

PLASTICS SUB-SECTOR

EXISTING SITUATION:

There are more than 70 plastic industries in Kenya with capacities ranging from 1000 to 8000 tonnes per year. Most of these industries are located in Nairobi and Mombasa with a few in Kisumu, Nakuru, Eldoret, and Thika. The plastics industrial subsector has benefited from the technological changes that have occurred in the manufacturing industry combined with the shift in demand to plastic products. The overall result has been increased production and demand of plastics products.

The plastics subsector in Kenya mainly produces PVC pipes and fittings, polythene packaging bags, plastic shoes, plastic crates and bottles, floor tiles, household plastic wares and plastic containers for domestic and industrial use. Plastic products from Kenya are marketed locally and to the preferential Trade Area region in Africa now called Common Market for Eastern and Southern Africa, COMESA.

EXISTING PROBLEMS:

1. Most inputs for the plastic industries are imported (mainly from Europe and Asian countries), and in the last few years a lot of foreign exchange has been spent on importation of plastic raw materials. For example in 1985 and 1986, Kenya spent Kshs 811 Million and 900 Million respectively on finished plastic products and plastic raw materials.

All the plastic raw materials are imported except the plastic dyes which are manufactured locally by Kenswiss (K) Ltd, but the ingredients for manufacturing these plastic dyes are imported.

2. Although the plastics sub-sector in Kenya has steadily grown in the past years, we lag behind in the production of electrical appliances (like sockets, plug etc) and automotive plastic spares. There are many industries producing paper bags, basins, plates etc. Production of specialised items would be recommended.
3. With increasing plastic products manufacture, plastic waste generation has been on the increase. Most plastics are non-biodegradable. Their continued accumulation has raised a lot of concern to the environmentalists.

The project "Plastics Waste Management System in Kenya" aims at a countrywide education and awareness campaign on how best plastics waste can be managed, putting emphasis on reduce, re-use and recycle. The project cost is estimated to be Kshs 10066045 or US\$ 183019 and funding is requested from COMMONWEALTH SECRETARIAT to realize the goals.

Three companies are currently involved in recycling of selected types of plastic waste. The companies are:

- 1) Skyplast manufacturers Ltd (NRB)
- 2) Rainbow plastic Ltd (NRB)
- 3) Plaspak company Ltd (Mombasa)

Despite the country having these recycling firms disposal of plastic waste is still a big problem.

4. Competition from the imported substitutes. Unfair competition is affecting the local industries. This involves the importation of sub-standard goods, tariff anomalies etc. There is stiff competition from substitutes like rubber products, metal products, ceramic products etc.
5. The current inadequate state of Kenya's infrastructure acts as a major disincentive to potential

investors and threatens the realisation of the goal of industrialisation. The availability of infrastructure and its efficient operation are major determinants to the cost of production, quality and timeliness of response to product and service demands.

6. Electricity supply is crucial to the manufacturing sector. The main constraints with regard to electricity supply are voltage fluctuations and power breakdowns. Electrical fluctuations and breakdowns damage equipment and create production losses.
7. Most industrial activities need clean, adequate and reliable water supplies. Besides, both the surfeit and lack of water has been cause to untold human suffering as well as serious environmental degradation. The quantity and standard of water treatment must, therefore, be high enough to meet industrial requirements.
8. The availability of a well educated and trained workforce is critical to the success of Kenya's industrialisation process. Apart from entrepreneurial and managerial skills, there are equal requirements for operational, technician and artisan skills at the shop floor level. There needs to be a proper ratio of technicians and artisans to engineers and designers.

RAW MATERIALS

Plastics are non-metallic engineering materials that can be formed and shaped by many methods. There are many kinds of chemically different plastics. Each kind may be made into hundreds of compositions or alloys.

A plastic is classified as a thermoplastic or thermosetting resin depending upon how heat affects it. When heated, thermoplastic resins soften and flow as liquids when cooled they solidify. These changes on heating and cooling can be repeated. When heated, thermosetting resins liquefy and then solidify with continued heating, the polymer crosslinks during heating. These materials are formulated for controlled chemical changes during moulding. Cross linking is a permanent change, thus once moulded a thermoset part cannot be reheated and moulded again.

Plastic raw materials must be characterised by two kinds of properties - those important for processing and those important for the intended product.

Examples of thermoplastics are cellulosic plastics, acrylic plastics, styrene plastics, vinyl plastics, polyamide plastic etc.

Examples of thermosetting plastics are phenolic plastics, amino plastics, allkyd plastics, alkyd polyester plastics, silicone plastics, epoxy plastics.

The major plastic materials are:

-Plastics thermoplastics:	Polyethylene	PE
	Polypropylene	PP
	Polystyrene	PS
	Poly(vinylchloride)	PVC
	Polyacetate	POM
	Acrylic	PMMC
	Polyamido (Nylon)	PA
	Polycarbonate	PC
	Polytetrafluoroethylene	PTFE
-Plastics thermosets:	Epoxy	EP
	Melamine-Formaldehyde	MF

Unsaturated Polyester	UP
Phenolic	PF
Polyurethane	PUR

Production of Polymer-based Products from Raw Materials:

Primary Resources:	Basic Petrochemicals:	Polymer Material:	End Products:
Crude oil	Ethylene	PE	plastics
Natural gas	Propylene	PP	
Chlorine nitrogen	Styrene	PS	elastomers
	Vinylchloride	PVC	
	Butadiene	ABS	fibres
	Cyclohexane	PA	
	Acetylene	PUR	

All the plastic raw materials are imported.

APPROPRIATE TECHNOLOGY FOR THE INDUSTRY:

The techniques of moulding have developed along several processes. The most common being:

1. Compression moulding
2. Extrusion moulding
3. Injection moulding
4. Blow moulding

COMPRESSION MOULDING:

It is the oldest process of the plastic industry. In a typical compression moulding operation a weighed load of the moulding compound is preheated to the moulding temperature, and then placed in a heated mould where it is compressed by the hydraulic press, and held under great pressure while the hardening reaction takes place. The moulding compound may be in the form of loose powder, compacted pills and compact shaped preforms. Equipment used in compression moulding consists of a vertical hydraulic press with platens for mould attachment. Three important thermosetting resins are used in the compression moulding process-phenolformaldehyde resins, urea formaldehyde resins, and melamine formaldehyde resins.

EXTRUSION MOULDING:

Approximately 30 percent of all resins are converted into products by extrusion. The resin is melted in the extruder and then pumped through a die. The die forms the melt into a shape closely related to that of the final product. The melt may be drawn to a thinner cross-section in an air gap. The melt is then cooled and its shape is maintained. The solid plastic enters a puller, which is characterised by a complementary shape to that of the plastic, it is the puller that draws melt from the die and through the cooling system. The final piece of equipment cut the product to length or winds it into a roller coil. Extrusion is a continuous process, and a product of the same cross-section is produced in infinite length. Typical products made by extrusion are film sheeting, pipe, tubing, profiles coated wire and coated paper.

INJECTION MOULDING:

It is a process by which a molten thermoplastic is injected under high pressure into a steel mould. After the plastic solidifies, the mould is opened and a part, the shape of the mould cavity is obtained. An

injection-moulding machine consists of two principal parts, i.e. an injection unit and a clamp unit. The injection unit melts the plastic, and injects it into the mould. The clamp unit opens and closes, and holds the mould closed against the pressure of the melt. Most injection units are extruders that are specially built for injection moulding machines. An injection-moulding machine is operated by hydraulic power, and machines are supplied with an electric motor and hydraulic pump.

BLOW MOULDING:

Blow moulding is the most common process for making hollow parts e.g. bottles. It is often done on a large scale with a single production line making only one product. In this process, a tube of hot, molten plastics is extruded into the blow mould, which clamps and seals of each end, but permits air to be blown into the sealed tube of molten plastics, where it is then expanded by this pressure to form a hollow shape. The process required that the resin be characterised by very consistent swell and sag melt properties. A viscous melt is needed to prevent sag.

Usually bottles are made in two steps. First a test tube shaped preform is moulded and then is reheated, stretched, and blown. Stretching produces orientation and, therefore, improve strength of the bottle.

OTHER METHODS:

Other methods of processing of plastics are jet moulding, slush moulding, powder moulding, rotational moulding, laminating, calendering, coating, foaming, embedding and potting, cementing, sealing and jointing, machinery and finishing.

REQUIREMENT FOR PUBLIC INFRASTRUCTURE, FISCAL AND OTHER PUBLIC POLICY SUPPORT.

Infrastructure facilities have developed over the years. Kenya's transport system is controlled by the Government. It includes rail, road and air facilities, limited inland waterway transport on Lake Victoria, a major seaport at Mombasa and an oil pipeline running from Mombasa to Eldoret. The fastest growing subsector is air transport. Kenya is served by many of the world's major airlines. Services between Nairobi, Kenya's capital city and European capitals are numerous but other services connect with Middle and Far East, North America and other parts of Africa. Kenya has two International Airports and four medium sized airports. Kenya's port, the Mombasa Kilindini port is well equipped and serves several landlocked neighbouring countries in the region. Telecommunications services are provided by the Kenya Posts and Telecommunications Corporation (KPTC). KPTC provides postal, telephone, telex, facsimile and external communication services. Electricity supply is provided by the Kenya power and Lighting Company (KPLC). The domestic electricity supply is 240 Volt, 50 hertz, AC with 415 volt single and three phase supply available for industrial use.

There are several Trade Associations covering the entire spectrum of companies, large or small, manufacturing or trading within the country.

These are namely:

1. Kenya Association of Manufacturers
 - A non-statutory body set to serve the interests of Kenyan manufacturing and service industries.
2. Kenya National Chamber of Commerce and Industry.
 - An organisation of Kenya's businessmen and women including commercial operators and industrialists who have agreed to come together so as to speak with one voice on matters that effect the commercial and industrial sector of Kenya.

Other associations also serving the plastics industry include:-

- 1) Federation of Kenya Employers
- 2) Kenya Bureau of Standards
- 3) Marketing Society of Kenya

Currently, there is no specialised institution in Kenya offering specialised training in technology of plastics processing. However, several institutions offer training courses in Engineering from the Technician level upto University level. These institutions are mainly Government institutions (polytechnic institutes and Universities).

Specialised technology of plastics processing is offered by individual companies in " On the job". However, a considerable number of Kenyans have been trained abroad in technology of plastics processing in various institutions scattered all over the world. Those already in the plastic industry have also been sent abroad for training by the individual companies or through scholarship awards from donor agencies through the Government.

POTENTIAL BENEFITS AND COSTS TO THE NATION

The subsector contributes a lot to the national economy by providing cheap, affordable products which are gradually replacing expensive metal, rubber, ceramic products etc especially in the building and construction industry and consumer household products.

TARGETS FOR THE INDUSTRY.

Quality and standards of manufactured goods in any country are of paramount importance and especially for those products which could adversely affect the health and safety of the consumers. Environmental requirements should be taken into consideration.

As stipulated in the Sessional Paper number two of 1997, the Kenya Bureau of Standards is expected to enforce Quality Assurance as well as standards development, testing and quality control in all the various industrial sectors.

As the Kenya industry aspires to enter the International and regional markets, they should consider adherence to the set standards and quality.

There is great need for the industry and the Kenya Bureau of Standards to work together in order to accelerate industrial development. Assurance of quality helps to curb the tendency of dumping sub standard products in the market and also protect the local industry from unfair competition from cheap, substandard imports.

POTENTIAL ADDITIONAL BENEFITS IN LINKAGE INDUSTRIES.

Kenya has a fair share of technological and human resources. In order to strengthen this resource base there is need to focus attention on the development of organisational and sub-contracting links and integration between large-scale and small-scale enterprises. The establishment of such links is a prerequisite for the nation-wide diffusion of technological skills. State institutional support for the development of such linkages needs to be provided. Industrial restructuring will be feasible only if substantial levels of new investments are made within the manufacturing sector.

ENVIRONMENTAL IMPACT AND MEASURES TO AMELIORATE ENVIRONMENTAL DAMAGE, SPATIAL IMPLICATIONS ETC.

The plastic industry in Kenya achieved a tremendous growth rate in the past seven year. This has been attributed to increase in use of plastic products du to their affordability to consumers as compared with other packaging materials.

With increasing plastic products manufacture plastic waste generation has been on the increase. Although a few firms recycle these plastics wastes evidence of plastic wastes within the municipal dumping sites by the roadside around the dwelling places in the urban estates etc signals that it is time to

sound the alarm for the populace to adopt plastics wastes management ethics. Most plastic are non-biodegradable. Their continued accumulation has raised a lot of concern to the environmentalists. As a result, it has been considered needful to educate the masses on the dangers posed by unmanaged plastic wastes. There is a project which aims at a countrywide education and awareness campaign on how best plastics waste can be managed, putting emphasis on reduce, re-use and recycle. The campaign will also draw the participation of the populace in a concerted effort to root out plastics waste menace from the living environment.

Towards this end, the department of industries intends to carry out nation wide workshops integrating the department's technical officers, Kenya Association of Manufacturers (KAM) as resource persons and plastics product consumers and plastics wastes collectors as participants.

Two types of workshops have been proposed to be able to address the various sections of the population. The project cost is estimated to be Kshs 10066045 or US\$ 183019 and funding is requested from COMMON WEALTH SECRETARIAT to realise the goals.

WORKSHOPS ON PLASTICS WASTE MANAGEMENT:

Two types of workshops have been proposed namely:

a). Plastics and environment

The target group for this kind of workshop includes resource teachers/persons in Nairobi, Mombasa, Kisumu, Nyeri, Embu, Meru, Machakos, Eldoret and Kakamega.

Participants will be drawn from schools, manufacturing firms (making and using plastics), general public who use plastic products, and NGO's and local administrators. The department will closely liaise with the respective organisations to provide participants. This kind of workshop is estimated to last two days in each provincial town.

b). Plastics recycling campaign in schools in twenty districts selected throughout the country.

The department intends to address environment conservation club as a way of using the students to pass on the information to their colleagues, parents and the general public.

As part of their normal inter-school exchange programme, environment conservation members from neighbouring schools will be invited to attend the seminar at selected schools, centrally placed in town for ease of accessibility by other students teams and resource persons. Such functions are proposed for weekends so that they do not interfere with the usual learning of the involved students. Schools will be required to provide fare for their students representatives. A maximum of two days will suffice for each of such seminars.

CURRENT STATUS AND CONSTRAINTS FACING THE INDUSTRY

PLASTIC PACKAGING: bags, containers, sheets, trays, crates.

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
ACME containers	Mombasa	Industrial packaging containers	700 tons					
AFRO plastics LTD	Industrial Area Nairobi	Plastic containers	318 tons		Skilled :150			
COSMO plastics LTD	Industrial area Nairobi	Polythene packaging	4250 tons		Skilled :200		local	
DENTEX industries (K) LTD	Industrial area Nairobi	Plastic containers	37tons					
EMCO plastic (INTER) LTD	Mombasa	Plastic containers						
FLEXIPACK industries LTD	Mombasa	Polyethylene bags, PP Woven sacks			Skilled:35			
FLORA plastic industries	Mombasa	Polypropylene tubing bags						
GENERAL plastics LTD	Industrial area Nairobi	Plastic packaging for food packaging	49310000 P CS		Skilled:500			
GORHANDS DHARMSHI & BROS.LTD	Limuru, Kiambu	Polythene sheets, polythene bags						
KENTAINERS	Nairobi	Blow injection, moulded plastic packages						
KENYA LAMINATE(1975)LTD	Industrial area Nairobi	Plastic laminate sheets						
MARSPACK LTD	Industrial area Nairobi	Plastic containers, plastic packaging materials						

MEPAL PLASTIC (K) LTD	Industrial area Nairobi	Polythene products, multicolour printed bags	159891kg					
MULTI-PRODUCTS LTD	Mombasa	Polythene, polypropylene bags						
NAVE PLASTICS LTD	Thika	Plastic sheeting's, polyethene bags						
NITIN INDUSTRIES	M Mombasa	Plastic containers						
OMEGA INVESTMENT LTD	Ruaraka, Nairobi	Polythene bags and sheets	355 million tons		Skilled:8, semi skilled:12		Local and Exports	
PACKAGING AFRICA LTD	Kikuyu, Kiambu	Polypropylene woven bags, Flat cloths	665 tons					
POLYCANS LTD	Mombasa	Plastic containers	21258300 PCs					
PREMIUM DR UMS LTD	Industrial area Nairobi	Plastic containers 0,5-25 litres	20304000 pcs	Blow moulding, injection moulding	Skilled:123, total155	140million per year	Local: Mombasa, Nairobi, Kisumu, Muhoroni	1.competition 2.duty on row materials 3.transport 4.power 5.water

AFROLITE Industries LTD	Nairobi	Plastic packaging	73966 pairs					
ALANKAR Industries LTD	Nairobi	Polythene bags						
BONAR (EA.)LTD	Nairobi	Bags, plastic containers	23000					
COMET PLASTICS	Nairobi	Polythene and polypropylene	414 tons					

LTD		bags						
COSMIC CRAYON Co.(EA.) LTD	Nairobi	Polythene bags						
ELITE Enterprises LTD	Mombasa	Polythene bags	345 million tons					
JAMSONS I industries LTD	Nairobi	Polythene bags						
KAPA OIL Refineries LTD	Nairobi	Plastic packaging	690 tons					
KEN Containers Mfrs	Nairobi	Plastic containers & Bottles	47000 tons					
KENLEATHE R Enterprise LTD	Nairobi	PVC bags, polythene sheeting, paper Board	7200 tube					
KING Plastic Industries LTD	Nairobi	Polythene bags and sheeting						
KISUMU Polythene LTD	Kisumu	Polythene bags						
MARS Mechanical Engs. LTD	Nairobi	Plastic packaging & Containers						
Nairobi Plastics LTD	Nairobi	Polythene bags						
NAS Plastics LTD	Nairobi	Plastic bags						
Packaging Industries LTD	Nairobi	Plastic packaging materials	1707 tons					
Packaging Manufacturers (1976) LTD	Mombasa	Polythene, polypropylene tubes, bags	132 million tons					

Plastic Electricon LTD	Nairobi	Containers	3647000 pcs					
Plastic Moulding LTD	Nairobi	Plastic cups and containers	50 tons					
Plastic Products (K) LTD	Nairobi	Plastic containers	140 tons					
Plasticraft LTD	Nakuru	Plastic containers						
Polythene Industries LTD	Nairobi	Plastic tubing, sheets, bags	648.8 tons					
Prestige Packaging LTD	Nairobi	Plastic containers. Bags						
Vishal Plastics Ltd	Eldoret	Polythene bags						
Wax & Polypack Ltd	Nairobi	Plastic Packaging items						
PYRAMID Packaging Ltd	Eldoret	Polyethelene products			Skilled:80			
SANPAC Ltd	Nairobi	Packaging plastics			Skilled:150			
TEE GEE ELECTRICS and plastics Co. Ltd	Tiriki, Vihiga	Polythene bags			Skilled:26			

WATER STORAGE PLASTIC TANKS

NAME	location	product	Capacity	Technology	Employment	investment	market	problems
Kentainers	Nairobi	Polythene Tanks, containers						
Roto Moulders Ltd	Nairobi	Water storage plastic tanks						
Solco Africa Ltd	Nairobi	Plastic storage tanks						
Van Leer	Mombasa	Plastic drums						

(E.A.) Ltd								
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INDUSTRIAL, AUTOMOBILE AND CIVIL CONSTRUCTIONS

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
ALLILE association	Ind. area	Plastic aerosols						
CABLES & PLASTICS LTD	Mombasa	Industrial plastic products	328 ton		Skilled:90			
ELSON PLASTICS (K) Ltd	Ind. area Nairobi	Pipes, conduits, pressure drains	3141.2 tons p.m., 100%		Skilled:170			
EZZI VINYL PRODUCTS Ltd	Ind. area Nairobi	P.V.C floor tiles, sheetings, skirtings contact adhesive avaplast		Skilled:6				
K. H. KARIMBAI	Nairobi	Neon plastic signs, road signs						
METAL BOX Co.(K) LTD	Ind. area Nairobi	Plastic pipes, plastic cans						
NITIN INDUSTRIES	Mombasa	Plastic industrial goods						
PLASTIC & RUBBER Ltd	Ind. area Nairobi	Industrial, Automobile & Civil construction, specialty			Skilled:70			

		moulded and extruded products, Re-rubberising of rollers & adhesives						
SANPAC Ltd	Nairobi	Industrial plastics			Skilled:150			
AZAD Automobile Trimmings Ltd	Nairobi	Floor carpeting						
BITUMEN Products Ltd	Mombasa	Roofing Felts, P.V.C pipes						
Carboworks Ltd	Nairobi	Roofing felt, Bitumen, Pipe Wraps and concrete Paving blocks						
DOWELL Enterprises Ltd	Nairobi	P.V.C & Contact Glues, Varnishes, Thinners						
DUNLOP Kenya Ltd	Nairobi	Vynlex Floor Tiles, Adhesives						
KENBRO Industries Ltd	Nairobi	P.V.C floor tiles, Aspheth, Adhesives, Paving blocks						
MAYSON Kenya Ltd	Eldoret	P.V.C water pipes						
MEGH CUSHION	Nairobi	Automotive seats &	7250 ton					

Ind. Ltd		Allied Trim products						
METRO Plastics Kenya Ltd	Nairobi	P.V.C pipes, fittings	1500 ton					
PELICAN Ltd	Nairobi	Neon signs, traffic, backlit, engraved signs						
POLYPIPES Ltd	Nairobi	P.V.C pipes & fittings	360 ton					
TELEC Limited	Nairobi	Signs						
PRESTIGE PACKAGING Ltd	Nairobi	Hose pipes						

HOUSEHOLD PLASTIC ITEMS

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
BRIGHT LIGHT Products Ltd	Kisumu	Plastic household items						
FOREMOST Foods Limited	Nairobi	Bottles, Caps & Bowls						
GENERAL Plastics Ltd	Nairobi	Plastic bottles & Jars	49310000 pcs					
KENPOLY Manufacturers Ltd	Nairobi	Plasticware, Bottles, Jars, Stoppers, Caps and	5000 kg					

		Vacuum Flasks						
Kenya Industrial Plastics	Nairobi	Cups, Saucers, Plates, Jugs, Trays, etc						
LUCKY Industries Ltd	Nairobi	Plastic ware plates, cups, bowls	5 ton					
PAN Plastics Limited	Nairobi	Plastic bottles, jars, caps and household items	630062 kg					
PLASTIC ELECTRICON Ltd	Nairobi	Bottles and jars, containers	3647000 pcs					
TEXTILE & PLASTIC Ind. Ltd	Mombasa	Household plastic wares, mirror, bottles, shoes						
YARENA EPZ Ltd	Kitengela	Household plastic ware						

PLASTIC FURNITURE

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
COMPLAST Industries Ltd	Nairobi	Plastic furniture and other products						
HENKEL FIBREGLASS (E.A.)	Nairobi	Furniture						

MIMOSA DESIGN Ltd	Nairobi	Plastic furniture						
RAMBOO COLOURCANE Ltd	Nairobi	Chairs, tables, sofas, loungers made from P.V.C	2550 pcs					
REST ASSURED	Nairobi	Plastic pails, chairs, crates						

FOAM MATTRESSES, PILLOW AND CUSHIONS

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
BOBMIL Industries	Nairobi	Polyurethane, foam blocks	2400 m. ton					
FOAM MATTRESS Ltd	Kisumu	Foam Mattresses, plastic products						
KARADOL Industries Ltd	Nairobi	Polythene Foam blocks	53775 kg					
MOHABAB EPZ Ltd	Kitengela	Foam mattresses, pillow, cushions						
SUPA FOAM Ltd	Nairobi	Foam, plastics						
VITAFOAM Products Ltd	Nairobi	Foam mattresses, pillows, cushions and sheets	365555 kg					

RECYCLED PLASTIC MATERIALS

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
PLASPACK Company	Mombasa	Regrind & Pelletised Polythene material	1800000 pair					
RAINBOW Plastic Ind. Ltd	Nairobi	Recycled Plastic Granules	360 ton					
SKYPLAST Manufacturers Ltd	Nairobi	Recycled plastic granules						

FOOTWEAR, BUTTONS, TOOTHBRUSHES, CASSETTE TAPES, ROPES, SUITCASES, BRIEFCASES

NAME	LOCATION	PRODUCT	CAPACITY	TECHNOLOGY	EMPLOYMENT	INVESTMENT	MARKET	PROBLEMS
BATA SHOE Co. (K) Ltd	Limuru	P.V.C shoes						
BUDGET SHOES Ltd	Nairobi	Footwear	702000 pair					
ELITE ENTERPRISES Ltd	Mombasa	P.V.C shoes	345 m. ton					
GENERAL PLASTICS Ltd	Nairobi	Plastic shoes	49310000 pcs					
KENAFRIC SHOE Ind. Ltd	Nairobi	P.V.C shoes and soles	330 ton					

KENYA SUITCASE Manufacturers Ltd	Mombasa	Footwear, plastic shoes	20315475 Kshs					
TEXTILE & PLASTIC Ind. Ltd	Mombasa	Plastic shoes						
TWENTIES Manufacturers Ltd	Mombasa	Footwear	100000 kg					
UNITED FOOTWEAR Ltd	Kiambu	Leather and plastic footwear	218000 pair					
PLASTIC CRATES Kenya Ltd	Nairobi	Rubber sandals	150 ton					
WONDER SHOE Ind. Ltd	Nairobi	P.V.C sandals	539621 pair					
CHUI Manufacturers Ltd	Nairobi	Buttons	110000 gross					
STAREX FASTENER Manufacturers	Nairobi	Polyester & UREA Buttons	11.2 ton					
DENTEX Industries Ltd	Nairobi	Toothbrushes	37 ton					
SINDICATE Industries Ltd	Nairobi	Toothbrushes	13000000 pcs					
THORN TREE Products Ltd	Nairobi	Toothbrushes						

KENYA FLEXO Ltd	Nakuru	Tapes						
KENAPEN Industries Ltd	Nairobi	Audio cassettes						
SYNDICATE Industries Ltd	Nairobi	Cassettes	13000000 pcs					
BRUSH Manufacturers Ltd	Nairobi	Polythene ropes						
KAMBA Manufacturing (1986) Ltd	Nairobi	Polysynthetic and Manila ropes & twine	290 ton					
EMBASSY Industries Ltd	Nairobi	Plastic and leather suitcases and briefcases	163500 pcs					
CABLES, FABRICS, PENS, TOYS, FISHING FLIES, SYRINGES								
AMELIA Industries	Kisumu	P.V.C Insulated cables						
KENNY CABLES Ltd	Kisumu	P.V.C Insulated, sheathed copper, electric cables						
POLYSACK Ltd	Thika	P.P fabrics						
SERACOATINGS EAST AFRICA Ltd	Nairobi	P.V.C coated fabric and sheeting	682962 mts					
HACO Industries (K)	Nairobi	Ball point pens, rulers	44036 doz.					

Ltd								
KENAPEN Industries Ltd	Nairobi	Ball point pens						
LAMA EPZ Ltd	Kitengela	Plastic toys						
FISHING PRIORITIES	Kikuyu	Fishing flies (plastic)						
SYNDICATE Industries Ltd	Nairobi	Disposable syringes	13000000 pcs					