PAPER 11

THE MAIN INDUSTRIAL SECTORS

1. TEXTILES

S.E. Joseph

Introduction

The textile industry which was brough under the purview of the National Textile Board (NTB) in 1974, consisted of one cotton spinning mill, four composite spinning-cum-weaving mills, two garment manufacturing factories, one woollen blankets factory and another making gunny bags and hessian cloth. A handloom weaving project had also been started in 1968 by the Ministry of Culture and Community Development. Apart from these government establishments, there were several garment making units of varying sizes in the private sector.

2. All these units have continued to function. Those under the NTB now provide employment for about 13,600 persons. Their authorised and paid-up capital amounts to about Shs. 93 and 84m. respectively.

3. Up to 1972, the industry was able to meet the country's requirements of cloth and also to export a substantial quantity. But since then, both production and exports have declined. The relevant figures since 1970 are shown in Table 11.1.

Table 11.1

Cotton and Other Fabrics (m. sq. metres)

Year	Production	Imports	Total	Exports	Domestic Consumption
1970	50	6	56	16	40
1971	46	11	57	12	45
1972	48	8	56	11	45
1973	38	6	44	10	34
1974	36	5	41	2	39
1975	36	6	42	N	42
1976	(43)	3		-	
1977	(41)	n.a.		-	
1978	(30)	n.a.		-	

Notes: The figures of production in brackets are in linear metres.
The figures of imports include fabrics of cotton, synthetics and regenerated fibres.

N: Negligible

n.a: Not available

Source: NTB and Annual Trade Reports.

4. The composite textile mills were all established with varying quantities of old and second-hand plant and equipment, some of which dates back to 1899. However, the mills could not replace the obsolete machines and also maintain others with new parts and components, mainly because of their inadequate allocations of foreign exchange. Their output had also been adversely affected by the shortage of funds for the mills to

purchase raw cotton, and a steady decline in the productivity of labour. Almost all the mills have small workshops to fabricate some parts and components for replacement purposes, but the mills will continue to depend largely on imported parts and components for some years to come.

5. During the recent war, the bulk of the stocks of cloth, raw materials, spare parts and vehicles of all the mills except one (namely, Nyanza Textile Industries) were looted. It is informally understood that looting of one mill was led by a former minister and his men.

6. The per capita availability of cloth in 1970 was about 4.2 sq.metres. A modest objective of the programme for the rehabilitation of the textile industry over the next two years should be to increase the quantity available for domestic consumption to at least 58 m.sq. metres so as to ensure per capita availability of 4.2 metres by 1981.

7. It is estimated that for production of 58 m. sq. metres of cloth, about 11.6 to 13.0 m. kgs. of yarn would be required which, in turn, would depend on the availability of about 14.5 to 16.2. m. kgs. of raw cotton (or about 78,400 to 87,600 bales).

8. Yarn production

The present installed and operating capacities of the spinning mills are shown below and the production figures of individual mills is tabulated in Annex 11.1.

Table 11.2

	No of Spindles		Annual Capacity To produce Yarn	
	Installed	Operating	Installed	Operating
Uganda Spinning Mill	64,000	25,600	3.6	1.4
Nyanza Textile Industries	34,516	27,000	5.4	3.3
Pamba Textile	23,512	10,700	4.0	1.4
Uganda Rayon Textiles Manufacturers	2,800	2,400	0.5	0.2
African Textile Mill	22,380	12,000	1.5	0.8
	147,208	77,700	15.0	7.1

Source: National Textile Board.

The present operating capacity, if worked on a double shift basis, is enough to meet the requirements of 11.6 to 13.0 m.kgs. over the next two years.

9. Cloth Production

Annex 11.1 contains the production figures of different mills. Table 11.3 shows the weaving capacity of the existing mills. The operating capacity to produce cloth on a double shift basis is more than adequate to meet the country's needs of 58m. sq. metres over the next two years.

Table 11.3

	No. of Looms		Annual Capacity to Produce Cloth (m.metres)	
	Installed	Operating	Installed	Operating
Nyanza Textile Industries	912	850	36.0	25.2
Pamba Textile	460	330	15.0	7.6
Uganda Rayon Textile Manufacturers	200	100	3.3	1.9
Africa Textile Mill	550	300	10.0	5.4
	2,122	1,580	64.3	40.1

Source: National Textile Board.

10. Financial Position

Three textile mills were visited. Their present financial position and requirements - immediate and over the next two years - are briefly reviewed in the following paragraphs.

11. a) Nyanza

The mill did not suffer any war damage. It has also no financial liabilities. On the other hand, about Shs. 12m. are due to it including about Shs. 7m. from the Lint Marketing Board and Shs. 5m. from the Kilembe Mines. Over the last few years, the average annual profits have been Shs. 7-10m.

12. The mill is urgently in need of raw cotton, dyes and some chemicals. High priority needs also to be given to the installation of a new blowing room unit for augmenting the spinning capacity, renovation of some old looms (Northrop make) and processing facilities. The mill has drawn up a detailed short-term programme of rehabilitation.

13. b) Pamba

The mill has fully availed itself of the overdraft facility of about Shs.15m. and has a bank loan of about Shs. 5 million. According to the provisional estimates, it incurred a loss of about Shs. 9m. in 1978.

14. The mill has suffered heavy war damage. Stocks of cloth, raw materials, spares, office equipment, vehicles, etc., have been looted. Printing machinery has also been damaged to some extent and most of the office records are reported to be missing. Therefore, the mill is urgently in need of funds for purchases of raw materials, etc.

15. c) Rayon:

The mill has used its overdraft facility of about Shs. 2.5 m. Its accummulated losses up to last year are estimated at Shs. 5 m.

16. Like the Pamba mill, this mill was also ransacked. The present stocks of raw materials are adequate to utilise the capacity only to a small extent for the next few weeks.

17. Financial and Personnel Requirements:

All the mills have made fairly detailed inventories of their requirements for rehabilitation along with the estimates of funds required during 1979-80 and 1980-81. It is, however, noted that while Nyanza, the largest mill, has assessed its total requirements for the next two years at about Shs. 50m., the corresponding estimates of Pamba

range between Shs. 124m. (including Shs. 16 m. for war damages) and Shs. 140m. and those of the Rayon amount to Shs. 23m. for the next year only.

18. The Board's assessment of the financial needs for 1979-80 (Annex 11.2) are summarised below:-

NTB's estimates for 1979-80
(Shs.m)

Mills	Local	Foreign Exh.	Total
Spinning	4.2	4.5	8.7
Nyanza	-	12.0	12.0
Pamba	9.0	11.0	20.0
Rayon	2.5	4.5	7.0
African	8.0	11.0	19.0
	23.7	43.0	66.7

Assuming these estimates to be fairly reasonable, the requirements for 1980-81 may be roughly assessed at about Shs. 125 m., including Shs. 120 m. of foreign exchange. However, these estimates need to be reviewed urgently on the basis of a production target of 42 m. sq. metres of cloth in 1979-80 and 58 m. sq. metres in 1980-81. It should be possible for the NTB to reassess the minimum financial requirements on an urgent basis for producing 42m. sq. metres on a double shift basis in 1979-80.

19. It is also considered necessary that steps should be taken during the early part of next year to make a detailed assessment of the machinery and spare parts required for the rehabilitation of the industry so that it could produce 52m. sq.metres of cloth by 1980-81. For this purpose, international organisations such as the Commonwealth Secretariat may be approached for a team of 3-4 experts in textile engineering, production and financial management for a period of about 4-6 months, who could also recommend measures for fuller utilisation of the capacity and production of finer varieties of cloth. It will also be useful if the services of a foreign Metallurgist are obtained for about a month to advise on the metals to be used for fabrication of spare parts.

20. Powerlooms: As mentioned earlier, a handloom project is functioning. The productivity of a handloom is nearly one-third of a powerloom. It is, therefore, suggested that the feasibility of setting up a few centres, each containing about four to six powerlooms, may be examined. These centres may initially be set up on a pilot basis, preferably in the vicinity of the spinning mill at Lira.

21. Garment Manufacturing: As mentioned earlier, two factories, namely, Uganda Garment Industry Lt. (UGIL) and Uganda Garments Ltd., are subsidiaries of the NTB. The former is a joint venture, with 30% equity participation by a Japanese firm. Its paid-up capital is Shs. 5.7m. and it employs 1,200. The other factory which had 120 workers, is not functioning at present.

22. The UGIL's capacity and volume of production over the last few years are shown in Table 11.4.

23. Shortage of foreign exchange for the import of fabrics, chemicals and accessories, has been the main factor responsible for the firm's production lagging behind its installed capacity. However, the firm has been making profits amounting to about Shs. 2.5m. per annum. During the recent war, the firm suffered considerable damage, which is estimated at about Shs. 25m. It is expecting aid of about Shs. 15m. from the Japanese firm which also has a project for setting up plants for making suits and uniforms.

The NTB is also considering a proposal for the UGIL to take over the management of the other subsidiary. The proposal needs to be processed as early as possible. The Board's estimates of the foreign exchange required for imports of cloth, spares, etc., are indicated in Annex 11.2.

Table 11.4

UNITED GARMENTS INDUSTRY (UGIL) (000s)

Annual Capacity	Shirts	Knitted	Trousers	Ladies Garments
Installed	48.0	96.0	14.4	12.0
Operating	24.0	48.0	9.6	4.8
Production				
1974	49.4	62.6	6.6	-
1975	31.8	43.6	4.9	-
1976	27.9	61.4	7.3	3.8
1977	33.1	45.8	9.0	4.2
1978	26.8	43.4	7.9	4.9

Source: National Textile Board.

24. Woollen Blankets: Woollen blankets are being produced by only one mill, namely, The Uganda Blanket Manufacturers, which came under the purview of the National Textile Board in 1974. It has 78 looms and a capacity to produce 1.5m. blankets a year. Its present operating capacity is 132,000 blankets only, but the production has continuously declined. The figures for production and imports are:

Table 11.5

Data on Woollen Blankets ('000 pieces)

	Production	Imports
1970	1,164	75
1971	1,396	198
1972	1,204	63
1973	363	4
1974	365	43
1975	322	53
1976	222	29
1977	233	n.a.
1978	165	n.a.

n.a.: not available
Source : National Textile Board & Annual Trade Report.

25. The mill was not visited, but shortage of foreign exchange for import of raw wool and spare parts has been the main reason for the falling production. Recently, the mill was also looted. The NTB's estimates of the financial requirements are shown in Annex 11.2. These estimates need to be reviewed since they do not indicate the levels of production likely to be achieved over the next two years. It may be feasible to raise the production to about 500,000 items by 1979-80 and to over 1m. by 1980-81. The estimates need to be reassessed accordingly.

26. Jute Products: The Uganda Bags and Hessian Mills is a joint sector project between the Government (40%), an Indian firm (50%) and others (10%). At present, it employs about 570 persons. Its annual installed and present capacities are indicated below along with the figures of production:

Table 11.6

Data on Jute (Tonnes)

	Gunny bags	Hessian cloth	Jute twine	Total
Installed capacity	5,520	960	20	6,500
Operating capacity	1,200	185	10	1,395
Production				
1971	2,357	376	21	2,754
1972	4,090	637	1	4,728
1973	3,252	547	75	3,874
1974	3,275	364	63	3,702
1975	1,505	160	10	1,675
1976	1,550	147	15	1,712
1977	633	19	29	681
1978	828	15	-	843

Source: National Textile Board.

27. According to a report, the factory could supply about 75% of the domestic demand of bags and cloth which are mainly for export of coffee and cotton; the balance of imports which ranged between 1-4m. pieces from 1974 to 1976. But the shortage of foreign exchange for import of jute and spare parts has been responsible for the fall in production since 1971. It is understood that under a Saudi Arabian Loan agreement, a project was taken up some time back for the development of a kenof and jute industry, but information about the progress of the project was not readly available.

28. The present stocks of raw jute are likely to last another 4-6 weeks. According to the NTB, Shs. 8m. are required in 1979-80 for import of raw materials and spare parts (Annex 11.2), as compared to the mill's estimate of Shs. 20m. It would be desirable to provide the minimum funds required for increasing the total production to almost 3,000 tonnes next year and 4,500 by 1980-81. Since the stocks at present are very low, and it takes about 3-4 months to import raw jute, steps have to be taken urgently for obtaining some supplies from abroad.

2. CONSUMER GOODS

S.E. Joseph

(a) Oil and Soap

29. In 1972, 18 oil mills which were also producing soap, were passed on to local entrepreneurs. The new owners mismanaged the mills so much that some mills came to a collapse, leading to a serious congestion of cotton seeds with the ginneries. This was followed by the taking over of the mills along with the soap factories by the Lint Marketing Board in accordance with a public announcement by the then President.

30. The position on domestic consumption of oil and soap was as in Table 11.7. The annual per capita consumption of oil and soap in 1970 works out at about 1.3 kgs each. To ensure the same level of consumption in 1981, production of 18,000 tonnes each of oil and soap would be required.

Table 11.7

	Oil			Soap
	Production	Imports	Total	Production & Total
1970	17	4	13	13
1971	17	4	13	14
1972	16	2	14	14
1973	13	1	12	6

31. At present, only 11 oil mills and 8 soap factories (including 7 oil mills) are working, which fall within the purview of the Lint Marketing Board (Annex 11.3) Their estimated annual capacities of producing 14,360 tonnes of oil and 12,845 tonnes of soap, if worked on a double shift basis, are adequate to meet fully the domestic needs over the next two years. The oil plants are also capable of manufacturing 'ghee' and margarine, but are unable to do so owing to shortage of groundnuts. A few mills are equiped to manufacture tin cans and have been supplying these to the other mills.

32. Since 1974, the production has been lagging far behind capacity; the relevant figures are:

	Production	
	Oil ('000 tonnes)	Soap (tonnes)
Estimated Capacity	14.4	12,880
1974-75	6.1	2
1975-76	2.0	2
1976-77	2.0	1
1977-78	1.5	1

Uganda had been importing soap till 1975.

33. The main reasons for the continued fall in output of oil as well as soap have been the gradual decline in the production of cotton seeds, the shortage of imported raw materials for soap and spare parts for the plants, and poor maintenance of the machinery. The management of the Board is of the view that obsolete plant and frequent directives and interference by the Government in the management and running of the mills have also been responsible for the under-utilisation of the capacity and the financial losses. The position about the raw cotton and cotton seeds has been discussed in the paper on Agriculture. At present, the mills are reported to have only about 3,000 tonnes of cotton seeds, against their annual average consumption of 30,000 tonnes in the past. Oil and soap are essential items of mass consumption. Therefore, suitable arrangements should be made urgently to import either seeds, or oil and soap so as to prevent an acute shortage and a further rise in prices.

34. With the anticipated increase in the production of raw cotton, it should be possible to produce more and resume exports of oil and oil cakes. Therefore, it is necessary to rationalise the industry over the next year or so. Considering that some of the large mills have the capacity to meet fully the domestic market and also to export some, it would be better to utilise the machinery of some of the smaller and un-economic mills for renovating the machinery of the larger ones, working on double or triple shifts.

35. The financial requirements for rehabilitating the industry over the next two years as assessed by the Lint Marketing Board, are indicated below:

	(Shs. m.)
Cotton Seeds	102
Other Raw Materials	83
Spare parts	10
	195

These estimates include the requirements of three oil mills which are not working and also about 113,000 tonnes of cotton seeds. Excluding the requirements of the closed mills and providing for cotton seeds and other raw materials for production of about 8-9 tonnes, about Shs. 45m. may be required for 1979-80. It is assumed that the domestic production of cotton seeds would be adequate to increase the production to about 18,000 tonnes by 1980-81. Therefore, the amount required for import of raw materials and spare parts in 1980-81 would not exceed about Shs. 15m.

(b) Matches

36. The associated Match Company is the only factory producing matches. Its annual installed capacity is 54,000 cartons, but the production depends largely on vehicles for transport of logs for veneers and foreign exchange for imports of splints, chemicals, paper and spare parts. Due to the continuous shortage of foreign exchange, production has declined rapidly since 1974 and the factory is now working at about 15% of its capacity. The figures of production are:

	Production ('000 cartons)
1970	49
1971	59
1972	51
1973	44
1974	30
1975	31
1976	17
1977	10
1978	8

The fall in production is responsible for pushing up the market price of a match box to Shs. 2, as against the ex-factory price of 50 cents.

37. A plant for making cardboard boxes was imported sometime back, but has not been installed owing to lack of financial resources. Although the factory has not suffered any war damage, it has practically no lorry in good working condition. Its present financial liabilities include about Shs. 2.4m. of debts, a bank loan of Shs. 2.7m., an overdraft of Shs. 1.5m. and Shs. 0.4m. for salaries to be paid. Cash in hand and in the bank is negligible.

38. The factory is urgently in need of at least one lorry in good condition, about Shs. 0.6m. in foreign exchange for the import of essential raw materials, and some suitable amount in local currency for clearing debts, paying salary arrears, etc. Additional funds would be required in 1980-81 for purchase of one or two more lorries, spares, chemicals, etc., in order to enable the factory to utilise its capacity fully on a multiple shift basis. Total provision of Shs. 2m. is recommended for 1979-80 and 6.5m. in 1980-81.

39. It would be useful for the working of the factory to be studied rapidly by a technical consultant, particularly so he could suggest ways of reducing the waste of veneer and splints in the manufacturing operations. It should be ascertained from the Forest Department whether suitable wood for making splints is available within the country. The UDC may also study the economics of installing the plant already imported for making cardboard boxes.

Paper

40. The Papco Industries Limited, a subsidiary of the UDC, is the only factory making certain types of paper including bond, bank, duplicating, cover and wood-free paper. Against its annual installed capacity to manufacture 3,000 tonnes of paper, the actual production over the last seven years has ranged between 40% and 60% of the capacity; the figures are:

Production of Paper
(tonnes)

1972	1,603
1973	1,140
1974	1,765
1975	1,805
1976	1,750
1977	1,550
1978	1,380

Source: Papco Industries Limited

The factory is entirely dependent on imported pulp; it has not been able to get its full need because of the shortage of foreign exchange.

41. Machinery for another plant for producing mainly kraft paper was imported a few years back, but only about 80% of it has been installed. A proposal has also been under consideration for some time for setting up a plant for production of pulp from bagasse.

42. The factory was recently looted and is now left with practically no cash, raw materials, spares, office equipment, etc. Under the circumstances, the labour has been laid off for a month or so. Since some records are also missing, the position of financial resources is not clear, except that the company has been running at a loss over the last two years.

43. What is urgently required by the factory is foreign exchange for import of pulp (total annual requirements for fully utilising the capacity are estimated at Shs. 18m.), some chemicals, one or two vehicles and also local currency for paying wages, etc. Meanwhile, it would also be necessary to arrange funds required for replacement/renovation of calendering, drying and other machinery, completing the installation of the new plant referred to above and for preparing a feasibility/protect report on setting up a pulp making plant based on the quantity of bagasse likely to be available in the near future. However, in order to increase the production gradually, to over 2,000 tonnes over the next two years, provision of Shs. 10m. for 1979-80 and Shs. 18m. for 1980-81 is recommended.

(c) Distillery

44. The East African Distilleries, a subsidiary of the UDC, is the only distillery in the country. It produces waragi and enguli, semi-distilled alcohol produced largely from jaggery and, to a little extent, from cassava and molasses, by private brewers who supply it to the distillery. On an average, while waragi accounts for about 85% of the production, the balance consists of whisky, gin and brandy. The annual installed capacity of the distillery is 533,600 litres (or about 66,700 cases).

45. Unlike most other industrial undertakings, the distillery has been able to maintain a high level of production by working on a double-shift basis except during the last three years. The ex-factory price of a bottle of waragi is Shs. 130, half of which is accounted for by taxes. The figures are:

Production of Waragi

('000 Litres)

1970	564
1971	598
1972	729
1973	910
1974	814
1975	859
1976	543
1977	545
1978	420

Source: The Action Programme and the East African Distilleries

46. Besides enguli, the other principal raw materials required are glass bottles, concentrates, seals, labels and filter sheets. Since the closure of the East African Glassworks a few years back which left some glass bottles available, the distillery has been dependent on used beer bottles. However, a shortage of beer bottles and foreign exchange for the import of the other raw materials has brought production down. The total foreign exchange requirements for fully utilising the capacity are estimated at Shs. 9m. (including about Shs. 3m. for bottles and Shs. 4m. for spare parts).

47. A contract was signed in November 1978 with a German firm for doubling the capacity and setting up a molasses-spirit factory, costing DM.7.8m., but the initial payment has not yet been made.

48. During the recent war, most of the spares, office equipment and furniture, etc., have been looted or damaged. However, the company has no other financial liabilities and it has been making net profits of nearly Shs. 9m. a year and has almost Shs. 16m. in cash.

49.The funds required for increasing the annual output to about 1m. litres on a double-shift basis over the next two years would bring more revenues to the Government and also help in bringing down the cost of production. At the same time, a decision may also be taken expeditiously about the contract already signed for expansion of the plant, taking into account the availability of molasses and the prospects of rehabilitating the glassworks.

3. ENGINEERING AND CHEMICAL INDUSTRIES

P.K. Sardana

50. This section is based on the empirical observations and data collected during visits to a dozen establishments in the engineering and chemical indsutrial sectors. As the sector-wide information was not available in Kampala, the visits were undertaken to representative, relatively large-sized industrial units which, in fact, constitute the core of industry in Uganda.

GENERAL OBSERVATIONS

51. At the outset, it may be necessary to mention a few observations common to most of the units.

- There has been no material damage in the recent fighting to any of the plants visited.
- The visits have convinced us that much more can be obtained from the existing productive apparatus than is currently being realised simply through better management.

- The inadequacy of managerial expertise, though not expressable in physical quantities, overrides the shortages of other inputs.

- Many of the chief executives and senior personnel did not appear to have a grasp of their unit's operations, let alone the characteristics of the industry in which they operate or the characteristics of their present and potential market.

- The estimates furnished for requirements or rehabilitation and reconstruction appear to be on the high side. In many cases, for example, the estimates of inputs were based on an output equal to the installed capacity. It is difficult to believe that a factory which is almost at a standstill because of one constraint or another can have full scale production (never attained in the past) within a period of 6-12 months. Besides, the figure for installed capacity has also become a notional one - the state of plant and machinery is such as to make the effective capacity available much lower than that originally installed. It would be wrong to work out any rehabilitation programme based on installed capacity figures which are no longer valid. Moreover, in the engineering industry particularly, the concept of production capacity is flexible and depends upon changes in product-mix.

- Given the above consideraitons of inadequate managerial expertise and past performance, the capacity effectively to absorb the entire quantum of financial and other assistance becomes doubtful.

- In most of the factories visited, the stocks of material inputs have either already run out or been fast depleted. There is not much in the pipeline and placement of fresh orders is yet to begin. As the period for which available stocks will last is much lower than the period of three to four months which a normal commercial transaction would take from placement of orders to actual receipt at the factory, the immediate outlook, even if the foreign exchange is available, is rather gloomy. Unless some emergency measures such as freighting of materials are undertaken, the prospects for industrial production in the next three to four months are far worse than the present picture.

- The long-term outlook is, however, reassuring. Uganda has the necessary factor inputs for industrialisation.

Given the financial resources and techno-managerial expertise and, more than anything else, a determined and visionary leadership, the country can make rapid strides towards industrial development.

ENGINEERING AND ALLIED INDUSTRIES

Steel Manufacturers of East Africa Limited, Jinja

52. This plant was set up in 1963 to produce about 30,000 tonnes per annum of finished steel products such as reinforcing bars, rolled steel angles and flats, bailing hoops, etc. The main feed material, scrap, was to be collected from all over East Africa.

53. During the 1960s, the consumption of iron and steel grew rapidly in the region, which led to the setting up of a number of steel rolling mills producing almost similar products and aiming at the same market. Table 11.8 gives the consumption figures for Uganda and East Africa as a whole.

Table 11.8

Consumption of Iron and Steel Products

Year	Uganda	East Africa
	('000 tonnes)	
1960	19.0	105.6
1964	23.8	111.1
1965	33.3	141.0
1966	30.4	135.6
1967	29.4	150.5
1968	35.8	147.4
1969	41.6	163.2

Source: East African Development Bank

While in the 1960s Uganda was the only country in East Africa with rolling facilities, the 1970s saw the setting up of five rolling mills - two of them using scrap as the principal feed material - in Kenya and Tanzania. This has led to a scarcity of scrap in the region. Because of this and other difficulties - such as the lack of maintenance and spare parts - the output of steel manufacturers has been declining since 1970.

1970 = 18,250 tonnes
1975 = 12,000 tonnes
1978 = 7,500 tonnes

Currently the rate of production is around 6,000 tonnes per annum.

Immediate Needs:

54. Presently, the main problems are:

- Poor availability of raw materials, especially scrap.
- Transport difficulties. The railway service for transporting scrap has not been satisfactory and the two lorries for transporting by road are inadequare.
- Lack of spare parts.

If the production is to be restored to a reasonable level of, say, 15,000 tonnes per annum, it will require about 22,000 tonnes of scrap. The present stocks are around 2,000 tonnes which will last for about a month only (at the production rate of 15,000 tonnes per annum). Assuming that 15,000 tonnes of scrap is imported at a price of Shs. 5000 per tonne as a supplement to what is indigenously available, the total foreign exchange requirement in 1979-80 for raw materials will be about Shs. 8m. Inclusive of requirements for equipment, the total assistance needed is of the order of Shs. 15m.

55. Since the Jinja plant is a supplier of basic material, any cut in production affects a multitude of industries dependent on it including those making such priority items as hoes, bailing hoops, etc. Therefore, the rehabilitation of this unit merits top priority.

Future Prospects:

56. For the development of the engineering industry in the country, it is necessary that there be adequate supplies of steel. The production of steel is characteristic for its economies of scale and high transportation costs. In view of the inadequate availability of scrap indigenously and the high cost of transporting it from outside, the suggestion of an integrated iron and steel complex should be seriously pursued.

Already it appears that over Shs. 2m. have been spent as consultants' fees in preparing a feasibility report for utilising Tororo ore, but without any results.

57. Presently, the Steel Works itself collects the scrap from various sources. It is suggested that the collection and supply of the scrap to the Steel Works should be undertaken by a separate agency or private contractors.

58. The product-mix of the company also merits examination. Most of the rolling mills in East Africa make the same type of products. It is suggested that, considering the total market size, the possibility of diversifying to other products be considered. An altered product-mix might also yield higher revenue.

Tororo Steel Works, Tororo

59. This Company, engaged mainly in the production of galvanised corrugated iron sheets, has an installed capacity of about 900 tonnes per month on a three shift basis. Its production performance since 1970 has been as follows:

Year	Production in Tonnes
1970	11,914
1971	13,413
1975	1,367
1976	1,064
1977	1,962
1978	807

Thus the production in the whole of 1978 (valued at Shs. 12m.) has been less than the installed capacity per month.

60. The factory has been closed since December 1978 because of the inadequacy of raw material supply, in particular, zinc. Besides the main feed material of cold rolled steel coils, the other inputs are ammonium chloride, hydrochloric acid and lead. Despite there being no operations for the last six months, the financial position is not too bad and the company has been paying salaries to its 700-odd employees.

Immediate Needs:

61. The present stock of raw materials is:

Cold rolled steel coils	=	330 tonnes
Ammonium Chloride	=	3 tonnes
Zinc	=	nil
Lead	=	nil

In the pipeline, stranded at Nairobi/Mombasa because of transport difficulties are:

Zinc	=	23 tonnes
Ammonium Chloride	=	63 tonnes

62. Assuming a prodcution target of 6,500 tonnes of galvanised sheets, the requirements of raw materials per month would be:

540 tonnes	Cold rolled steel coils	=	Shs. 2.46m.
54 tonnes	Zinc	=	Shs. 0.45m.
	Others	=	Shs. 0.30m.
	Total	=	Shs. 2.95m.
	or, say		Shs. 3m.

63. Assuming a lapse of a further two months without receipt of the necessary raw materials, the estimate of foreign exchange required for imports during 1979-80 is Shs. 30m. The estimated value of output would be about Shs. 100m. The company has sufficient spares to carry it through 1979-80.

Future Prospects:

64. The company's products are consumed by the construction industry. The rehabilitation of the economy will cause a spurt in building activity and thus a period of high demand for the company's products is foreseen. At full scale production (80% of capacity), the foreign exchange requirements for raw materials would be around Shs. 50m. per annum. The spare parts requirements are estimated to be about Shs. 0.1m. during 1980-81. The factory has large vacant covered areas which is a costly wastage. The management should consider ways of utilising this space in a productive manner.

Ugma Steel and Engineering Corporation Limited, Lugazi

65. Employing about 320 persons with a turnover of Shs. 10.4m. in 1978, this company has two main business components - agricultural implements such as hoes, pick axes, shovels etc. and the sugar machinery parts and other industrial machinery components. Being a subsidiary of the Sugar Works at Lugazi, it has been treated as a captive source of supply, with 70% of output going to the Sugar Works. As the price realised was below the market rate (sometimes not received at all), the company is now concentrating on outside sales, especially of hoes, to strengthen its cash position.

66. The stocks of steel ingots are fast being depleted and with no large supplies in sight, the production of hoes may have to be stopped. The cupola in the foundry needs its firebricks replacing.

67. A technical report prepared in December 1978 by UNIDO/UNDP experts puts the requirements of equipment at Shs. 25.5m. and of raw materials at Shs. 3.75m. in 1979.

Immediate Needs :

68. Besides the equipment replacement needs mentioned above, the requirements of raw materials during 1979-80 are estimated to be Shs. 1.5m.

69. In view of the large scale of hoe production at Uganda Hoes, it is suggested that production at Ugma be confined to other agricultural implements such as shovels, pick-axes, etc. for which the necessary dies are available.

Uganda Hoes Limited, Jinja

70. The production deterioration in this large scale manufacturer of hoes is depicted below.

Year	No. of Hoes ('000s)	Value in Shs.m.
1970	1,502.82	13.53
1971	1,370.08	12.34
1972	1,452.87	13.07
1973	1,205.50	10.85
1974	1,066.20	9.60
1975	752.63	12.04
1976	404.00	9.70
1977	375.20	9.00
1978	332.95	11.27

71. Interestingly, while the output has dropped to less than a quarter of what it used to be in the early 1970s, the turnover has remained more or less at the same level. However, the company went into the red in 1974 and is yet to recover.

72. The installed capacity of one operational line is 1.5m. hoes per annum on a two shift basis and 1.7m. on a three shift basis. The import of hoes during 1978 is estimated to be 0.4m. The size of the market is assessed to be about 1.5m. In view of the shortage, the ruling price is said to be four to six times the official price. The main reason for the fall in output is the shortage of raw material.

Immediate needs:

73. At the time of our visit, the stocks of flats obtainable from Steel Manufacturers of East Africa Limited, were estimated to be 20 tonnes, sufficient for the production of about 9,000 hoes only. Unless some emergency steps are taken the factory may have to be shut down. One possibility is the import of steel. But it may prove to be costly as about 22% of steel results in scrap and thus an unnecessary expenditure of one fifth on transportation would be incurred. (The scrap can, of course, be used at the Steel Works). The alternative is to import hoes. A decision will have to be taken by comparing the cost economies of these alternatives.

74. Tentatively, and given a low/no production during the next three months, depending upon the supplies from Steel Manufacturers and until the imported steel arrives, a target production of 0.5m. hoes in the three remaining quarters would require a foreign exchange of about Shs. 5.5m. for the import of steel. There are other problems such as the shortage of paints (presently hoes are being sold without varnish) and lack of some spare parts.

Future Prospects:

75. Even when the present line is underutilised because of shrotage of the feedstock, a second line, costing Shs. 8m. and with a capacity of 1.3m. production per annum on a two shift basis and 1.6m. per annum on a three shift basis, has been installed. The heavy initial depreciation and possible unutilisation will add further to the financial burden of the company during 1979-80 and 1980-81.

Lamps Factory, Jinja

76. This factory, established in 1972-73, was taken over by the Uganda Electricity Board in 1974 under a State decree. The absence of a lamp technologist has hampered its operations since then. Against a reported installed capacity of 8,000 lamps a day, its production has varied from 0 to 2,500 a day. In 1978, the factory produced about 30,000 lamps of a value of about Sh.0.25m. (The average life of a lamp, which used to be in days and then weeks, has improved to be in months.)

77. The factory has been closed for some time because of the non-supply of water from the public system.

78. The company has stocks of raw materials enough for making 165,000 lamps - over five times the production achieved in 1978. In fact the stocks of glass shells may suffice for about 2m. bulbs. Thus there is no immediate requirement for foreign exchange for raw materials. About Shs. 0.15m. are needed for the import of spare parts for seal-exhaust and head-steam machines during 1979-80.

79. The critical needs are, however, for technical skills. A lamp technologist is urgently needed besides four machine operators and maintenance staff. In their absence, there is no bright prospect of rehabilitating the company.

Future Prospects:

80. The imported material content in a bulb is about Shs. 3. At a production rate of 0.5m. bulbs a year in 1980-81, this will mean a foreign exchange requirement of Shs. 1.5m. Because of inexperience, the wastage rate runs as high as 40%. Inclusive of some wastage and spare parts, the exchange requirement is assessed at Shs. 2.5m.

81. It appears that this factory has suffered from neglect and the lack of the requisite professional skills. The technology of manufacturing a bulb has nothing in common with that of generating a transmitting power. The marketing needs are also quite different. And so are the requirements of operations management. The advantages, if any, of the Unganda Electricity Board (UEB) running the lamp factory are not clear. It is suggested that the lamp factory be delinked from the Board and put under a new company. To strengthen the operational viability of the suggested Electrical Company, the relatively better operated UEB's Cable Works can also be put under it, provided the desired specifications are adhered to. UEB is amenable to the suggested course of action.

Tororo Cement Works, Tororo

82. Established in 1953, this factory has two kilns with capacities of 150 tonnes per day and 350 tonnes per day respectively, totalling 160,000 tonnes per annum. The production performance since 1967 is shown at Table 11.9. It will be seen that output in 1978 is hardly 10% of that obtaining 9-10 years earlier.

Table 11.9

Production at Tororo Cement Works

Year	Cement	Lime	Aggregate
		('000 tonnes)	
1967	140	-	-
1968	152.4	15.6	7.0
1969	170.2	17.9	6.2
1970	147.3	19.0	4.0
1971	143.4	15.5	6.3
1972	116.9	12.0	6.6
1973	75.7	9.3	13.9
1974	87.2	3.9	12.2
1975	47.2	0.9	7.0
1976	37.6	0.9	8.2
1977	31.3	Nil	5.9
1978	16.5	Nil	6.1

83. The reasons for such a slide in production are:

- Obsolete plant and equipment. The kiln I that was installed two and a half decades ago, was second hand.

- Lack of limestone due both to depletion in reserves and the inadequate quarry machinery.

- Difficulties in the transport of raw materials to the factory.

84. Despite the sharp decline in production, the financial position is not too bad - against a share capital of about Shs. 20 m., the general reserves stand at Shs. 28 m. Partly, this is due to the steep rise in the price of cement from Shs. 250 per tonne in 1970 to Shs. 1700 per tonne now.

85. Presently, the operations are almost at a standstill because of the non-availability of gypsum. The smaller, over-aged kiln I is being worked to some extent and the large-capacity kiln II is lying idle.

Immediate Needs:

86. Based on a production target of 53,600 tonnes of cement in 1979-80, the requirements of raw materials in foreign exchange have been worked out to be Shs. 2.3 m. This should be seen in conjunction with requirements of plant and equipment worth Shs. 7 m., Shs. 4.5 m. for the quarry and Shs. 2.5 m. for the factory.

Future Prospects:

87. It is believed that limestone deposits are fast running out. Before incurring any further capital expenditure, this aspect should be enquired into.

Universal Asbestos Manufacturing Company, Tororo

88. Located in the same compound as the Cement Works, this company is engaged in the production of asbestos and plastic sheets and pipes. The installed capacities are:

Asbestos sheets:	Machine I	=	30 tonnes per day
	Machine II	=	80 tonnes per day
Asbestos pipes		=	5 tonnes per day
Plastic sheeting		=	80,000 sq.m. per annum
Plastic pipes		=	40,000 kg. per annum of PVC pipes and 60,000 kg. per annum of polythene pipes

The production performance since 1967 is shown at Table 11.10

89. Presently, the plant is not working because of lack of cement. Interestingly, the cement used is either from Hima factory or imported from Kenya, as Tororo cement is not found to be suitable because of its poor setting characteristics. Generally, a mix of Tororo and outside cement in the proportion of 1:1 is used. In the past, almost three-quarters of production was exported to neighbouring countries. This was due to a lack of substantial building activity in the country. It is expected that with an up-surge in the construction sector, the bulk of the output of the plant would be absorbed by the domestic market in the near future.

Immediate Needs :

90. Besides cement to be obtained internally, the requirements of such other raw materials as asbestos fibre, PVC materials, plastic sheeting materials etc. are estimated to be worth Shs. 9.8 m. This is for a production level of about 6,500 tonnes of AC sheets and pipes, 72,000 kgs. of plastic pipes and 7,200 square metres of plastic

sheets. The bulk of the imports would be asbestos fibre amounting to over Shs. 8.9 m. On the equipment side, it is felt that, but for one fork lift truck, any other expenditure can be deferred for some time.

Table 11.10
Production at Asbestos Works

	AC Sheets and pipes in '000 tonnes	Plastic pipes in tonnes	Plastic sheets in '000 sq.m.
1967	9.37	5.78	18.62
1968	9.87	54.29	15.78
1969	8.39	182.76	9.62
1970	14.45	260.28	19.00
1971	13.54	116.25	18.00
1972	12.31	64.76	10.22
1973	5.49	67.98	10.55
1974	5.42	26.25	6.94
1975	2.59	56.59	2.94
1976	2.41	74.95	0.54
1977	1.85	52.67	Nil
1978	1.73	15.09	Nil

Future Prospects:

91. The company requires 15,000 tonnes of cement per annum and 2,000 tonnes of imported asbestos fibre costing Shs. 22 m. for a restoration of production to the 1970 level. The company's products have to compete with galvanised corrugated iron sheets. Which is to be promoted by the Government, should be determined by, among other factors, the quantum of foreign exchange - both recurring and capital - involved in each case.

Hima Cement Factory

92. Commissioned in 1970, the operating kiln I has a capacity of 300 tonnes per day amounting to 100,000 tonnes of clinker per annum. The production performance since 1970 is shown at Table 11.11.

Table 11.11
Production at Hima Cement Factory

(in '000 tonnes)

	Clinker	Cement	
1970	43.56	45.87	
1971	59.71	57.46	
1972	42.01	39.00	(decreases due to roof collapse)
1973	65.57	66.38	
1974	70.82	62.82	
1975	42.38	50.24	
1976	42.84	45.91	
1977	38.52	40.14	
1978	- around 15,000 tonnes -		

93. The number of employees has gone up from about 350 in 1975 to about 500 now. Presently, the daily production rate is around 160 tonnes. On the day of our visit, the factory was closed because there was no power from Kilembe mines station. There are

substantial limestone deposits nearby but the company faces difficulty in obtaining gypsum from abroad.

94. The work on the Phase II expansion with a kiln of 600 tonnes capacity per day - twice that of kiln I - was started in 1975 but even after a lapse of six years and heavy payments to overseas consultants which went on changing, the kiln is yet to be commissioned. During testing trials in December 1978, over Shs. 1 m. worth of equipment was damaged and the consultants left the scene.

Immediate Needs:

95. About Shs. 2 m. worth of spare parts are needed for resuming the normal production of phase I. The commissioning of phase II is estimated to require about Shs. 10 m. worth of equipment. But it is suggested that until supplies of imported raw materials are assured, the latter capital expenditure can be deferred. The unutilised kiln II will of course put a strain on the financial operations of the company.

96. The company also suffers from a lack of technical expertise. It is of surprise that even after a decade of operating a cement mill at Tororo, the country has not acquired the requisite skills of running a very similar mill. Foreign technical expertise is required for the commissioning of phase II. It is suggested that the utmost priority be given to the training and acquisition of operating skills during the next two to three years.

Future Prospects:

97. The restoration to normal production levels is dependent upon the supplies of imported gypsum which at a production rate of 250 tonnes of clinker per day (from Phase I) will cost about Shs. 1.8 m. per annum.

General Observations on the Cement Industry:

98. Considering the falling limestone deposits and the over-aged plant and equipment at Tororo as against the potential of local mineral reserves and the relatively modern plant at Hima, the latter will constitute the major source of supply of cement in the country. The only disadvantage will be the heavy transport cost - which amounts to nearly one-fifth of total cost - as the major consumption is in the Eastern region around Kampala.

99. The location of an asbestos plant at Tororo Cement Works seems to be an error in planning, as local cement is not entirely suitable for asbestos products and supplies have to be obtained from Hima/Kenya. Even if a 1:1 mix of Tororo and outside cement is to be used, it means outside supplies of about 7,000 tonnes of cement per annum concurrent transport costs.

100. The Tororo cement mills, for grinding clinker to cement, are in a more or less proper condition. It is suggested that clinker instead of cement should be brought from Hima for use at the asbestos works, which will save on transport costs. In view of the high consumption of cement in the Eastern region, it may be worthwhile to grind Hima's clinker at Tororo to save on transport costs. For the same reason, clinker rather than cement should be imported from Kenya, both to use the spare capacity at the cement mill and to save on transport costs.

101. It is suggested that at least the second yet-to-be operational line at the Asbestos Works be shifted to Hima, and asbestos sheets be made there, especially for catering to the needs of the Western and Southern regions.

Kishenyi Deposits

102. There appear to be large reserves of heamatite ore containing about 70% iron at Keshenyi, south of Kabale. The region is not easily accessible and heavy capital expenditure would have to be incurred. But its importance in the industrialisation programme of Uganda cannot be underrated. Instead of transporting this ore to an integrated iron and steel complex at Jinja, it may be better to have a pelletisation plant at Kabale and then transport the pellets to the steel works. It is suggested that preliminary steps for a feasibility study be taken.

RUBBER PRODUCTS, CHEMICAL AND ALLIED INDUSTRIES

Dunlop (E.A.) Ltd., Jinja

103. This company was taken over by the Government in 1972. Its products are bicycle tyres and tubes, rubber solution and adhesive. Employing 160 persons, it produced 300,000 tyres and 450,000 tubes in 1978, with a turnover of around Shs. 10 m. The rated capacity is said to be 1 m. tyres and 1.4 m. tubes but the actual capacity is not likely to exceed 0.5 m. tyres and 1 m. tubes on a two shift basis.

Immediate Needs:

104. Currently, the factory is operating on one shift only because of shortage of the main raw material, rubber. Its present stock of 18,692 kg. might suffice for 50,000 tyres and tubes. This can take the production up to another month at a daily rate of 2,000, or longer if the production rate is reduced. Since there is nothing in the pipeline and it will take three to four months before the materials arrive, if ordered now, there is the prospect of its being shut for the next three months unless rubber is urgently obtained. Other stocks are not so critical, especially that of sulphur and titonium dioxide which might last for several years.

105. For producing 400,000 tyres and 700,000 tubes in 1979-80 - in consonance with the objective of restoring the normal production level - about Shs. 2 m. worth of rubber would have to be imported.

Future Prospects:

106. Raw materials worth Shs. 6 m. per annum will be required for normal scale production. The spare parts requirements are assessed at Shs. 4 m.

Tororo Industrial Chemicals and Fertilisers Limited, Tororo

107. TICAF was set up in 1962 with the participation of ICI Ltd. which pulled out later. This very antiquated plant has a rated capacity of 25,000 tonnes of single superphosphates per annum. The production has dropped from 24,800 tonnes in 1970 to 14,100 tonnes in 1975. The plant has not been functioning for the last two years. The plant for making insecticides such as cotton dip has been closed for a long time.

108. Phosphates are mined locally and sulphur is imported for making sulphuric acid. The plant is in very bad state and will require much replacement of machinery. In the past about 80% of production was exported to Kenya and Tanzania. The imports of complex fertilisers amount to over Shs. 6 m.

Immediate Needs:

109. The requirements of plant and equipment are assessed at Shs. 7 m. by a German team of consultants. There appears to be enough sulphur for six months' production. Assuming that the factory runs for only six months in 1979-80, the requirements of other materials are assessed at Shs. 1 m.

Future Prospects:

110. For normal scale annual production 1f 20,000 tonnes, the requirements of raw materials in foreign exchange would be around Shs. 6 m.

General:

111. It has been suggested that the bulk of the resumed production will be exported to Kenya. The market is felt to be assured as TICAF is the only producer of single superphosphates in East Africa. The company expects to earn profit at a production rate of 20,000 tonnes per annum in view of high price of about Shs. 1,000 per tonne and the cheap availability of phosphates. However, it will require a good deal of foreign exchange before the plant could be started and pushed up to 80% capacity utilisation.

We are not convinced that the company will emerge a net foreign exchange earner within the next two years. The matter, therefore, needs further examination before any rehabilitation programme can be recommended. In the interim, it may be worthwhile to repair the acid plant only, at a cost of about Shs. 1.5 m. and process the sulphuric acid there.

Kalamu Limited, Tororo

112. This company, a subsidiary of Tororo Steel Works for historical reasons, is engaged in making two brands of ball pens, 'Bip' and 'Rocket', the combined rated capacity of which is 18 millions per annum on a three shift basis - more than the population of Uganda. A large domestic market is not foreseen. The effective capacity is assessed to be much less.

113. The factory has been closed since February 1979 because of a blunder in operations planning. There are sufficient stocks of 'Bip' refills but the relevant mould is out of order, whereas there are no refills for 'Rocket' type whose mould is working. There are more than enough stocks of other raw materials such as polystyrene and staflene.

Immediate Needs:

114. These are assessed at Shs. 0.5 m. each for the refills and the mould for a production of 5 m. ball pens in 1979-80.

Future Prospects :

115. Raw materials worth Shs. 5 m. per annum are required for producing about 7-8 m. ball pens a year.

Lake Katwe Salt Project

116. This is a new project for producing 45,000 tonnes per annum of sodium chloride and 7,000 tonnes per annum of potassium chloride. 500 tonnes per annum of sulphur will also be produced which can be supplied to TICAF. From the material dumped, the soda ash and caustic soda can be processed later. The total cost of the project is Shs. 150 m. with Shs. 100 m. in foreign exchange. The plant is likely to be commissioned in a few months and is expected to save foreign exchange worth Shs. 50 m. in 1979-80.

117. It is suggested that sulphur from this project be used for making sulphuric acid at the Tororo plant during the interim period before the latter is completely rehabilitated. A 20 km. road link is required for connecting the project site to the main highway (see paper on transportation). The project will use fuel oil for generating process steam etc., the cost of which may be Shs. 10 m. per annum. To save this recurring burden on foreign exchange, it is suggested that the conversion of the fuel oil system to use cheap, local electric power be seriously examined.

118. The plant is likely to be run by foreign technicians for the first three years. During this period, high priority ought to be given to training.

Recommendations

119. A summary of our recommendations is contained in Table 11.12.

Table 11.12
Summary and Recommendations for Engineering and Allied Industries

Foreign Exchange Requirements (Figs. in Shs. m.)

ENTERPRISE	REQUIREMENTS IN 1979-80 Raw Materials	Spare Parts	REQUIREMENTS IN 1980-81 Raw Materials	Plant & Equipment	REMARKS
1. a. Steel Manufacturers of East Africa Ltd. Jinja	8	-	na	na	High priority; factory faces closure. Any slow
b. Imports of billets/steel to supplement input to engineering industries	8	-	na	na	down in this company has a chain effect in entire industry
2. Tororo Steel Works	30	-	50	0.1	Market to be shared with asbestos products. High priority.
3. Uganda Steel & Eng. Corp. Limited, Lugazi	1.5	25	na	na	Comprehensive programme can be delayed.
4. Uganda Hoes Ltd., Jinja	5.5	-	na	na	High priority; factory faces closure.
5. Lamps Factory, Jinja	-	0.15	2.5	na	Needs immediate technical assistance.
6. Tororo Cement Factory, Tororo	3	-	na	na	Rehabilitation can be delayed.
7. Universal Asbestos Manuf. Co. Ltd., Tororo	9.8	-	22	-	Reorganisation needed
8. Hima Cement Factory Hima - Jasese	3	12	1.8	6	High priority to Phase I production. Equipment needs of Shs. 12 m. in 1979-80 include Shs.10m. for Phase II completion - low priority.
9. Dunlop (E.A.) Ltd. Jinja	2	-	6	4	Raw material to be rushed. Factory faces shut-down.
10. Tororo Industrial Chemicals & Fertilizers Ltd., Tororo	1	7	6	na	Further examination needed.
11. Kalamu Limited, Tororo	0.5	0.5	3	-	Low priority
Total	72.3	60.65	91.3	10.1	
Say	72	61			

Notes: a) na = not assessed. The extent of requirements in 1980-81 will be dependent upon the degree of rehabilitation achieved in the previous year.

b) Wherever appropriate, a period of no/low production has been taken into account.

120. Expected Output Level

With the above estimated financial and technical assistance materialising during 1979-80, the output scenario of industries is expected to be as in Table 11.13.

Table 11.13
Output of Industries 1979-80

	Enterprise	Unit	ACTUAL OUTPUT IN 1970	1978	ESTIMATED OUTPUT IN 1979-80
1.	Steel Manufacturers of East Africa Limited, Jinja (steel material)	'000 tonnes	18.25	7.5	15.0
2.	Tororo Steel Works, Tororo (galvanised corrugated iron sheet)	'000 tonnes	11.91	0.81	6.5
3.	Ugma Steel and Engineering Corporation Limited, Lugazi	sh.m	7	10.4	
4.	Uganda Hoes Limited, Jinja (hoes)	'000 nos	1503	333	500
5.	Lamps Factory, Jinja (plastic bulbs)	'000 nos	-	30	165
6.	Tororo Cement Works Tororo (cement)	'000 tonnes	147.3	16.5	53.6
7.	Universal Asbestos Manufacturing Co. Limited, Tororo				
	i. Asbestos Cement sheets/pipes	'000 tonnes	14.45	1.73	6.5
	ii. Plastic pipes	tonnes	260.28	15.09	72
	iii. Plastic sheets	'000 sq.m.	19.00	Nil	7.2
8.	Hima Cement Works, Hima (cement)	'000 tonnes	45.8	15	60
9.	Dunlop (E.A.) Limited Jinja				
	i. Tyres	'000 nos	-	300	400
	ii. Tubes	'000 nos	-	450	750
10.	Tororo Industrial Chemicals & Fertilizers Ltd. Tororo (single super-phosphates)	'000 tonnes	24.8	Nil	-
11.	Kalamu Limited Tororo (ball point pens)	m. nos	-	-	5

At current prices, the value of the above estimated output in 1979-80 is likely to be around Shs. 450-500m.

121. Details of our recommendations are as follows:

1. Of highest priority are the basic steel and cement industries. The reconstruction programme of the economy will be affected if adequate quantities of these materials are not made available. A sharp upsurge in the demand of these products is foreseen within the next two year period of rehabilitation.

2. In the steel industry, it is suggested that:

- scrap is efficiently collected from within Uganda (especially since the recent fighting must have generated this material!)

- an increase in output be made possible through imports of scrap and if need be, through imports of billets.

- urgent steps be initiated to set up an integrated plant in view of the local availability of iron ore, especially at the Kishenyi deposits.

- the product-mix be diversified.

3. In the cement industry, it is recommended that:

a) gypsum be imported on an urgent basis for producing cement.

b) clinker be transported from Hima to Tororo for grinding there with a two-fold objective - to supply the adjoining asbestos works and to meet the requirements of the surrounding region. This will save on transportation costs.

c) if need be, clinker instead of cement be imported from neighbouring countries.

d) the capital rehabilitation programme of Tororo Works can be delayed, pending an assessment of dwindling deposits there.

e) the second manufacturing line at Asbestos Works (involving a few employees only) be transferred to Hima for producing asbestos cement sheets there.

4. Uganda Hoes, Dunlop (E.A.) Ltd., and Uganda Bags Ltd. - all making priority items - face prospects of closure for at least three months unless raw materials of steel, rubber and jute are urgently provided.

5. Operations management needs considerable improvement. Areas of particular and immediate importance are the inventory management and the establishment of repair and maintenance schedules.

6. Product rationalisation be achieved between the two units making agricultural implements. A suggested course of action is for Uganda Hoes Limited to mass produce hoes only, while Ugma Engineering Works can concentrate on manufacturing all other agricultural implements.

7. The immediate need of the lamps factory is technical assistance.

8. The operations of Ugma Works and the lamps factory be delinked from the Uganda Sugar Works and Uganda Electricity Board respectively - the first has suffered from exploitation and the second from neglect.

9. We are not convinced that TICAF will become a net earner of foreign exchange within the next two years. The rehabilitation programme of this company can be delayed pending a look into its operational viability. In the meantime, its acid plant can be made operational to produce sulphuric acid from existing stocks of sulphur.

10. In all major cases of where technical know-how from abroad is sought, a technology transfer plan be prepared to effectively absorb and if necessary adapt such know-how. Particularly in cases of extended foreign technical assistance programmes, the training and development of local personnel to acquire the requisite skills should be accorded a very high priority.

4. WOOD INDUSTRIES

S. Montsi

Forestry

122. There are about 1.5 m. ha. reserved for forestry in Uganda. About 48% is tropical high forests and 51% savannah woodland. The latter includes some 26,000 ha. of plantation forests. The savannah woodland is an important source of round wood for fuel wood and poles in the rural non-monetary sector. Commercial timber relies on tropical forests and plantations. The first and second plans envisaged extensions of about 20,000 ha. in plantations. But less than half of the target was achieved. The third plan had a 10,000 ha. target. After about half of this target was achieved the Norwegian bilateral loan agreement was cancelled and the programme came to a standstill. Nothing of significance has been done since.

123. It is estimated that about 11 m. cubic m. of fuel wood was used in the non-monetised sector for fuel wood and poles in 1976. The off-take is said to rise with an increase in population. It is estimated that by the year 2000 about 30 m. cubic m. will be required for the needs of this sector. The forestry department advises that present forests, even under the best management, would not be able to supply all industrial needs by the mid 1990s. The problem could arise earlier if industrial expansion was experienced. To avoid this eventuality the Forestry Department estimates that some extra 40,000 ha. would have to be planted. They estimate the cost of planting one ha. at Shs. 2,100. They would, therefore, require some Shs. 84 m. for the programme. The foreign exchange component of this estimate is Shs. 18 m. The programme would take 12 years, implying an average annual requirement of Shs. 7 m., Shs. 1.5 m. of which would be foreign exchange.

Production of Processed Wood

124. Up till 1973 all production and processing of forest based products was in private hands. In 1974 Government established the Wood Industries Corporation (WICO). The corporation is responsible for almost all processing of forest products in the country. There are, however, some 25 small private saw mills, all owned by Ugandans and about 500 registered pit-sawyers. The latter produce rough sawn timber which is sufficient for building and other needs in the rural areas.

125. WICO operates a plywood and veneer factory with a 340,000 sq. metres pa. capacity. The Corporation also operates a chipboard unit with annual capacity of 4,100 cu. m. No reliable figures for production exist before 1973. WICO records reveal a declining production trend since 1973. In 1978, production of sawnwood is estimated at 16,300 cu. m., about 55% of capacity. The plywood factory operated at 47% of capacity producing about 161,000 sq. m. of plywood. Chipboard production was only 198 cu. m. or 4.8% of capacity (see Table 11.14)

126. The difficulties that faced this industry are threefold. First there was a shortage of logs. Because of the ever shrinking value of the Ugandan shilling many sawmill owners and labourers found it more rewarding to revert to subsistance farming than stay in the sawmills. Lack of parts made it difficult to maintain mills in a good state of repair. Many sawmills had no alternative but to close down. Secondly there were problems of transporting logs to the factories. No new vehicles could be bought nor could spare parts be obtained to repair old ones because of foreign exchange problems. At times petrol and diesel were not available. Difficulties experienced at the factories were mainly managerial and those relating to old machinery and lack of spare

parts. The people running the companies were not experienced in the business, and had difficulty keeping the companies afloat. The deteriorating economic position of Uganda did not help. Most machines inherited by WICO were old and obsolete and required expensive maintenance. The unavailability of foreign exchange to purchase spare parts made it impossible to maintain the machines in a reasonable state of repair, and this exacerbated the problem.

Table 11.14
Recorded Production of Sawnwood, Plywood and Chipboard

Year	Sawnwood Capacity: 47,000 annual cu.m. (000 cu.m.)	Plywood Annual Capacity (000 sq.m.)	Chipboard Annual Capacity: (cu.m.)
1973	43.7	257.0	900
1974	30.0	266.0	357
1975	24.0	280.0	314
1976	21.1	240.0	220
1977	16.6	213.0	
1978	16.3	161.0	198

Source: WICO
Source: WICO

127. The problems outlined above applied also to the furniture industry. This sub-sector faced the additional difficulty of shortage of imported materials, such as glues, fabric, foam sheets, and finishing materials. As a result shortages of furniture were experienced countrywide, and this led to an escallation of prices.

War Damage

128. Fortunately forests were not affected by the war; most damage was confined to the cities. Vehicles, furniture and fittings, operational equipment such as typewriters, and a few small finished products were looted. Work on the Budongo Plywood and Veneer factory was not completed.

Issues and Resources

129. Management could not provide consumption figures, but they believe that there is a large unsatisfied market for their products. They expect the market to rise fairly sharply as reconstruction gains momentum. The immediate need is to put existing factories back into operation - first, the sawmills that had stopped producing logs or scaled down their operation, need to be revived. Approximately Shs. 2.6 m. is required in foreign exchange for this exercise. To revive the Plywood factory, the chipboard plant and the furniture workshop, Shs. 4.5. m., Shs. 6 m., and Shs. 0.65 m. respectively is required, all in foreign exchange. About Shs. 18.1 m. is requested for transport and haulage, and Shs. 78.5 m. for raw materials and working capital, Shs. 2.4 m. of this in foreign exchange.

130. The request for Shs. 78.5 m. for raw materials and working capital needs scrutiny. Time constraints did not allow detailed analysis of this request. Management agreed, however, that the Shs. 0.64 m. for cars should be given low priority. It is, therefore, not included in the two year emergency programme in Table 11.15 below. From field visits to two of the units ran by WICO, and from reports by officials in Kampala it seems the rest of the requests are justified. In the factory at Jinja I could not get any financial reports nor audits. Lack of such reports is in my view a serious omission by management. I would recommend, therefore, that management in this unit be carefully assessed and strengthened accordingly.

Intermaterial Assistance

131. The Forestry Department requests are two fold. First they request some Shs. 5m., Shs. 3 m. of which is foreign exchange for determining the quantity of trees suitable for making plywood in Mabira forest reserve. They are also anxious for the programme to expand plantations to be resumed. The former programme is included in the 1979/80 programme whereas the latter is included in the 1980/81 plan. The Norwegians could be asked to revive the plantation programme that had to stop a few years back. Assistance in the form of soft loans for the foreign exchange component of WICO needs should be considered. All assistance should be channelled through on institution that has the capacity carefully to consider WICO's request in detail and supervise progress. Either the East African Development Bank or the rehabilitated Uganda Development Corporation could play this role. Table 11.15 below aggregates the funds required.

Table 11.15
Funds Required for Forests and WICO

Programme	1979/80 (Shs. m)		1980/81	
	Total	Foreign Exchange	Total	Foreign Exchange
Forestry Department	.5	.5	7.0	1.5
Saw Mills	2.6	2.6	-	-
Plywood Mill	4.5	4.5	-	-
Chipboard Plant	.6	.6	-	-
Furniture Plant	.63	.63	.63	.63
Log Haulage and other Transport	17.46	17.46	-	-
Raw Material and Capital	78.5	2.4	-	-
Total	104.79	28.49	7.65	2.13

5. BUILDING MATERIALS

P. K. Sardana

131. This section presents a general overview of the building materials industry in Uganda, including its performance and problems during the decade 1969 - 79, assesses the needs for immediate reconstruction and rehabilitation during 1979 - 80 and takes a look at the future development. [1]

GENERAL OVERVIEW

Coverage

132. The building materials industry in Uganda manufactures:-

-iron and steel products like corrugated iron sheets, reinforcing bars, wire nails, pipes and fittings etc.

-clay and clay products like baked bricks and roofing tiles.

-cement and cement products like asbestos sheets & pipes

[1] This note is based on information furnished to the Team by the sub-committee on Building Materials. About a dozen major industrial enterprises, including those engaged in manufacturing building materials, were visited and discussions held with the operating personnel. The report based on this field investigation making recommendations for each such enterprise is contained in a separate paper.

- paint , and

- timber and timber industries.

Market

133. Most of the production is consumed within the country and exports are negligible. Within the domestic market, there are three major target segments:

- Government agencies like the Ministry of National Reconstruction and Rehabilitation and the District Administration;

- National Housing Construction Corporation

- Private building contractors and individuals.

Structure of the Industry

134. Most of the manufacturing establishments, especially in the steel and cement industries, are the large-sized (by Ugandan standards) public sector units. Their locations are mainly in the southern, south-eastern and western parts of the country because of the basic raw materials. A certain degree of integration exists within the industry, for example, the production of cement from the raw materials and the manufacture of asbestos sheets and pipes from this cement. There is no integrated complex in the steel industry stretching from iron ore processing to finished steel products but the linkage between the steel and engineering units does exist.

The Period 1970 - 79

135. Many of the firms engaged in the manufacture of building materials were once wholly or partly owned by non-citizen Asians. Following their expulsion in 1972, some of these firms were allocated to Ugandans while others were put collectively under the newly organised corporations. The inadequate expertise at managerial and functional levels resulted in a decline in capacity utilisation and a general deterioration in operational efficiency. Plant and equipment was also very old necessitating heavy maintenance expenditure. Coupled with the constraints of foreign exchange availability to import raw materials and spare parts, many of these enterprises have come to a virtual stand-still stage.

ASSESSMENT OF THE MAJOR INDUSTRIES

136. Subsequent paragraphs describe the following major industries, assess their immediate needs, and put forward plans for the future development.

Iron and Steel Industry
Cement Industry
Clay and Clay products
Paints Industry

Iron and Steel Industry

137. The set-up and activities of Uganda Steel Corporation - the virtual owner of the iron and steel industry in Uganda are outlined in Annex 11.4.

Present Status:

138. As far as pipes and fittings are concerned, all galvanised water pipes and fittings are imported from neighbouring countries. The cast iron long and short drainage pipes, manhole covers etc. are produced at Ugma Steel and Engineering Works. Casement products like windows and doors, barbed wire etc. are manufactured by Casements (Africa) Limited, Kampala.

Immediate Needs:

139. The problems facing the Uganda Steel Corporation, the Ugma Engineering Works and Casements Limited are mainly due to the shortage of raw materials and spare parts and the obsolete machinery.

140. The foreign exchange requirements of Steel Manufacturers of East Africa Limited, Tororo Steel Works, Uganda Hoes Limited and Ugma Steel ? Engineering Corporation Limited have been assessed in the section on engineering and chemicals industries. The estimates of annual foreign exchange requriements for raw materials and spare parts by other companies are as follows:

	(in Shs. m.)
Uganda Baati Limited	15
Uganda Metal Products and Enamelling Company Limited	18
Uganda Metal Industries Limited	20
E. A. Steel Products Limited	12
Uganda Steel Corporation Depot	2
The Casements (Africa) Limited	35
	102

Future Prospects:

141. Presently, the Steel Manufacturers of East Africa Limited produce steel by using scrap as the feed input. In view of the limited supplies of scrap, it is intended to supplement it with the processing of iron ore. An amount of Shs. 135 m. in foreign exchange is envisaged on this account.

142. Uganda Metal Industries Limited and E. A. Steel Products Limited have planned immediate expansion which will require Shs. 16 m. and Shs. 14 m. respectively in foreign exchange.

The Cement Industry

143. The Uganda Cement Corporation, representing the cement industry of Uganda, has the following factories under it:

Tororo Cement Works
Hima Cement Works
Universal Asbestos Manufacturing Company
and Spun-pipe Construction Company

144. The first three plants were visited and an assessment of their needs in 1979-80 as well as the future prospects is presented in the section on engineering and chemical industries above. The aggregate amount of foreign exchange required by the cement industry in 1979 - 80 is estimated to be around Shs. 55 m. inclusive of Shs. 10 m. for commissioning phase II of Hima Works.

Clay and Clay Products

145. The main company producing products such as bricks and roofing tiles is Uganda Clays, near Kampala. Also, there are a number of small scale producers.

Present Status:

146. Uganda Clays produced about 29,000 tonnes of clay products in 1969. Nine years later, the production stood at 14,000 tonnes. The fall has been attributed to the lack of spare parts.

Immediate Needs:

147. A sum of Shs. 4 m. in foreign exchange has been assessed for Uganda Clays as the requirement for importing spare parts during 1979 - 80. The rehabilitation needs of other small producers are estimated to be Shs. 5 m. in foreign exchange.

Future Prospects:

148. Messrs. Westomat, the technical managers of Uganda Clays are studying the feasability of setting up another clay products plant in Southern Uganda. The estimated cost is Shs. 16 m. out of which the foreign exchange component is likely to be Shs. 15 m.

The Paints Industry

149. There are two firms producing water and oil paints as well as putty and adhesive for the domestic market.

Immediate Needs:

150. A sum of Shs. 16.95 m. in foreign exchange has been proposed for procurement of raw materials and replacement of equipment lost during the recent fighting:-

	Shs. m.
Raw materials for paints, putty and adhesives	15.12
Spare parts, scales, brushes etc.	1.53
Miscellaneous items - office stationery, advertising materials and delivery vehicles	0.30
	16.95

SUMMARY

151. A summary of our recommendations is contained in Table 11.16.

Table 11.16
Summary of Recommendations and Immediate Requirements

Industry	Total Requirements	Local Funds	Foreign Exchange Component	Remarks
Iron and Steel Products	141.80	39.8	102.00	-
Cement and Cement Products	-	-	-	Assessed in report on engineering and chemical industries
Clay and Clay Products	9.00	-	9.00	-
Paints	16.95	-	16,95	-
TOTAL	167.75	39.8	127.95	

152. Thus an immediate assistance of about Shs. 128 m. in foreign exchange is required as estimated by the sub-committee on Building Materials.

153. In the entire exercise of assessing the aid requirements, the injection of financial inputs has not been linked with the corresponding improvement in performance in terms of increased output, profitability etc. Therefore, it becomes difficult to say what the picture will be if a certain amount is expanded or not. Non-optional utilisation of resources is a possibility. But it goes without saying that in the period of rehabilitation and reconstruction, the building materials industry has to be accorded utmost priority.

Production of Yarn and Cloth

(Yarn: m.kgs - Cloth: m.l.mts)

	Spinning Mill [1]	Nyanza		Pamba		Rayon		African	
	Yarn	Yarn	Cloth	Yarn	Cloth	Yarn	Cloth	Yarn	Cloth
1970	-								
1971	-		27.4	-	11.0		3.1	-	9.1
1972	-		28.4	-	12.5		2.4		8.9
1973	-		23.6	-	9.5		1.6		5.4
1974	0.28	4.9	22.6	1.8	9.7	0.8	1.7	0.6	4.1
1975	0.94	3.8	21.8	1.8	9.5	0.3	2.3	0.8	5.3
1976	1.48	3.6	25.0	1.4	9.2	0.3	2.4	1.0	6.3
1977	1.55	3.3	25.8	1.4	7.6	0.2	1.8	0.9	5.4
1978	1.54	2.4	21.0	0.7	4.5	0.5	1.2	0.6	3.6

[1] Established in 1968 and started production in 1974.

Source: National Textile Board

ANNEX 11.2

N T B's Estimates of Financial Requirements for 1979/80
(Shs. m.)

Spinning & Weaving Mills	Machinery & Spare Parts		Raw Materials	
	Foreign Exchange	Local	Foreign Exchange	Local
1. Spinning	4.5	-	-	4.2
2. Nyanza	7.0	-	5.0	-
3. Pamba	6.0	-	5.0	9.0
4. Rayon	1.5	-	3.0	2.5
5. African	5.0	-	6.0	8.0
6. UGIL	16.0	-	27.0	-
7. U. Garments	-	-	2.0	-
8. Blankets	7.8	-	18.0	-
9. Hessian & Jute	2.0	-	6.0	-

Data on Oil and Soap

I. OIL AND CAKE

Estimated Annual Capacity

Mills (Working)	Cotton Seeds Crushing (Tonnes)	Oil (Tonnes)	Cake (Tonnes)
1. Kakira Oil Mill	31,680	3,992	15,840
2. OK Oil Mill	24,460	3,105	12,320
3. Iganga Industries	15,840	1,996	7,920
4. Busembatia Oil Mill	13,200	1,663	6,100
5. New Budaka Mill	7,920	997	3,960
6. New Alliance Oil Indus.	7,920	997	3,960
7. Supersonic Mill	4,600	580	2,000
8. Tororo Oil and Soap	2,640	333	1,320
9. Arapai Oil Mill	2,112	266	1,056
10. Anguruma Oil & Soap Indus.	1,760	222	880
11. E.A. Oil Industries	1,680	212	840
	113,992	14,263	56,496

II. SOAP

Estimated Annual Capacity

	(Tonnes)
1. Nakasero Soap Works	6,000
2. Kakira Oil Mill	2,704
3. Iganga Industries	1,560
4. New Budaka Mill	1,560
5. Tororo Oil and Soap	730
6. Anguruma	171
7. OK Mill	100
8. E.A. Oil Industries	20
	12,845

Source: Lint Marketing Board.

Uganda Steel Corporation: Subsidiary Companies, Main Products and Foreign Exchange Requirements

Former Name	New Name	Location	Main Products	Annual Foreign Exchange Reqmnts Shs. m.	
				Raw Mtls. & Spres	Planned Immediate Expansion
Steel Corporation of E.A.	Steel Manufacturers of E. A. Limited	Jinja	Reinforcing bars, rods, small sections, wire cast billets, strip (for cotton bales) mainly from scrap metal as raw materials, bolts and nuts.	18	
Chillington Tool of E.A. Ltd.	Uganda Hoes Limited	Jinja	Forged hoes	10	4
Uganda Steel Limited	Tororo Steel Works Ltd.	Tororo	Corrugated galvanised roofing sheets.	9	
Uganda Baati Limited	No change	Kampala	Corrugated galvanised roofing sheets and forged metal household appliances.	15	
Uganda Metal Products & Enamelling Company Limited	No change	Kampala	Enamelware, beds, mattresses & Hospital equipment.	18	
Uganda Metal Industries Ltd.	No change	Jinja	Galvanised chain link fencing from imported galvanised wire and barbed wire.	5	15.67

Uganda Steel Corporation

Former Name	New Name	Location	Main Products	Annual Foreign Exchange Requirements Shs. m.	
				Raw Materials and spares	Planned Immediate expansion
E. A. Steel Products Ltd.	No change	Jinja	Welded Steel tubes and Conduits	12	14
Emco Steel & Metal Corp. Ltd.	Uganda Steel Corp. Depot	Kampala	Training and importers of finished products not produced by the companies of the Corporation	5	-