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INDUSTRIAL DEVELOPMENT REVIEW OF ERITREA

THE INDUSTRIAL BRANCH PROFILES

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for

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CHAPTER III.

INDUSTRIAL PROFILE OF ERITREA

III. A FOOD PROCESSING AND RELATED AGRO-INDUSTRIES

Food

The resource base

Agriculture is the mainstay of the economy with the majority of the population depending on it for their livelihood. This sector contributes approximately 40-50 percent of the GDP and about 70 percent of the export earning in the country. Production is predominantly of the subsistence nature. Of the total area of 12.432 million hectares about 3.2 million hectares or (26%) is suitable for agriculture, but only 10% of this is under cultivation¹. Eritrea has favorable climate suitable for growing a variety of cereals, pulses, oilseeds, fruits, vegetables, tobacco and cotton etc...

Fishing is the other major potential of the economy as Eritrea is endowed with abundant fish and marine resources including shrimp and lobster beds, fish of every variety, tuna, mackerel, snapper, barracuda, grouper, anchovy, sardine, shark of every type etc. Eritrea has over 1,000 km costal line of the Red Sea and a continental shelf shores covering over 52,000 sq.km within the Eritrean exclusive economic zone²; with pristine water capable of producing 66,000 tons of fish and sea food annually. The Eritrean Red Sea water consists of around 1,000 known species of fish and 220 species of coral³.

Although Eritrea at present, is not self-sufficient in food production and has partially been depending on imported food, agriculture and fishing together are believed to have significant contribution not only to revive the economy but also to generate substantial profit to potential investors.

¹ Ministry of Agriculture, Agricultural Development Potentials and Constraints, September 1993, Asmara, Eritrea P.4.

² Ministry of Marine Resources, Small Scale Investment Opportunities, Asmara, November 1994, page 3.

³ Ministry of Trade and Industry, A study Report on Marine Resources, submitted to National Business Conference and Exhibition of 12-14 December 1995, Asmara, Page 12.

1. Cereals

Recent Trends

The major traditional staple foods in Eritrea are sorghum, millet, wheat, barley, maize and taff. The current estimated crop production of cereals and is estimated at 122 thousand tons compared to the total notional annual food requirement of 579 thousand tons⁴. To improve food production, the government has recently been shifting towards improved irrigated agriculture by encouraging the private sector to play as a lead actor.

Table III.A-1: Food Crop production of Cereals, (1992-1994)⁵.
(Thousands Tons)

Type of cereal	1992	1993	1994	1995
Taff	15.60	2.22	14.85	5.76
Barley	29.89	9.73	29.42	27.95
Wheat	8.60	5.40	14.99	9.56
Maize	17.15	5.54	19.86	5.35
Sorghum	132.84	4.86	120.44	61.01
Pearl Millet	31.30	4.38	42.48	9.33
Finger Millet	16.10	14.72	16.47	3.45
Total	251.30	86.85	253.41	122.41

The food produced in the last four years covered food starch requirements ranging from 3-6 months and the balance is imported. The imports of food items has increased from birr 112.88 million in 1992 to birr 469.57 million in 1994. Most of the cereals are imported from Ethiopia and the Sudan, except wheat and wheat flour which is often imported from the western countries. The annual value of export as percentage of imports has been growing from 6% in 1992 to 40% in 1995 mainly due to exports of live sheep and goats, sesame oil seeds and legumes.

As a packages of the Agricultural Recovery and Rehabilitation Program for Eritrea, the IDA earmarked US\$ 5.41 million for procurement of farm machinery, vehicles, office equipment and supplies. Italy committed US\$ 5.01 million for the procurement of agricultural inputs like fertilizer, vegetables and forage seeds and pesticides EEC has earmarked US\$ 4.34 million for procuring construction equipment and seeds. The Netherlands has allocated US\$ 1.43 million for the procurement of agricultural inputs (US\$ 1.23

⁴ Ministry of Agriculture, Preliminary crop Assessment Summary 1995.

⁵ Ministry of Agriculture, Crop Production 1992-1994, Revised Version May 1995, Asmara, Eritrea.

million), training and technical assistance (US\$ 0.20)⁶

Constraints and Prospects

The major constraints in starch staple food production are rainfall uncertainty, pests outbreak and traditional farming.

Small scale irrigations are mushrooming at an increasing rate as the government boosts irrigated agriculture through water harvesting. Since independence, the government has been providing farmers tractor hiring services and draught animals, motor pumps, farm tools, fertilizers and seed to promote food production.

2 Pulses

Recent Trends

The highlands of Eritrea also grow pulses which serve as a domestic complimentary food sources. The following data pertain to production trends of pulses in the last four years.

Table III A-2: Production of Pulses, 1992-1995
(Thousand Tons)

Year	1992	1993	1994	1995
Horse bean	2.6	0.61	2.02	1.07
Chick Pea	2.3	0.4	1.14	2.74
Field Pea	1.1	0.52	0.97	0.71
Total	6.00	1.53	4.13	4.52

Source: Ministry of Agriculture, a) Crop Production Assessment, Asmara 1992-1994, Revised Version May 1995, b) Preliminary Crop Assessment Summary of 1995, Asmara, 1995.

Constraints & Prospects

The traditional method of farming and unreliable rainfall contribute to low yield of pulses.

Employment of modern agricultural techniques and inputs will increase the yield of pulses.

⁶ Program Management Unit (PMU), Recovery and Rehabilitation Program For Eritrea. Fourth Quarterly Progress Report, May - September 1994, Asmara, Eritrea. pp.32-34.

3 Oil Seeds

Recent Trends

Most part of the western lowlands of Eritrea are suitable for growing oil seeds. Particularly, sesame has high demand for export and domestic markets. The following indicates the production of oil seeds in recent years.

Table III A-3: Production of Oil Seeds 1992 - 1994
(Thousand Tons)

Year	1992	1993	1994	1995
Linseed	0.70	0.35	0.67	0.53
Nihug	-	-	0.40	0.02
Ground nut	0.40	3.36	1.51	0.27
Sesame	4.00	5.96	6.22	10.88
Total	5.10	9.67	8.80	11.70

Source: Ministry of Agriculture, a) Crop Production Assessment, Asmara 1992 - 1994, Revised Version May 1995, b) Preliminary Crop Assessment Summary, Asmara, 1995.

Constraints & Prospects

Despite the land is suitable for growing sesame, groundnut and other oil seeds, the cultivated area is very limited owing to lack or shortage of agricultural inputs. As the result, the domestic oil pressing factories are in severe shortage of oil seed raw materials.

Sesame production in particular will be one of the leading oil seeds with high potential for export in the future.

4. Fruits and Vegetables Processing

Recent Trends

Most farmers grow vegetables at a household level and to a small scale. Despite the fertile soil and favorable agro-climatic zones in the country, the private sector has not yet come up with substantial production of fruits and vegetables to the market. Some farmers have recently started to grow fruits in the western and eastern lowlands. On the other hand, Elabered, Ghindae & Mai-Aini Estate Farms as government owned agricultural enterprises currently grow citrus fruits and vegetables.

Table III.A-4: Production of citrus fruits & vegetables by State farms of Elabered, Ghindae and MaiAini 1991-1995. (Tons)

Year	1991	1992	1993	1994	1995
Orange	432	3033	3858	3528	3549
Lemon	150	1350	1150	937	537
Mandarin	127	340	429	396	272
Grape fruit	210	836	755	530	350
Grape vine	-	-	12	10	22
Papaya	1	1	34	638	655
Mango	-	355	317	470	417
Banana	-	-	1	25	17
Tomato	-	561	614	500	633
Tomato paste	533	570	486	586	1000
Green pepper	-	5	18	32	16
Total	1453	7051	7674	7652	7468

Source : Ministry of Agriculture, Department of Commercial Agriculture, Asmara 1995.

The government allocated additional investment worth of birr 9 million to rehabilitate the Elabered farm. The government's policy is to privatize the estate farms and in essence, interested parties have already been invited to buy these farms.

Constraints & Prospects:

Investment in irrigated agriculture is relatively low and infrastructures pertaining to marketing have not been yet developed.

In the future it is expected that the private sector will find irrigated agriculture attractive and commercially viable.

5 Tobacco

Recent Trends

Private farmers in the vicinity of Toccombia and Gash river are encouraged by the government to plant tobacco through irrigation during the dry season; and to use the same area to grow sorghum or sesame using rain-fed agriculture in summer. There is also a state owned virginia type tobacco plantation where the tying and curing sections are installed, which supplies the private farmers tobacco seedling.

There is one factory that process tobacco leaves in the country with a total production of 250 tons comprising of 210 tons for smoking cigarettes and the remaining 40 tons being for chewing cigarette. The country imports substantial tobacco raw materials for the State owned factory since this tobacco plantation only satisfies about 5%-10% of the raw material demands of the factory.

Since 1992 the government has invested on the farm so that it will supply about 140 tons of tobacco leaves in the coming 5 years. By the end of 1997, it is anticipated that the current domestic market of 60% will be raised to 100% as the result of this new plantation. Moreover, it is also hoped that exports of tobacco products will start within the coming 5 years.

Constraints and Prospects:

Tobacco plantation is stipulated to be a major source of cash income to the farmers and a source of foreign exchange to the nation. There is an extensive area on the river banks that can be developed in the future.

8. Fishing

Recent Trends:

In 1950-60s, fish production, mainly for export, was over 25,000 tons per year, but this decreased to 21,000 tons in 1966 and further dropped to 14,000 tons in 1967 mainly due to the closure of Suez Canal. The intensification of the armed struggle provoked a further decline to 4,000 tons in 1972 and collapsed to only 328 tons in 1980. Current production is close to 1,000 tons per year¹.

Many foreign companies have shown interest in investing to exploit the living marine resources and since 1994, ten companies signed agreements to commence operation by investing little over 20 million US dollars².

Constraints & Prospects:

The absence of infrastructure facilities is the bottle neck and investment in fishing industry and other marine resources compared to the potential of the Red Sea is at its lowest ebb. Eritrea is endowed with extensive resources of fish and other marine resources for export markets.

¹ Ministry of Marine Resources, *ibid*, Page 3.

² *Ibid*, Page 13.

III.B TEXTILES & CLOTHING

1 Cotton

Resource Base:

The western lowlands and the south eastern lowlands of Eritrea are suitable for cotton plantation. The potential for cotton plantation is particularly suitable along the Gash river although a very limited area has been developed. Alighider Estate Farm is the only large scale irrigation scheme in the country that exploits the river Gash since 1928. Alighider farm was a 16,000 hectare concession located on the left bank of the Gash and developed by S.I.A pvt. Ltd. Co. Of this area, 8268 hectares were equipped for irrigation and over 5000 ha. have been yearly devoted for cotton plantation. Near the farm, there is a 10 million meter cube capacity reservoir for additional irrigation.

Recent trends

The plantation is producing long staple Acala type cotton, from which 35% lint cotton, 58% seed and 7% trash is extracted. Currently, the three textile industries are able to get a supply of cotton sufficient for seven months from limited state and small scale private owned cotton plantations that are existing. The raw cotton is ginned in one of the textile factories, the lint cotton is sold to the three textiles factories and the cotton seed is sold to one edible oil factory.

During the war it has not been possible to grow cotton on commercial basis but since 1993 the area for cotton cultivation has been increasing. In 1994, 31% of the annual demand of textile industries was satisfied and in 1995 about 65% of the annual demand for cotton of the textile industries is satisfied at full capacity in three shifts.

Table III.B-1: Cotton Production in Aligheder, 1993-1995

Year	1993	1994	1995
Area (Ha)	406	2441	3854
Raw Cotton (Tons)	460	4300	6937

Source: Ministry of Agriculture, Aligidir Agricultural Development Project, Asmara 1995.

There are three public factories that produce cotton yarn and fabrics, and acrylic-yarn fabrics. The total demand of cotton by these textile factories is about 4830 tons of lint cotton per year. While these three factories together are getting raw cotton sufficient for seven months from the domestic sources at present, the balance is being imported mainly from Ethiopia. It is estimated

that the total demand of the existing textile industries in the country will be satisfied in 1997 and export of cotton is projected thereafter. In addition, the expansion of cotton plantation will also supply the cotton seed requirements of the oil pressing industries that are currently importing.

Since April 1993, Substantial amount of machinery, equipment and manpower have been allocated to make it commercially viable. The Short term plan of Aligider project is to cultivate 5000 hectares of cotton to accommodate textile demand of cotton and to install jinnery, store seed delineating and briquette plant in the short run; and is to build a dam to supply a continuous flow of irrigation water to Aligider project in the long term so that it can be able to cultivate 12,000 ha of cotton, fruits and vegetables, for export.

Constraints & Prospects

The cotton plantation requires huge initial capital outlay for the acquisition of heavy duty machinery including bulldozers, graders and excavators etc... But, the pay back period is rather shorter and the revenue offsets the incurred costs since cotton commands higher prices in the international market. The private sector particularly the demobilized fighter have started cotton plantation in cooperative and private company forms and the government strongly supports the mushrooming private ventures in the cotton plantation.

2. Doum-Fibre

Resource Base

Natural doum-palm trees as sources for jute for the existing fibre industry as well as dough nut for potential button industries also grow in Barka, Gash Setit and Denkel provinces extensively. However, the fibre processing from Doum palm trees is currently confined to the vicinity of Agordat-an administrative capital of Barka province. There are suitable areas on the eastern escarpments in which sisal production had been tested in the past and that can be rehabilitated and expanded in the future.

Recent trends

There is one public owned factory that produces sacks from jute and fibers. Until recently, the sack and fibre factory used to import from Bangladesh 3965 metric tons of jute, knif, coating and patching materials annually at an average cost of birr 17.3 million.

An investment of birr 10.6 million has been made after liberation to rehabilitate the doum-fibre project in the town of Agordat which had been closed for decades.

Since the first quarter of 1995, the doum-fibre project has started production and is substituting approximately 20% of the jute imports (about 278 metric tons) of the Sack and fibre factory.

Constraints and Prospects:

The doum-fibre processing and sisal production require initially substantial investment. There is extensive coverage of doum-palm trees and there abundant land that can be provided for investors on concession basis for growing sisal.

3. Garments

Resource Base

According to the 1994-94 statistics of the Ministry of Finance and development, the textiles and clothing industry annually import and export crude and manufactured items worth of birr 132 million and birr 37 million. While consolidated information is not available regarding the private sector's annual turnover, the public enterprises alone generate about Birr 53 million of sales annually. The garment factories totally depend on imported raw materials.

Recent trends

There are one public and eighty-nine private small scale in the clothing industry. Out of the ninety factories, seventy-five are engaged in the processing of sweaters from acrylic and wool yarns and the remaining 15 are engaged in the production of ready made garments.

The total investment is birr 17 million, consisting of birr 5 million in the public and birr 12 million in the private sectors.

Constraints and Prospects

The strategic location of Eritrea permits it to be a center of services and facilities and new investment in garment industries can produce to meet the substantial demand for uniforms locally and to promote export to the neighboring countries.

III.C LEATHER & FOOTWEAR

Leather

Resource base

Eritrea is one of the countries in the Horn of Africa endowed with a large number of livestock. Although as the result of the war and drought, the livestock population was severely been reduced from the mid of the 1970s to early 1990s, the present peace and stability has enabled the these animals to revive both in number and quality. The table below indicates the potential source for leather processing and foot wear.

Table III. C: Estimated Number of Ruminants & Cattle.
(Thousands)

Year	Goats/Sheep	Cattle
1928	1,897	749
1938	1,491	591
1946	2,200	1,200
1965	3,200	1,300
1973	5,000	2,500
1987	3,001	970
1990	2,538	942
1991	1,738	538
1992	4,950	1,300

Source: IFAD, Eastern Lowlands, Wadi Rehabilitation Project Report February, 1994, Annex 1 page 52.

After independence, the livestock number has started to increase, hence, at present the supply of hides and skins to the leather and footwear industries is growing. The tannery and pickling industries mainly depend on domestic hides and skins as their raw materials,

Recent Trends

There are seven (two public and five private) factories which are engaged in tannery and pickling process. At full capacity, the tanneries import about 588 tons of hides and skins from Ethiopia and the Sudan in addition to domestic supply annually. Besides, the tanneries and foot wear factories require about 4323 tons of imported chemicals per year.

Table III.C-2 **Production of Hides & Skins (thousand units)**

Year	Hides	Sheep Skins	Goat Skins
1984	70	122	182
1985	78	160	178
1986	60	119	228
1987	62	118	195
1988	52	156	240
1989	56	190	249
1990	49	186	220
1991	-	-	-
1992	54	131	182
1993	54	165	234

Source: Ministry of Agriculture

The exports pertaining to hides and skins for selected years are indicated in the table below.

Table III.C-3 **Export of Hides & Skins, 1994-1992
(Thousand units)**

Year	Raw			Processed			Total
	Hides	Sheep Skins	Goat Skins	Hides	Sheep Skins	Goat Skins	
1984	52	166	161	5	120	166	670
1985	37	126	226	22	186	258	855
1986	-	70	414	28	300	417	1229
1987	-	-	-	18	240	348	606
1988	-	-	-	-	586	486	1072
1989	-	-	-	15	216	240	471
1990	-	-	-	9	237	354	600
1991	-	-	-	-	-	-	-
1992	20	12	15	324	49	72	330
1993	21	-	-	37	261	210	529

Source: Ministry of Agriculture, Annual Reports of 1984-1993.

The total investment in this leather and footwear industrial sub sector is birr 69 million of which birr 53 million in the public and birr 16 million in the private sector.

Constraints & Prospects:

Inadequacy of veterinary services and traditional skinning and skin handling increase the size of defective raw hides and skins supplies to the industry.

Livestock raising is predominant in Eritrea and the value of livestock to the farmers is relatively higher compared to the food crop production. The phenomenon encourages livestock breeders and leather and foot wear, meat processing and soap manufacturing industries will have abundant supply for domestic use and for export.

2 Foot Wear and other leather products

Resource Base

The footwear processing industries depend on the domestic supplies of processed leather. Leather shoes, Leather jackets, belts, leather bags, etc are produced locally. While Some of the shoes and leather jackets are exported the other products are being produced mainly for domestic use.

Recent Trends

There are 28 (three public and twenty-five private) foot wear processing factories in the country of which five are government owned and thirty are private small scale industries which are engaged in the manufacturing of foot wear and various leather products.

Constraints and Prospects

The machinery that process foot wear and other leather products are outdated. Additional investment in this sub sector will increase competitiveness in the quality of products and thereby exports can be promoted.

III.D WOOD & WOOD PRODUCTS

The resource base

The intensive utilization of wood for construction and fuel for decades coupled with the recurrent drought, the country is left only with 0.4% forest area. As a result of this Eritrea has only furniture producing factories which depend on imported intermediate wooden raw materials which includes mainly play wood, chip wood, formica and faizit wood.

Recent trends

There are three public owned and eighty private small scale furniture manufacturing enterprises employing about 207 people. It is estimated that this sub sector imports semi processed wood worth of birr 22 million and exports manufactured wood worth of birr 3 million annually (see Tables III.D-1 and III.D-2).

The total investment made in this sub sector is about birr 14.7 million.

Constraints & Prospects

Though, there is high demand for wood in the country there is a severe shortage of domestic supply to the manufacturing and construction industries. The only prospective is that the government has launched both public and private afforestation program which includes enclosures and indigenous as well as exotic tree plantation.

III.E OIL REFINERY

Resource base:

Crude oil for refining is purchased and imported by Ethiopia in accordance with the bilateral agreements made between Eritrea and Ethiopia. From the imported crude oil, different products including liquid petroleum gas (LAG), regular benzine, Jet A-1 kerosene, gas-oil, furnace oil and bitumen are extracted.

Additionally, Eritrea also imports fuel minerals lubricants and related materials (see annex 3). Some companies have started searching oil deposits along the Red sea coasts. The Ministry of Mines, Energy and Water Resources, has given permission to an American oil exploring company to search oil along the Red-Sea Coasts.

Recent trends

There is one State owned crude oil refining industry in Eritrea which is located at the port of Assab. This factory was established in 1967. The total annual production capacity of the refinery at present is 800,000 tons. It generates 866.6 million liters and the sales value is estimated at birr 1005.8 million. Out of these products about 8% is consumed domestically, 80% consumed by Ethiopia and the remaining 12% is exported to other countries.

Table III.E-1: Production of Assab Oil Refinery (1991-1995)
(Thousand Tons)

Year	1991	1992	1993	1994	1995
Production	600	700	740	740	800

After the rehabilitation of the refinery production has reached gradually to 800,000 tons. The variety and share of the outputs are classified into the following proportions:

Table III.E-2: Crude Oil Processing By Assab Refinery and Products

Type of output	(Tons)	Percent(%)
1. Liquid petroleum gas	6080	1
2. Regular benzin	121040	15
3. Jet-A 1-kerosene	67760	8
4. Gas oil	193600	24
5. Furnace oil	328560	41
7. Bitumen	22240	3
8. Refinery loss	60720	8
Total	800000	100%

Source: Ministry of Mines, Energy & Water, Asmara, 1995

The initial investment made in the industry was about 125.7 million of which about one third of it is depreciated and since 1991, a total of birr 3.5 million additional investment has been made on the refinery.

Constraints & Prospects :

The entire machinery for the refinery was made by and imported from the Soviet Union. The current constraint of the refinery is shortage of spare parts and lack of technical Experts. In the near future, the capacity will be raised to 1.1 million tons and thereby the eight main types of oil products will proportionally increase. Eritrea is believed to have natural gas and oil deposits along the Red Sea coasts where companies have already started searching.

III.F CHEMICALS

1. SALT

The resource base

Eritrea has about 1100 km coastal line along the Red Sea. The high salinity of the Red Sea and large flat area close to the sea with high temperature to accelerate evaporation puts Eritrea as one of the large salt producers of the world.

Recent Trends

In 1907 the Italians established a salt works industry for the first time at Massawa followed by another salt work establishment at Assab. Technologically, Eritrean Salt Works are equipped with old and outdated equipment. However, the government is rehabilitating and expanding the Eritrean Salt Works with the objective of bringing them to their original production capacity and at the same time refining the output to promote exports.

Besides, to control iodine deficiency disorder and to participate in the global effort on going program of eliminating iodine deficiency disorder by the year 2000, the government of Eritrea in cooperation with UNICEF has implemented the salt iodination program.

At present, the two salt work factories in the two Eritrean ports of Assab and Massawa are operating below their potential capacities. The existing capacity is planned to expand to 400 thousand tons as there are abundant space and raw materials.

Production has increased from 43 thousand to 755 thousand tons during the last five years. Of the total production in the five years, 657 thousand tons of salt was exported and sold for birr 307 million.

Table III.F-1: Salt Production At Massawa & Assab Ports, 1991-1995.

Year	Production in '000 tons	Export		Additional investment
		Tons '000	Mill. birr	Mill. birr
1991	42.63	35.73	20.39	0.01
1992	115.06	95.27	50.88	5.69
1993	135.57	129.38	63.42	5.55
1994	157.03	122.10	55.82	2.43
1995	305.12	274.34	116.68	4.14
Total	755.41	656.82	307.19	17.82

Source: Ministry of Trade and Industry, Asmara, 1995.

The total initial balance of investment made on the two salt works was birr 19 million of which about 90% was depreciated. During the last five years about 18 million additional investment has been made to rehabilitate the two factories.

Constraints and Prospects:

The major constraint is market limitation as the freight charges are exorbitant.

The expansion will significantly increase the foreign exchange of the country as more than 90% of the salt product is exportable.

III.G NON-METALLIC MINERALS

The strongest economic potential for the Eritrean industries lies in the fact that Eritrea is rich in various non-metallic mineral resources, including granite, marble, slate, limestone, potash, sulphur, gypsum, silica sand, feldspar, mica and asbestos. Silica sand, and marble are available abundantly for the glass industry.

1. Cement

Resource Base

At present, the cement products are highly demanded by the domestic needs of national reconstruction of housing and basic infrastructures. The major raw materials of the cement plant are available on the Red Sea coasts in abundance; while paper bags and chemicals are imported.

Recent Trends

There is one cement factory in Eritrea located in the Red Sea coast at Massawa port. The factory at present has an annual production capacity of 500 thousand tons of cement. Eritrea is now in the process of national reconstruction practically in every aspect of infrastructure, including roads, bridges, shelter etc and hence the domestic supply of cement is far below the enormous demand.

Constraints & Prospects

The cement industry needs large scale investment which the country can not afford and requires foreign loan and investment for the acquisition of machinery and technology. Since there is abundant raw material available within the country, the costs can be traded off and investment in this sector is hence rewarding. The cement plant will have a positive forward linkage to the national reconstruction and rehabilitation of Eritrea in the short run and will generate a substantial foreign exchanges in the long run.

2. Glass

Resource Base

As indicated earlier, silica, as the chief raw material component, is one of the highest qualities by world standards extensively available in range of mountains in the southern parts of Eritrea. More than 84% of the value of the raw materials for the glass industry are from the local mineral resources.

Recent trends

There is one glass factory in Eritrea which produces bottles and glass cups for the domestic market and for export mainly to Ethiopia. The following data reveal the production of three years.

Table :III.G-1 Production of glass 1992-1995
(Tons)

Year	Production
1992	6510
1993	60684
1994	49851

Source: Ministry of Trade and Industry, Asmara, 1995.

The factory's machinery is depreciated fully and is outdated that at present it has completely stopped production and is being dismantled. Instead, a pre-feasibility study to expand the glass industry is underway that paves the way to potential investors. It is stipulated in the preliminary study that the said project will have a production capacity of 70 tons per day. The estimated initial investment cost in this project is about birr 317 million.

Constraints and Prospects

The glass industry requires heavy investment. The major advantage in investing in such an industry is that almost the entire raw materials are locally available and therefore, will significantly substitute imports and promote exports, especially, to the neighboring Middle East and African countries.

III.H METALLURGY

Resource Base

Major metallic elements such as iron, gold, silver, copper, zinc, lead, nickel and chromium etc have been identified as potential deposits.

Substantial amounts of gold exists in the central high lands including Medrizien, Adishimagle, Hara Hot, Adinefas, Dibarwa, Adirasi; in the Gash-setit area including Augaro, Damishoba, Antore, Sosena and Shelalo; and in southern Seraye. The average head grade in the most of the mine sites was found to be as high as 25-45 grams per ton with reasonably good percentages of recovery after milling. Silver occurs in small quantities associated with the auriferous ore of Okere, Biscia and Chenaudi. Silver is also found in association with other metals in Dibarwa and Adi-Nefas. Base Metals mainly copper, zinc, and lead sulphide have been known to be found in Asmara region. Nickel, Chromium, Asbestos deposits (with nickel contents of up to 4%) occur in northern Eritrea bordering Sudan⁹.

1. Iron & Steel

Resource base

Economic iron ore deposits occur in the areas of Agemeda, Sabur, Gadem Mountains, Wekiro area, Hamasien Plateau laterites and Mt.Tullilui. The iron ores range from sync genetic to manganic ferrous iron ore; residual deposits to heavy mineral ore concentrates associated with beach sand¹⁰.

This metal has not yet been exploited for commercial purposes. With the exception of some local scrap metals required by the foundries, the entire raw material requirements of the steel industry are imported.

Recent Trends

The iron and steel industry in Eritrea is engaged in steel processing, household and office furniture production, and bus assembling.

⁹ Ministry of Trade and Industry, Study Report on Mineral Resources, National Business Conference and Exhibition, ibid P. 15.

¹⁰ Ibid.

There are two major steel plants within this metal industry one engaged in metal works with products of nails, bed springs, galvanized wire and another metal work with rolling mill, and electric-arc furnace project which produce reinforcement bars, wire rod and billets from domestically available scrap metals. One of these steel factories is a bus assembling factory which is capable of assembling an average of 10 buses annually for the domestic and Ethiopian markets.

A new electric- arc furnace expansion project of the steel factory is under installation.

Constraints & Prospects

Huge investment requirement to modernize the steel industrial technology and prices of imported iron and steel has been increasing. Exploitation of iron deposits and installation of modern machines to melt local scrap of iron and steel which will enhance production for domestic use as well as for export.

2. Non - ferrous metals

Resource base

Geologists confirm that the eastern lowlands, the western lowlands and the central highlands are also endowed with non-ferrous metallic minerals. These minerals have neither been exploited nor been made commercially viable. At present, almost all non-ferrous metals are major importers of raw materials and there is small export of aluminum products.

Aluminum

Recent Trends

During the Italian colonization period some gold mining areas have been identified and quarrying activities were carried out at Adinifas, Augaro and other areas. In the early 70s, a copper mining industry was operating at Debarwa (30 ks south of Asmara) by a Japanese Nippon Co. As the result of the war, this industry was compelled to close its business in 1974 and since then the copper deposit site has been idle.

There are four public industries engaged in processing non-ferrous metals products. While three of them are producing household utensils made of aluminum, one industry produces corrugated galvanized sheet of zinc. The three factories annually import about 1096 tons of aluminum and 160 tons of tin plate sheet, while the corrugated galvanized sheet producing factory imports about 374 tons of zinc ingot and sheets. The three aluminum factories produce mainly enamel, aluminum and tin plates, and various types of household utensils for export.

Table III.H-1: Exports of Aluminum Products, 1991-1994.
(Million Birr)

Item/Year	1991	1992	1993	1994
Enamel	0.60	1.80	3.70	3.90
Aluminum	0.03	0.20	1.30	0.90
Tin plates	0.08	0.06	0.60	0.60
Other utensils	0.60	1.00	1.40	1.80
Total	1.31	3.06	7.00	7.20

Source: Ministry of Trade and Industry, Asmara, 1995.

The government is conducting feasibility studies and has issued licenses to local and international companies which are currently engaged in searching for non-ferrous metals.

Constraints & Prospects

Machineries and technologies are very outdated. There is high demand for the aluminum products both locally and internationally.

III.J MACHINERY and TRANSPORT EQUIPMENT

Resource Base:

This sub sector is practically non existent and the entire machinery and transport equipment are imported.

Recent Trends

In the last four years the amounts of imports and exports concerning machinery and transport equipment indicated that of the total imports only 1% is exported while 99% of the trade balance is a deficit as exhibited in Table III.K-1 below. The average value of imported machinery and transport equipment of 1994-1995 was worth of Birr one billion

The imports value increased from birr 367 million in 1992 to birr 1,993 million in 1994. This is an increase by 5.43 times. Exports increased from birr 46 million in 1992 to birr 397 million in 1994 by 8.63 times. Since 1993 exports are 20% of imports in general.

ANNEXES OF STATISTICAL TABLES

A-1: Exports of Food Products, 1994 & 1995
(Thousands Birr)

1. Food & Live Animals	1994 3rd Quart	1994 4th Quart	1995 1st Quarter
Bovines, sheep and goats	3,234	9,510	6,707
Meat & Swine	14	15	13
Animal butter	1	5	10
Cheese, curd	8	40	9
Fresh, frozen, and dried fish	4	9	235
Cereal Milled	-	96	-
Cereals unmilled	4	538	221
Cereals husked and pop corn	6	2	-
Wheat wholly milled	2,548	10,004	3,908
Macaroni, pasta	3	38	31
Biscuits and others	17	138	99
Potato (fresh)	29	51	118
Sesame seeds	13,633	6,469	6,588
Legumes	3,928	3,010	1,159
Tomato	10	28	35
Onion and garlic	305	484	934
Vegetables	13	19	5
Powdered legumes and vegetables	31	31	-
Peanuts	17	65	241
Fruits	264	441	1,190
Grapes	1	10	46
Canned vegetables and fruits	-	35	-
Dates	-	6	-
Honey	35	20	120
Sugar Confectionery	262	1,353	596
Food Spices	58	926	211

Coffee and tea spices	318	305	-
Tomato spices	4	-	-
Mineral Water	25	60	-
Soft Drinks	166	278	507
Malted beer and stout	889	1,172	1,664
Wines	85	130	3
Beverages with high alcoholic content	839	2,577	839
Hay and fodder	-	9	3
Bran and Sharps	-	6	-
Vinegar	-	1	-
Yeast	-	-	2
Cotton seeds	-	-	24
Linseed	-	-	16

Source: Ministry of Finance and Development, Asmara, 1995.

A-2 : Imports of food products, 1994-1994
(Thousands Birr)

Type of imports	1994 3rd	1994 4th	1995 1st
Live animals	109	445	241
Canned, salted & dried meat	8	-	948
Concentrated milk sweetened and canned	2	9	8,736
Milk not concentrated, not sweetened	-	74	-
Powdered milk, canned	4,249	3,805	-
Powdered milk in sacks	1,059	-	-
Animal derived butter	3	75	650
Butter oil	69	295	-
Cheese curd	19	17	37
Eggs, dried eggs	123	85	142
Canned fish (ex. sardines)	66	77	30
Wheat, sorghum, maize, barley	44 597	46,383	20,687
Cereals husked	-	81	-

Rice	1,206	301	213
Wheat wholly milled	8,191	1,352	-
Cereal meals	-	48	487
Cereal milled (sorghum & maize)	-	315	-
Pop corn grain	587	2	211
Canned pop corn	-	384	-
Macaroni, spaghetti etc	1,566	1,819	676
Biscuits & similar products	1,296	681	528
Worked cereal meals (FAFA)	-	14	4
Potato(not sweet)	42	113	52
Legumes whether not husked & broken	11,898	3,297	-
Tomato	9	-	-
Onion and garlic	789	2,020	-
Other vegetables (lettuce, green chilies)	-	165	-
Powdered legumes and vegetables	1,869	994	2,341
Canned vegetables and fruits preserved	4	3	4
Canned vegetable, not preserved	499	3	-
Fruits(orange, lemon, apple, banana)	881	1,200	600
Grapes, raisins for industrial use	35	26	94
Powdered fruit for beverages	217	91	1,771
Jam products (canned)	202	216	6
Fruit and vegetable juices (orange etc)	330	129	235
Tomato juice	-	24	226
Dates	262	1,204	-
Fruits & vegetation (canned)	-	95	-
Sugar	21,234	36,309	45,946
Sugar confectionery	447	41	555
Honey	59	23,059	274
Chewing gum	1,251	126	-

Sugar and honey products	315	28	-
Coffee beans with husks	359	51	-
Coffee husked	1,657	2,691	3,429
Roasted and ground coffee with and without additives	4	5	-
Cocoa powder	-	23	-
Chocolate and other cocoa preparation	255	4	8
Tea leaves for retailing	413	509	2,472
Tea leaves in cans or boxes	-	1,855	-
Food spices mustard, ginger, pepper	182	1,370	1,614
Coffee and tea spices (cloves, condiments)	1,022	74	-
Animal food	96	-	-
Margarine	-	21	-
Tomato sauce	654	249	-
Soups and broths in liquid and solid or powdered	101	27	733
Natural yeast, baking powders	610	1,836	830
Vinegar and substitutes for vinegar	-	1	-
Malt	117	3,093	340
Other edible products(N.E.S)	-	1	59
Barley unmilled	-	-	2
Maize unmilled	-	-	54
Sorghum unmilled	-	-	3,124
Taff unmilled	-	-	15,520
Wheat flour	-	-	1,268
Bran, sharps and other residue of cereals	-	-	4
Oil cakes and residue of sesame cotton seed, peanut solid or powder	-	-	93
Table mineral water (bottled & canned)	163	177	-
Non Alcoholic Beverages	169	138	189
Malted beer & stout beer	990	845	294
Grape must in fermentation	-	7	-

Wine	202	68	182
Beverages with high alcoholic contents whisky, rum	1,723	3,534	775
Pure Alcoholic preparation	-	309	-
Tobacco, unmanufactured Tobacco refuse	23	1	600
Various types of cigarettes	5,514	5,688	628
Tobacco for chewing snuff etc	1	-	1

Source: Ministry of Finance and Development, Asmara, 1995.

A-3 : Exports of Textile Exports, 1994-1995
(Thousands Birr)

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Used clothes	147	-	-
Cotton yarn	2,497	76	11
Table yarn made from flux & others	-	1,164	-
Cotton Textiles	1,765	155	5
Cotton fabric and gauze for medical.	134	448	1,545
Canvas and fabrics from woven jute	11	-	-
Woolen textiles and the like	-	4	-
Sacks	845	402	327
Textile made of artificial yarn	-	1,250	3,174
Mosquito net	4	-	-
Bed linen, bed cover, towel etc	97	676	318
Blankets	81	22	18
Garments of men and ladies	3,794	4,124	4,041
Cotton carded or combed	-	28	349

Source: Ministry Of Finance and Development, Asmara, 1995.

A-4 : Imports of Textile Imports, 1994 - 1995
(Thousands Birr)

Item	1994 3rd	1994 4th	1995
cotton not carded or combed or	4,345	540	1
Cotton carded or combed	1,858	1,177	2,779
Cotton waste	126	-	-
Used clothing	3,119	-	-
Raw silk	-	2	-
Silk	-	1	-

Cotton yarn	178	207	198
Cotton textiles	871	386	-
Cotton fabrics & gauze for medicine	6	194	452
Textiles made of artificial yarn	14,798	17,991	17,921
Yarn and textiles made from flax and other fibers	7	34	2,633
Woollen textile	47	5	-
Silk yarn and textiles	25	34	-
Canvas and the like	3,804	3,413	-
Sacks and cordage	304	884	1,038
Carpets	300	251	193
Paints made of different years	49	38	-
Fishing nets	221	54	-
Ropes, cordage and twice for sheep & boats	81	126	66

Transmission, conveyor, or elevator belts from textile material	31	19	-
Nylon yarn for sweater	910	505	-
Mosquito net	6	86	1
Sleeping bag	-	7	-
Bed linen bed cover table linen kitchen and toilet towels	434	1,062	535
	11	9	15
Blanket and travelling bags	573	715	2,577
Others textiles	11	197	25,633
Fabrics woven, made from animal hairs	-	-	33
Fabrics woven of flax and other fibre	-	-	40
Fabrics woven of jute	-	-	5,164
fabrics, woven n.e.s.	-	-	200
Product of textile material	-	-	7
Tarpaulin, sails for boats tents	-	-	4,864

Source: Ministry of Finance and Development, Asmara, 1995.

**A-5: Exports of Leather & Footwear, 1994-95.
(Thousands Birr)**

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Bovine hides	1,530	113	-
Sheep & goat' skin	3,428	2,622	-
Leather products	165	1	-
Foot wear	3,593	10,378	6,096
Soles and parts of foot wear	1,714	37	-
Leather (tanned skin and hides)	-	-	3,234

Source: Ministry of Finance and Development, Asmara, 1995.

**A-6: Imports of Leather & Foot Wear, 1994-1995.
(Thousands Birr)**

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Leather & hides	43	40	11
Hides & skins of wild animals	7	19	-
Bovine hides & skins tanned,untanned	-	2	213
Finished leather in sheets, roles of belts of footwear	4	58	234
Articles of leather like saddle,converter	1	8	-
Leather in pieces for eyeglass holders etc.	30	-	-

Source: Ministry Finance and Development Asmara, 1995.

**A-7: Exports of Wood and Wood product 1994-1995
(Thousands Birr)**

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Wood for construction purposes	17	-	-
Wooden frames for doors and windows	4	-	-
Carpets and mats made of bamboo or wooden material	85	80	-
Furniture	162	1,221	539
Veneers, plywood and chip wood	-	4	-
Other articles of manufactured wood	-	1	174

Source: Ministry of Finance and Development, Asmara, 1995.

**A-8: Imports of Wood & Wood Products, 1994-1995
(Thousands Birr)**

Item	1994 3rd Quart	1994 4th Quart	1995 1st Quart
Wood and logs	244	-	-
Wood for construction	712	706	-
Wood roughly squared	2,461	3,248	5,266
Wooden flooring panel	-	10	-
Wooden boxes and trucks	6	24	-
Bamboo and reed furniture	1	-	-
Wooden handles and models	1	76	-
Wooden picture frames	176	22	-
Veneers, plywood, chip wood etc	696	2,882	-

Wooden frames for windows and doors and other carpentry works	1,958	28	-
Wooden walking sticks, whips, umbrella handle	12	13	-
Wooden table lamps, cutlery, trays, plates and other curio works	39	1	-
Bamboo carpets and mats	1	5	-
Other articles of wood	6	3	-
Wooden hives, incubators	-	6	-
Wood for match sticks	-	741	-
Kitchen utensils of wood	-	32	-
Densified wood blackboard	-	1	5
Plywood panel and laminated	-	-	2,385
Packing and cable drums of wood	-	-	2
Casks barrels, vats tubes etc.	-	-	1
Wooden builders carpentry and joiners for doors and windows	-	-	140
Manufacturers of wood for domestic use	-	-	119
Manufactured articles of wood	-	-	332

Source: Ministry of Finance and Development, Asmara, 1995.

**A-9 : Exports of Paper and Pulp Products, 1994-95
(Thousands Birr)**

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Exercise books	-	3	-
Books, periodicals	21	13	9
Cleaning tissues imported to be manufactured	-	184	-
Paper cartons and cases	-	-	1

Source: Ministry of Finance and Development, Asmara, 1995.

**A-10: Imports of Paper & Pulp Products, 1994-95
(Thousands Birr)**

Item	1994 3rd	1994 4th	1995 1st
paper & paper board in rolls & sheets	68	22	1,759
printing paper for news paper	30	206	257
paper for art & crafts & the like	4	114	423
printing paper for stamps & the like	44	-	-
printing paper	192	1,045	-
filtering paper	3	-	41
paper board for manufacturing boxes	9	4	524
wrapping paper	148	773	549
silver coated paper	44	12	11
wall paper & converted paper	18	8	70
paper & paper board cut to size for cigarette & others	18	27	-
carbon paper	27	35	-

tracing drafting, duplicating photocopy paper	564	318	323
copying paper	25	146	-
envelops letter	93	83	99
foolscap, block note	28	37	-
articles of paper for calculation, register & telex	63	25	-
box file & flat file & paper board	24	103	-
registers	3	33	-
toilet paper handkerchief, towels & other sa	408	639	-
paper trays, plates, dish, cups & the like	6	242	-
exercise books, note books	2,450	337	-
album, diary etc	46	60	231
cigarette paper in rolls	-	1,470	-
clean size tissues imported to be manufacture and other	-	81	72

Source: Ministry of Finance and Development, Asmara, 1995.

A-11: Imports of Petroleum Products 1994-95
(Thousands Birr)

Item	1994	1994	1995
	3rd Quarter	4th Quarter	1st Quarter
Petroleum oils crude or partially crude	82	571	3
Petroleum products (Benzine, petrol, kerosine, white spirit etc.)	17	-	654
Lubricants, oils and heavy oils	3,015	56	2,020
Residual petroleum products	2	6	-
Wax, paraffin, jelly, petroleum vaseline	136	744	1,875
Natural and artificial gas	12	-	-
White spirit for production of wine and other beverages	-	96	208
Grease	-	3,191	-
Coal	-	-	2

Source: Ministry of Finance and Development, Asmara, 1995.

A-12 : Export of Chemicals, 1994-1995.
(Thousands Birr)

6. Chemicals	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Salt	16,263	18,306	27,008
Essential Oils	-	14	-
Dying Vegetables	-	1	-
Resins	4,029	1,395	5,203
Cosmetics	-	656	193
Incenses	163	174	659

Laundry & Toilet Soap Powdered, liquid and dry soap	483	124	180
Articles of rubber	1,455	2,273	667
Animal and vegetable oils and waxes	135	118	68
Bottles, glasses, plates and others	-	3	-
Slippers and plastic soles	135	173	1,295
Toys	981	-	-
Combs, hair pins	8	12	17
	13	1	-

Source : Ministry of Finance and Development, Asmara, 1995.

A-13 : Imports of Chemicals, 1994-1995.
(Thousands Birr)

Item	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Organic Chemicals for oil refineries, dry cell battery, textile and tire industry	20	71	814
Organic chemical for weeds & pests	-	100	17
Naphthalene	2	-	-
Food additive organic chemicals	90	643	2,050
Soft Drinks additive organic chemicals	-	-	281
O.Chemicals for medical industries	-	10	8
O.Chemicals for Alcoholic beverages	48	137	-
Inorganic Chemicals for controlling weeds and pests	4,805	1,574	-

Inorganic Chemicals for use in medical and related establishments	12	2	1
Ino.Chemicals for oil refineries, battery, hides, textiles and tire industries	9,709	3,314	3,764
Ino.Chemicals for other industries	3,005	7,780	-
Acids like hydrochloric acid, sulfuric acid, nitric acid, phosphorous etc.	90	21	217
Inorganic bases	81	748	1,145
Metallic and proxy salts	219	432	325
Mercury	-	13	-
Tannery extracts	51	120	141
Oxygen, hydrogen, nitrogen etc.	-	-	150
Synthetic organic pigments and paints	166	21	25
Colors and paints for artists	84	209	-
Varnishes and lacquers	1,384	1,373	1,669
Coloring preparation used in chemical works, paint drier	26	61	459
Henna	99	92	-
Medical and pharmaceutical products	4,740	4,657	7,301
Essential oil for the manufacture of beverages and food	2,571	7	22
Perfumes	327	267	95
Incense, sandal wood etc.	298	248	-
Tooth pastes and powders	28	33	24

Cosmetics and toilet preparations	397	245	298
Lavatory cleaning powder, baby powder	42	45	375
Laundry soap	2,866	1,719	1,073
Toilet soap	565	795	-
Powder washing preparations	849	652	-
Polymers vinyl chloride of other Halogenated olefin	-	-	751
Bleaching preparations	42	140	-
Polishes for furniture, floors, footwear etc.	18	73	17
Fertilizers, manufacture, propellant powders	22	97	-
Artificial resins and plastic materials	437	2,356	-
Disinfectant and insecticides	-	2,800	231
Weed killers	-	313	-
Rat poison	-	3	-
Safety fuses detonating fuses ignites, electrification	-	-	1,582

Source : Ministry of Finance and Development, Asmara, 1995.

A-14: Exports of Non-metallic Minerals, 1994 - 1995.
(Thousands Birr)

Construction Materials	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Manufactured cement	-	10	-
Manufactured lime and pebbles	30	53	12
Clay	30	37	12
Tiles, mosaics, ceramics etc.	211	169	14
Blocks, bricks, marbles etc.	18	36	-
Cement Tubes & pipes	1	1	-
Sinks, wash basins and the like	17	9	6
Refractory Bricks	-	19	275

Source : Ministry of Finance and Development, Asmara, 1995.

A-15 : Imports of Non-metallic Minerals, 1994-1995
(Thousands Birr)

Type of Imports	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Manufactured lime	3	9	1,804
Manufactured cement	7,504	5,230	1,031
Tiles, mosaics	150	226	10
Marbles for monuments	1,379	6	-
Asbestos	103	-	-
Articles made of plaster	-	3	-
Blocks and bricks	2	716	-
Refractory bricks for furnace	96	17	514
Clay tubes & piping for sewage	3	-	-

Glass panels for doors and windows	146	664	-
Glass plates for vehicles	276	176	-
Mirror and glasses	298	48	262
Clay articles	112	263	-
Glass beads and sand paper	20	26	12
Demi-jean, beverage bottles, glasses	-	204	403
Glass sheets	-	-	498
Ceramic household articles	-	-	566

Source: Ministry of Finance and Development, Asmara, 1995.

A-16: Exports of Iron and Steel, 1994 - 1995
(Thousands Birr)

Iron & Steel	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Iron ore and concentrate & scrap	-	8	1,657
Bottle stopper and similar articles	22	-	-
Flat rolls products of iron	-	-	251
Pipes, tubes, nails, vices etc.	119	932	618
Frying oven, stove	48	21	4
Safes, strong boxes, tanks etc.	4	93	-
Bells & door bells	3	-	-
Hand tools and structures	-	99	33
House hold type of electrical equip.	47	-	-

Source : Ministry of Finance and Development, Asmara, 1995.

**A-17 : Imports of Iron and Steel, 1994 and 1995
(Thousands Birr)**

Iron & Steel Imports	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Iron and steel sheets, rods and angular grits for industries	139	612	7,066
Iron and steel sheets, rods and angular grits for construction	2,286	5,529	-
Cylinders of iron and steel	183	41	-
Iron and steel container tanks and barrels	1,059	285	-
Iron and steel tubes, pipes, cables, barbed wire	662	1,123	9,866
Nails, vices, bolts, dies of iron and steel	860	359	-
Sewing and knitting needles	3	11	-
Hairpins	11	2	-
Non electrical stoves, household cooking utensils	2	412	-
Iron wool for scoring kitchen utensils	14	11	-
Hand operated insect pumps and mouse traps	16	22	-
Suspensions	3	50	-
Springs for various vehicles	-	2	-
Flat rolled products of iron or non-alloy steel	-	-	1,235

Source : Ministry of Finance and Development, Asmara, 1995.

A-18: Export of Non-ferrous Metals, 1994 and 1995
(Thousands Birr)

Items	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Jewels made from gold and precious stones	11	-	-
Copper screws, electric wire etc	-	1,257	23

Source: Ministry of Finance and Development, Asmara, 1995.

A-19: Import of Non-Ferrous Metals, 1994-1995
(Thousands Birr)

imports of Items	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Silver unworked	-	5	5
Copper for processing	55	-	7
Copper tubes, pipes and fittings rod sheets	71	-	209
Copper nails, vices, springs electric wires (non insulated) non electrical kitchen utensils	1,489	2,049	268
Aluminum tubes, pipes, rods and sheets	435	372	55
Corrugated zinc plated sheets	23,518	-	518
Tins and containers made of zinc	41	-	1,045
Tubes, pipes and fittings, sheets and rods, nails	2,279	4,225	-
Vices, washers, nails, wire and springs	467	708	742
Hand Tools	2,081	1,969	5,148
Spares & tips for hand tools	50	130	-

Scissors, spoons and forks	707	835	-
Locks and padlocks, key holders and fittings	610	670	785
Non - electrical bells	2	2	-
Stopper, covers for barrels	476	2,672	-
Wires, tube sheets and electrodes	3,872	528	-
Structures, parts and metal containers	-	-	7,949

Source: Ministry of Finance and Development, Asmara, 1995.

**A-20: Re-Exports of Machinery and Equipment, 1994 and 1995
(Thousands Birr)**

10. Machinery & Equipments	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Butteries & electrical Accumulators	-	-	35
Construction machinery	5	-	-
Food & beverages machinery & parts	619	536	337
Metal works machinery & parts	2	-	-
Electro - thermic appliances	-	-	9

Source: Ministry of Finance and Development, Asmara, 1995.

A-21: Imports of Machinery & Transport Equipment, 1994-1995.
(Thousands Birr)

Machinery & Transport Equipment	1994 3rd Quarter	1994 4th Quarter	1995 1st Quarter
Electric producing generators and engines and parts	3,647	3,300	7,081
Motors and Engines	2,222	3,029	71,200
Agricultural Machinery and parts	3,338	10,560	3,477
Construction machinery and parts	23,371	23,196	50,298
Textiles and Leather Machinery and parts	10,603	11,468	6,229
Printing and paper machinery and parts	1,092	373	1,286
Food and beverage processing machinery	1,935	3,455	2,089
Wood processing machinery and parts	847	-	840
Metal Working Machinery	13,650	16,982	22,430
Big refrigerators	16	143	58
Air conditioner, cooler, ventilators	1,701	701	19
Motor pumps, rotary centrifugal, hydraulic compressors elevators and parts	2,891	5,070	4,901
Lifting and loading equipments	7,695	11,392	7,967
Stoves and ovens	3,517	25	-
Electric typewriters	18	-	-
Typewriters	245	211	207
Cheque writing typewriters	71	130	-
Calculators , cash registers etc.	330	58	553
Duplicators, photocopies	846	1,870	1,065
Computers and printers and parts	2,805	3,382	5,279

Other typing and calculating machines	64	21	=
Television receivers and parts	5,832	2,000	1,456
Video decks and parts	2,314	1,033	451
Radio, tape, CD tape recorders, and parts	2,580	1,833	3,417
Radio receiver and parts	549	821	1,897
Telecommunication equipments and parts	5,186	2,505	5,477
Others	856	2,571	-
Stabilizer, transformer, rectifier, changer	231	2,446	826
Insulated cable for power distribution	590	973	4,056
Switches, plugs, lamp holders, fuse control panels etc	6,987	1,145	1,148
Household type electrical equipment	5,478	2,553	4,144
Electro-mechanical appliances	-	-	1,4844
Dry cells	616	972	
Battery for cars	96	745	2,952
Incandescent lamps	107	211	-
Flash bulbs in flash lights and cameras, small lamps	56	105	-
Electrical equipment for medical purpose	176	15	677
Florescent lamps	146	259	138
Ambulances, fire engines, city refuse transporters	421	2,493	34,227
Motor vehicles for road maintenance	690	397	8,906
Public transport vehicles	5,218	20,511	17,197
Trucks	26,133	32,559	38,962
Trailers	1,066	4,306	3,798

Family cars and motor cycles	12,900	7,449	-
Bicycles and delivery tri-cycles	2,047	1,744	2,337
Spare parts for cars	17,356	10,896	11,163
Land cruisers, vans, jeep, pick-ups and land rovers	25,962	12,081	-
Boats and parts	1,083	490	-
Trains, ships, aircraft	-	1,694	3,873

Source: Ministry of Finance and Development, Asmara, 1995.