisation for providing technical instruction from governmental institutions to manufacturers. KAM will need to be given more resources to perform this role. Establishment of specialised institutions for coordinating should be considered in the future.

### (3) Quality Control Manuals

Manuals for quality control should be written for manufacturers. There are many different methods of production depending on the type of industry, precision required for processing, production volume, type of product and materials used. Separate quality control manuals should be written for different industries and production methods.

### (4) Teaching and Encouraging Quality Control

#### 1) Training of personnel from private firms

First, chief engineers of manufacturers should be instructed about quality control. They can be more successful in teaching quality control to the



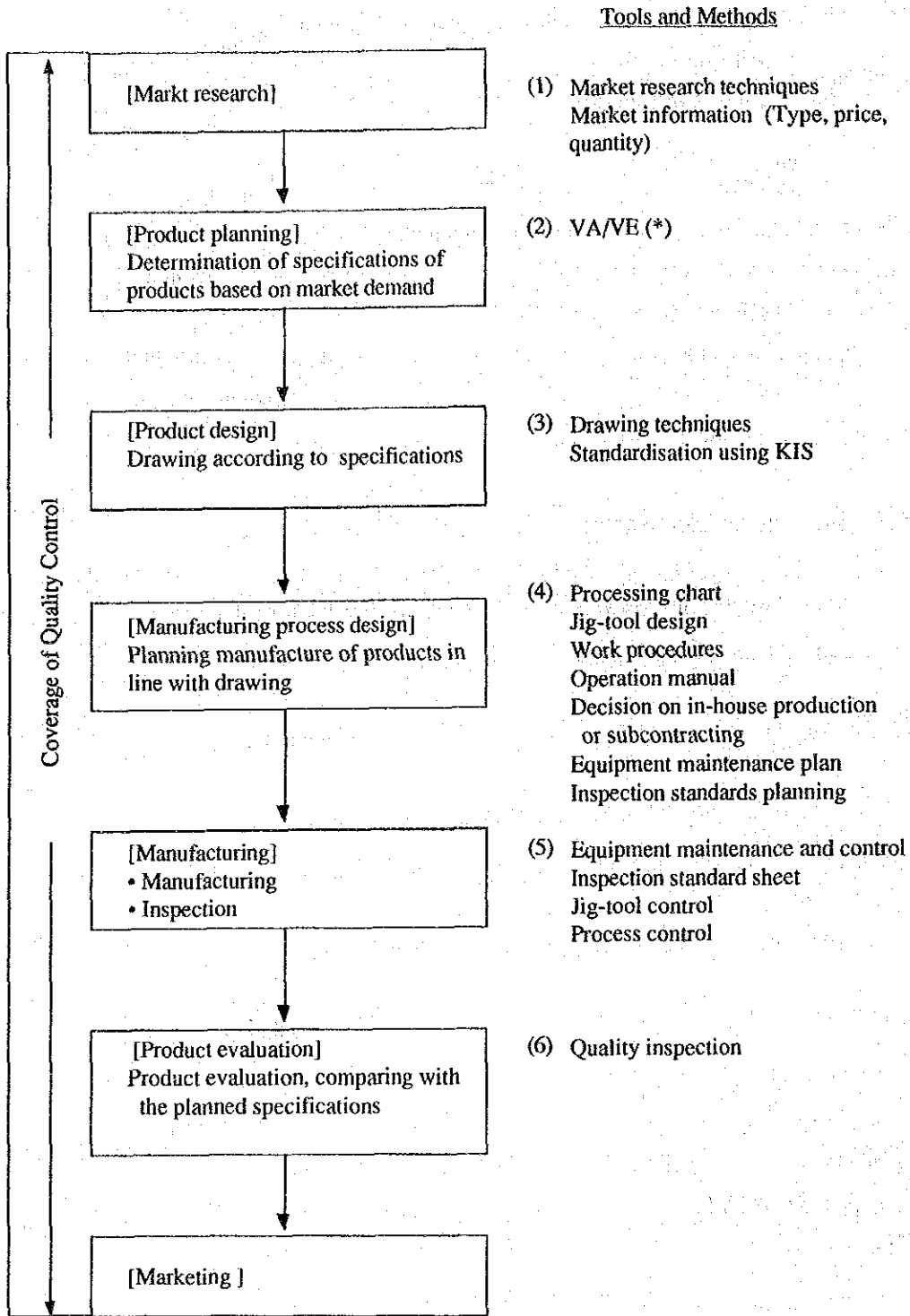
factory workers because professional knowledge is required for specific training. In the long term, training of quality control specialists should be done at universities and training centres.

2) Designation of model firms

To serve as examples of companies practicing good quality control for different regions and types of businesses, model firms should be selected and provided guidance. These firms will provide other firms in the same region and in the same type of business with good examples of quality control.

(5) Implementation Schedule for the Action Programme

The implementation schedule for the action programme is given in Table 7.2.2.



Note: (\*) Value Analysis/Value Engineering

Fig. 7.2.1 Commercialization Control Technology

Table 7.2.2 Action Programme for Introduction and Promotion of Quality Control

	Short and medium term	Medium and long term
Organisations, firms	KIRDI, KIBT, KBS	Guidance institutions and private enterprises
Measures	<ol style="list-style-type: none"> <li>1) Guidance for quality control</li> <li>2) Establishing a coordination organisation</li> <li>3) Quality control manual</li> </ol>	<ol style="list-style-type: none"> <li>1) Teaching and encouraging quality control               <ol style="list-style-type: none"> <li>a) Training of personnel from private firms</li> <li>b) Designation of model firms</li> </ol> </li> </ol>
Supporting organisations	<ol style="list-style-type: none"> <li>1) MOI, MOTTAT, KNCC&amp;I, KAM: Guidance and support for quality control</li> <li>2) TPO: Relevant technical information</li> </ol>	<ol style="list-style-type: none"> <li>1) MOI, MOTTAT, KNCC&amp;I, KAM: Guidance and support for quality control</li> <li>2) MOE: School education</li> <li>3) TPC: Support for quality control</li> </ol>
Locations	Major towns	Nationwide
Essential points and requirements:  Kenya	<ol style="list-style-type: none"> <li>1) Help manufacturers recognize the need for quality control</li> <li>2) Prepare manuals such as drawing control, inspection standards, quality indication</li> <li>3) Propose measures for introducing quality control to firms for different types of businesses</li> </ol>	<ol style="list-style-type: none"> <li>1) Teach quality control education in schools</li> <li>2) Issue technical approval certificates to persons completing study courses</li> <li>3) Select model firms in different regions and different types of business</li> <li>4) Provide technical guidance (by each firm)</li> </ol>
Essential points and requirements:  Foreign aid	Provision of technical cooperation (dispatching experts to Kenya and Acceptance of trainees)	



**PART IV**

**CONCLUSION AND RECOMMENDATIONS**



## CONCLUSIONS AND RECOMMENDATIONS

In submitting this final report, the Study Team proposes major premises, a philosophy and the outlook, of trade promotion.

### 1.1 Major Premises of Trade Promotion

The Study Team proposes the following as major premises for trade promotion in Kenya.

- (1) Kenya must strengthen the development of import-substitute industries and develop export-oriented industries to sustain stable GDP growth and improve the national balance of trade.
- (2) Public and private sectors must cooperate in the promotion of exports and the development of export-oriented industries.
- (3) For the promotion of exports and for the development of export-oriented industries, international competitiveness must be sought.
- (4) A change of awareness is required both in production and marketing. Specifically, the orientation toward local markets must be changed and the industries must become internationally competitive.
- (5) Kenyan firms should be given the maximum incentives possible for the development of export-oriented industries.
- (6) Kenya must promote "economic democratization" based on free-market principles to achieve economic independence and vitalization.

## **1.2 Philosophy of Trade Promotion and Implementation of Action Programmes**

Public and private sectors need to agree the following philosophy for trade promotion and implement action programmes based on that philosophy.

- (1) The structure and responsibilities of government departments in charge of trade should be reviewed and reorganised to simplify the import and export procedures. The authorities of the departments should be clarified to avoid overlapping or lack of responsibility. The procedures must be enforced strictly, but fairly in all cases.
- (2) To effectively promote trade, an unified trade promotion organisation (TPO) must be established with the participation from public and private sectors.
- (3) The TPO must have qualified personnel who can make and implement adequate plans for export promotion. The TPO must also have the function to develop expertise of trade promotion.
- (4) Trade promotion is best accomplished through close cooperation of public and private sectors. A trade promotion centre (TPC) will facilitate such cooperation. Establishment of the TPC should be studied.
- (5) Promotion of the export oriented manufacturing sector should be carefully planned and implemented making effective use of the available incentives and exemptions.
- (6) Current exports and import substitutes must be improved for short-term growth of trade.
- (7) The public and private sectors should study the development of new core industries and promote the development of the industries selected through the study.