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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

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REPORT

OF THE INDUSTRIAL SECTOR REVIEW AND PROGRAMMING MISSION

TO SIERRA LEONE

Vienna, Austria
February 1992

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LIST OF ABBREVIATIONS

BSL	Bank of Sierra Leone
CSO	Central Statistics Office
EDP	Entrepreneurship Development Programme
ECA	Economic Commission for Africa
EEC	European Economic Community
ECOWAS	Economic Community for West African States
FISL	Forest Industries of Sierra Leone
GDP	Gross Domestic Product
GCP	Growth Centre Programme
IMF	International Monetary Fund
LDC	Least Developed Country
MTISE	Ministry of Trade, Industry and State Enterprise
MW	Megawatts
NIDFO	National Industrial Development and Financing Organization
NGO	Non-Governmental Organization
NDMC	National Diamond Mining Company
NOW SL	National Organization of Women in Sierra Leone
NTC	National Technology Centre
OIC	Opportunities Industrialization Centre
SLCCIA	Sierra Leone Chamber of Commerce, Industry and Agriculture
SSI	Small-Scale Industry
SALHOC	Sierra Leone Housing Corporation
WAND	Women's Association for National Development

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PREFACE

The Government of Sierra Leone and the UNDP Office in Freetown requested UNIDO to carry out an industrial sector review and programming mission, aimed at analyzing the current economic, institutional and industrial policy trends at the industry and subsector levels. The aim of the review was to analyze the problems and constraints to industrial development and, on this basis, to identify priority areas for technical assistance within UNDP's Fifth Country Programme 1992-1996.

The present report has been prepared by the UNIDO mission in close collaboration with the Government of Sierra Leone. The findings and recommendations of the mission are a reflection of the priorities of the Government of Sierra Leone as expressed in policy statements and by the officials of the Government.

The mission report is structured as follows: Chapter 1 presents an assessment of the impact of macro-economic policies and the ongoing key economic reforms on the development of industry and underlines the short- to medium-term challenges faced by industry. Chapter 2 presents a brief analysis of the resource base of the country, and Chapter 3 outlines the industrial policy framework and capacity to implement policies and programmes for industrialization. Chapter 4 presents an in-depth analysis of the industrial sector, while Chapter 5 assesses the possibilities of enhancing the role of women in the industrialization process. Chapter 6 then goes into specific industrial subsectors. Chapter 7 looks at the current situation in development co-operation and aid co-ordination.

Actions to address the identified problems are taken up in Chapter 8, where priority areas for technical assistance are presented. The formulation of projects and activities within each broad area as well as identification of resource requirements will be undertaken as an essential follow-up of this report.

The mission that visited Sierra Leone from 23 November to 14 December 1991 consisted of the following UNIDO consultants: Mr. Daniel Ndlela, Mr. Olu Omosaiye and Ms. R. Nelson-Fyle. They were assisted by two national consultants, Messrs. P. Elliot and J. Lappia, and two counterpart officers, Mr. I. Lewally and Ms. K. Barley.

The UNIDO staff members who also participated in the mission included:

- Mr. Felix Ugbor, Area Programme Officer, Africa Programme (30/11 - 14/12/91)
- Mr. Niels Biering, Chief, Non-Metallic Minerals, Ceramics and Building Materials Branch (25/11 - 2/12/91)
- Mr. Selichiro Hisakawa, Institutional Infrastructure Branch (7 - 14/12/91)
- Mr. Mohammed Kamali, UNIDO Country Director for Sierra Leone (23/11 - 14/12/91)

The Head of the Africa Programme, Mr. Shadrack N. Ndam, visited Sierra Leone (11 - 14 December 1991) and presented the preliminary report and findings to the Government at a wrap-up meeting held on 13 December 1991.

The mission would like to express its gratitude to His Excellency, Dr. T. Kargbo, Minister of Trade, Industry and State Enterprise, and his staff, as well as to Mr. F. Karemo, Development Secretary, Ministry of Finance, Development and Economic Planning, and his staff for their support. The mission is also grateful to other ministries and the development assistance partners of Sierra Leone for their advice and useful information.

Finally, the mission would like to thank the UNDP Resident Representative a.i., Ms. Zara Nuru, for her support and encouragement at all stages of the mission.

CHAPTER 1

ECONOMIC POLICY FRAMEWORK

1.1 Preamble

Since the late 1970s, Sierra Leone had been through a series of economic crises. This resulted in the General Assembly declaring it a Least Developed Country (LDC) in 1982. Yet, considering the natural resources at its disposal, especially the mineral, climatic and soil conditions conducive to the cultivation of various tropical crops, Sierra Leone is capable of developing into a verile economy. Perhaps, what is needed most and urgently too is the will to introduce and maintain sound and consistent economic management reforms. That will be the pillar on which meaningful development, including industrialization can take place.

1.2 General Overview of Economic Structure, Trends and Impact of Policies

The country's economic structure is essentially dualistic, characterized by a large traditional sector which is dominated by agricultural activities and thriving on subsistency, and rudimentary technology. It exists in tandem with a relatively small modern enclave encompassing mining, manufacturing and trading activities.

The agricultural sector including fisheries and forestry activities form the backbone of the economy accounting for 35 percent of GDP and providing employment for 66 per cent of the labour force. Next in the order of importance is the services sector with 20 per cent share of GDP and the growing wholesale and retail trade sector accounting for 17 per cent of GDP. The industrial sector is relatively small and dominated by mining activities (5 per cent of GDP) and manufacturing only accounting for 4 per cent.

The GDP of Sierra Leone increased only marginally from US$1 013 million in 1980 to US$1 182 million in 1988*. This trend reflects negative annual growth rates experienced in the period 1985-1988 and a declining contribution of the key productive sectors. Per capita GDP in 1989-90 was US$240 which in real terms represents 45 per cent of 1980/81 level.

Despite the predominant role of agriculture, overall productivity in this sector remained low and progress has been hampered by poor incentives and rudimentary technology. Output in the mining sector which traditionally provides over 60 per cent of the country's foreign exchange declined by over 50 per cent, while output in the modern industrial sector also exhibited steep decline.

The few factories in the country produce import substitutes with very high import content. Industries that are capable of processing local agricultural and other raw materials are underdeveloped. Thus, Sierra Leone ends up exporting most of its raw materials in an unprocessed state.

In view of the fact that much of the economy is "underground", the "official" economy is chronically short of hard currency. In fact, from around 1989, banks have been unable to easily honour large individual cash withdrawals.

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* UNECA, 1988 African Socio-Economic Indicators, Table 12.

Large budget deficits have become a common feature of the economy. The 1990 budget was based upon the presumption of an overall deficit of Le5.167 million which was to be financed mostly by the local banking system. This naturally added to the inflationary push in the economy, with escalating inflation rates. Currently, inflation is running at well over 100 per cent.

Sierra Leone is highly dependent on external trade. This is demonstrated by the high ratios of external trade to GDP (12 per cent) and of revenues from international trade. Diamonds remain the most important export commodity. Other exportable minerals include gold, bauxite and rutile - a rare commodity used in space technology. Mining of iron ore has ceased. In recent years, however, the contribution of diamonds to the economy has been on the decline by more than 90 per cent to 2.4 thousand carats in 1989 as compared to 1988. Smuggling and the pervasive parallel market continue to thrive.

Like most developing countries, Sierra Leone has a high proportion of debt and therefore suffers from heavy external debt servicing burden. By 1989, the long- and medium-term debt stood at US$1,016 million. A good portion of the earnings from recorded exports of goods and services are being used to service the debt. This situation, coupled with other factors, have constrained growth and development.

1.3 General Constraints to Development and Their Effects

Economic growth in Sierra Leone was one of the fastest in Africa between the 1950s and 1972, with rates averaging 7 per cent per annum. The growth was based mainly on mining, especially diamonds. The problems of Sierra Leone can be traced to a combination of domestic and external factors. On the external side, the oil crisis combined with falling prices of the country's major exports - coffee, cocoa and diamonds, led to a substantial weakening of the country's economic performance, especially its terms of trade. Other causes of the worsening external imbalances were rooted in the severe economic and financial difficulties arising from (i) erosion in financial discipline; (ii) failure to arrest the expansion in the money supply which created a liquidity overhang outside the banking system for several years; (iii) sharp deterioration in public accountability. These constraints were compounded by the weak institutional setting within the economic and administrative sectors in financial management, resource allocation, production and distribution.

There is also evidence of inappropriate policy actions. These included (a) direct and indirect state control of external and internal trade; (b) inappropriate exchange rate and pricing policies that subsidized the activities of a particular group, especially urban entrepreneurs at the expense of agricultural growth; (c) expansionary fiscal policies that accommodated large non-productive expenditures and a thriving parallel market; and (d) monetary policies that increased the money supply and inflation as well as discouraged domestic savings and investment. The deteriorating government finance situation was one of the main causes of sharp acceleration in the rate of inflation.

Among the major manifestations of the poor economic performance were the significant deterioration of social and economic infrastructures, particularly schools, hospitals and roads; persistent scarcity of foreign exchange in official channels; the rapid depreciation of the value of the Leone; and unreliable supply of water, power and fuel. There is also a

general lack of essential drugs and other basic supplies. The evidence of poverty and malnutrition, especially among children, is widespread. Prices of imported consumer goods are beyond the reach of the ordinary populace. In terms of manufacturing, the industrial base remains weak.

1.4 Marco-Economic Policy Framework

The Government of Sierra Leone, over the last few years, had initiated several macro-economic reforms which were designed to restructure the economy and to lay the foundation for economic growth. Most of the policy measures were, however, not carried through to a successful end. Indeed, the major instrument that seemed to have endured is the first National Development Plan (NDP) 1974/75 - 1978/79. The NDP was a comprehensive development plan with broad objectives and strategies at both the macro-economic and sectoral levels. A second plan was prepared but not approved. The ad-hoc nature of planning over the last ten years or more has rendered planning as a medium- and long-term tool for economic management rather ineffective. Government has, therefore, been preoccupied with short-term management objectives using policy instruments which it works out with the collaboration of the World Bank/IMF but which it sometimes abrogated abruptly.

To this end successive Government efforts aimed at restoring macro-economic stability within the context of the stabilisation programmes have been made. A comprehensive economic reform programme supported by IMF standby arrangements and supplemented by a structural adjustment facility came into force in November 1986. This programme was, however, suspended in 1987 because the Government could not keep to the programme objectives.* This was largely because the prescribed quantitative guidelines in credit ceilings, domestic and external arrears, Government expenditure, the level of banking and that of the fiscal deficit were not observed. According to the 1990 Report by the Resident Co-ordinator on the UN System's Activities in Sierra Leone, at the bottom line of these failures "has been an incapacity to come to terms with Government expenditures and the failure to recognize the need for fundamental structural change following the loss of the diamond mining/ exporting tax base since the mid sixties and the subsequent shut-down of the iron ore mining, since 1975."** The absence of a policy framework for effective diversification of the economic base of the society and, even more important, lack of consistency in Government policies and inability to implement decisions created all kinds of difficulties.

The current economic reform programme was embarked upon by the Government since 1988. It was consolidated into a three-year economic recovery programme 1990/91 - 1992/93. In general terms the main thrust of the macro-economic reform programme is the reduction of the level of fiscal imbalance by promoting greater financial discipline, liberalization of the

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* Out of 8 financial accords with the IMF since 1966, only one standby arrangement of 1979 became operative. The 1986 accord in fact collapsed within months after it was signed, See ANNUAL REPORT BY THE RESIDENT CO-ORDINATOR ON THE UN SYSTEM'S OPERATIONAL ACTIVITIES IN SEIRRA LEONE, 1990, p. 2.

** Ibid.

economy through the removal of administrative and legislative regulations, and constraining of the public sector expansion. At the macro-economic level and in preparation for the launching of a full-scale IMF supported programme, the Government has already embarked on the following self-imposed macro-economic measures:

(a) Trade liberalization of the import/export trade of all commodities (except for gold and diamond);

(b) Liberalization of prices of local as well as imported goods;

(c) Introduction of market determined exchange rates and, by December 1991, operation of foreign exchange bureaux;

(d) Establishment of ceilings for the fiscal deficit;

(e) Reduction of external arrears on interest and principal due to foreign, commercial, bilateral and multi-lateral institutions;

(f) Reduction of the size of the public sector, including privatization of those parastatals whose services can be provided more efficiently by the private sector;

(g) Movement towards the creation of an economic environment conducive to private sector initiative, particularly with respect to inflation and the mobilization of savings.

(h) Elimination of the Sierra Leone Produce Market Board's (SLPMB) monopoly on coffee and cocoa, and privatization of rice importation;

1.5 Recent Developments

At the sectoral level, the key sectors are agriculture, mining and the manufacturing sector. Agriculture will continue to enjoy priority. Government's agricultural and food policy is aiming at improving incentives for agricultural exports, maintain timely and adequate supply of rice and other food crops, and maximize revenue from the fishing subsector. The measures include the provision of rural infrastructure and improved systems for input delivery as well as price incentives. The objective is to raise the level of productivity, output, incomes and employment.

The industrial sector policy is aimed at (a) strengthening of Government capacity to administer economic policies through provision of foreign technical assistance; (b) elimination of tax exemption in all mining equipment and industrial machinery and equipment; and (c) discontinuation of the practice of reviewing ex-factory prices of all locally manufactured products. The reform measures focus on the revision of the country's Investment Code and the Development of Industries Act 1983 to provide a more transparent and supportive framework for private sector investment.

Initiatives already taken by the Government to improve the industrial environment include:*

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* GOSL/UNDP/UNIDO project DP/SIL/87/003 National Industrial Development and Finance Organization Limited (NIDFO), Report on In-depth Sample Survey of Manufacturing and Related Services Sector in Sierra Leone, prepared by S. Pattoo, CTA, July 1991.

- A selective credit policy introduced by the Bank of Sierra Leone (BSL) effective 1 May 1988 required that at least 10 per cent of credits by financial institutions be given to the manufacturing sector;

- The BSL allowed NIDFO to participate in the Credit Guarantee Scheme for small borrowers. The scheme covers extractive, processing and manufacturing ventures with an original investment in plant and machinery not exceeding Le3 million. The guarantee is about 67 per cent with 1.5 per cent fee;

- In November 1988 the Government reduced corporate and personal tax from 60.5 per cent to 49 per cent. Company dividends were also exempted from tax;

- To alleviate foreign exchange scarcity and encourage inflow of export proceeds through official channels, the 1989/90 budget required all exporters to surrender 60 per cent of their export proceeds to the BSL and retain 40 per cent with a local commercial bank;

- The BSL initiated a pilot rural bank project at Mile 91 in 1985 to mobilize rural savings and finance small farmers. Subsequently, four additional rural banks have been set up at Lunsar, Konike, Makali and Mattru Jong.

In the mining sector, the major objectives of the Government reform policy instruments are the development of the country's significant kimberlite and increasing official receipts from alluvial gold and diamond mining through a better system of licensing and marketing. In view of the poor power supply situation, the Government has also committed itself to the completion of the Bumbuna Hydroelectric Power Project and the re-organisation of the National Power Authority towards greater efficiency. Policy is also aimed at encouraging private investment in mineral development and in improving artisanal mining production through normal trade channels by streamlining and transparent licensing and export procedures.

The main policy element in trade is to increase the export bias of production and reduce the economic costs of imports. The following measures are already in place: floating the exchange rate system, abolishing of trade licenses and removal of price controls. Other policy elements still in the pipeline are: (i) establishing of foreign exchange bureaux announced on 4 November 1991*; (ii) extend pre-shipment inspection to all items, including mineral exports; and (iii) complete a review of tariff structure and initiate the review of the Industry Development Act of 1983.

1.6 Impact on Industrial Development

The economic stagflation which characterized the economy, particularly between 1985 and 1990, had a constraining impact on industrial development.

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* Public Notice, Supplement to the Sierra Leone Gazette Extraordinary Vol. CXXII, No. 66 dated 4 November 1991, Public Notice No. 18 of 1991, THE EXCHANGE CONTROL ACT, (Cap. 265)

Physical output in the modern industrial sector contracted sharply as a result of the following factors:

- The persistent shortages of raw materials and fuel due to scarcity of foreign exchange;

- The negative impact of high nominal interest rates (over 80 per cent);

- The deterioration of infrastructures, especially electricity, water and roads, and the corresponding implications for capacity utilization and production cost for industry;

- The rapid depreciation of the value of the Leone;

- Soaring rates of domestic inflation estimated at over 100 per cent;

- Negative returns on domestic savings.

The overall poor performance of the economy also seriously undermined confidence in the private sector with unfavourable consequences for investment. Between 1985 and 1988 (except 1987) there was a net outflow of direct foreign investment from the country. However, the implementation of the recent reform measures, including those currently under discussion with the Bretton Woods Institution, may provide the basis for resumption of growth in the economy.

1.7 Proposed Actions

Inspite of the numerous problems, Sierra Leone has the potential to arrest the situation, reverse the process of decline and resume on the path of growth and development. The uncertainties of the past coupled with the unwillingness of Government to pursue or keep to agreed reform programmes have tended to erode the confidence of people, including the international community. What is badly needed therefore is a well thougnt-out and sound economic management policy and the determination to keep on track. Confidence in the economy will further be enhanced with the introduction of proper accountability, proper fiscal and financial discipline and removal of administrative red-tapes.

The industrial sector can play a central role in the revival of the economy. The reason for this lies in the linkages of industry with virtually all other sectors of the economy, especially agriculture. In order, however, to release the latent energies and private initiative, the environment for private sector development has to be improved and nurtured. The level of inter-action between the public and private sector must increase. In short, the development of the industrial sector calls for a strategic management approach which involves an interplay of all the economic agents in a consultative process.

Furthermore, entrepreneurship in Sierra Leone is in dire need of a renewed recognition, if the private sector is to grow and to play the lead role expected of it. Along with this, the creation of a conducive business climate, the institutional mechanisms for training, credits, incentives and information management need to be enhanced.

Finally, adequate attention must be paid to the provision of vital infrastructures, especially energy, if industry is to be the engine of growth in Sierra Leone.

CHAPTER 2

RESOURCE BASE OF SIERRA LEONE

2.1 Preamble

Some of the major constraints facing Sierra Leone's industrial development include the inadequacy, untimeliness and inaccuracy of industrial data needed for decision-making. In industrial development, data on the resource base of a nation are essential for planning purposes and taking decisions on technological options and the development of national capacities. Therefore, it is important that the data required are available and up-to-date.

Data on the resource endowment of Sierra Leone's natural resources is sketchy and unreliable in virtually all major sectors: agriculture, forestry, mining, marine resources as well as human resources. For example, agricultural production data available in the country is not consistent. An examination of three different sources of information from the Bank of Sierra Leone, Central Statistical Digest and Ministry of Agriculture show different trends. In this chapter, an attempt is made at highlighting the country's major resource base endowments, with a view to assessing priority and strategic areas for concentration by both public and private sectors as well as the international community.

2.2 Human Resources

Overview

The human resources of a country form one of the most vital ingredients in the development process. Manpower planning and employment policies also play a key role in the facilitation of the growth process through its influence on the structure and productivity of the labour force.

The 1985 National Census put the population of Sierra Leone at 3.5 million. This was 30 per cent above the 2.7 million recorded in 1974. This gives an annual growth rate of 2.3 per cent over 1974-85. Going by United Nations estimates, the population was expected to have reached 3.82 million in 1989. However, according to UNICEF, life expectancy at birth stood at 41 years for men and 43 years for women in 1988. The rate of infant and child mortality is also high due, in part, to the poor medical facilities available.

A 1988-89 survey revealed that 68 per cent of the population (2.59 million) were of the age of 10 years and above and considered eligible to belong to the labour force. In terms of the percentage distribution of gainfully employed labour force by major sectors, 66 per cent were in agriculture and 10 per cent in manufacturing activities.

The survey also revealed that in 1988/89 the rate of unemployment was 2.3 per cent nation wide and 11 per cent for large towns. While these apparent low statistics for unemployment were related to the high labour force participation in the rural areas, it may also grossly underplay widespread underemployment and low levels of labour productivity in all sectors.

No national manpower survey has been carried out lately. Various assessments of the manpower requirements of the country have shown that there is an overall surplus of unskilled manpower, there are also simultaneous shortages of almost every kind of skilled professionals, technicians and craftsmen. This shortage is particularly acute for manufacturing enterprises. However, while the National Education System has been described as "elitist" and inadequate, the shortage of skilled manpower cannot be related entirely to the lack of formal education and training. It is also due to complex historical and economic factors.

Recent Developments and Policies

The basic tenets of manpower and employment policy in Sierra Leone are embodied in the 1974/79 National Development Plan and the Education Review Report "All Our Future" published in 1976. The general objectives of these policy documents are: (i) to accelerate the growth of productive employment; (ii) to reduce unemployment and under-employment; and (iii) to meet the needs for skilled manpower in the economy through formal and vocational training schemes at all levels.

In the area of human resource development, Sierra Leone played a pioneering role in West Africa. As far back as 1827, the famous Fourah Bay College was set up and was, in fact, affiliated to the University of Durham. The College offers various courses in engineering, humanities, general science, social science and public administration. It has recently been expanded to include law, medicine and adult education. The Njala Agricultural College, on the other hand, was established later in recognition of the need to undertake research in technologies for food storage and in the utilization of agricultural machinery. Both colleges were merged in 1969 to become the University of Sierra Leone. As far as industrial development is concerned, another very important institution is the Technical Institute in Freetown. This was originally set up to turn out middle level technical manpower, such as plumbers, electricians, civil and automobile engineers.

In general, however, the University is now a mere shadow of itself, especially in terms of physical development. The general decline in the economy has deprived all the institutions of the vital resources to enable them keep abreast of developments and research. Worse still, the course content in the University is not geared towards productive activities needed by the economy. The research being conducted should ideally be oriented towards solving social and economic problems in the various sectors.

Formal management training is provided by the Institute of Public Administration and Management (IPAM). This institute which started in 1980 as a department of the University caters for the need of middle and senior management officials in both public and private sectors of the economy. Courses offered include public administration, accountancy and finance, business and computer studies, research and consultancy in issues relating to management, education, health and development personnel.

The Sierra Leone Institute of Management is another establishment which collaborates with IPAM. As a voluntary organisation, it aims at training people for self employment. The Opportunities Industrialization Centre (OIC) is a non-profit private organization which is affiliated to the OIC of Philadelphia, United States of America. It provides management and business development courses and caters for the supervisory personnel of both the public and private enterprises.

In addition to the foregoing, there are also a number of other public and private vocational training institutions. Some of the more popular ones include the Vocational Tailoring Centre, Bouthe Technical Training College, YMCA, YWCA, Milton Margai Teachers College, Abbocco Commercial Institute, Trade Centre (Freetown) and Makama Rural Training Institute.

Factors Affecting Human Resource Development

Development of human resources has to tackle this so called "labour force participation in rural areas" as an actual and potential labour force reservoir rather then treat it with the usual and casual complacency as though these people were gainfully employed and effectively contributing to the nation's wealth.

The major factors impacting on human resource development in Sierra Leone are: (i) the size of the labour force and the absorptive capacity of the economy; and (ii) orientation of the national education and training system. The former shows itself through extreme distortions between the large surplus of unskilled labour and the low absorptive capacity of the economy, particularly in the modern formal sectors: manufacturing and mining. This imbalance between the demand and supply of labour in relation to other factors of production, mainly capital, further manifests itself through: (a) low manpower absorption and utilization (under-employment); and (b) low and sluggish labour productivity levels in all sectors of the economy, including agriculture.

These distortions are further demonstrated in the imbalance between the demand and supply of modern factor inputs, particularly technical/skilled professions starting from the middle-level vocational trained technicians, managerial and entrepreneurial skills development.

The inadequacy of the National Education System is related to its failure to provide critical linkages between formal education, i.e. white-collar career development, and the technical skills development.

For industry, the low level of entrepreneurship, especially in the formal sector, the shortage of people with management skills and the generally poor worker motivation constitute additional constraints. The poor remuneration in the public service is in sharp contrast to what happens in the enclave-type mining operations where attractive salaires are offered. They are able to recruit, train and retain their staff. The general practice in other industries, such as metal working, is to recruit untrained personnel and train them on the job. Even though the University of Sierra Leone has turned out eight generations of graduates, most of these graduates are outside of the country. Brain drain, especially in the public sector, is therefore a major problem that has to be addressed.

The Government will most probably continue to commit itself to increasing employment opportunities, promotion of labour intensive technologies, improvement in incomes and general living standards and provision of basic necessities. To be able to do these effectively, the various skills needed for the productive sectors, including technical and managerial skills, must be improved.

Recommendations

Sierra Leone needs to carry out an industrial manpower resource survey in order to plan effectively. The information obtained will assist the various institutions to re-orient their courses and to relate these courses to the actual needs of the economy. It is also recognized that, under the present circumstances where most of the institutions are short of staff, funds, books, journals, equipment and other facilities, the products of these institutions are adversely affected. In order to improve the quality of the technical and professional graduates, facilities for R&D as well as practical training, such as the one previously provided by the National Workshop, have to be provided. This calls for the rehabilitation of a number of establishments which have been closed down and closer liaison with private enterprises.

Furthermore, IPAM could be expanded to accommodate additional courses, including production management, marketing, feasibility studies, project design, quality control, strategic planning and enterprise management.

Finally, entrepreneurship needs to be nurtured in Sierra Leone. Potential entrepreneurs, especially in small-scale industries, should be identified and motivated/assisted in various ways so that they can play a more active role in the economy. It is hardly an exageration to say that there are only a few entrepreneurs available today in Sierra Leone. The unfavourable business climate has been a serious disincentive.

2.3 Agricultural Resources

Policy Framework

Agriculture is the largest sector in the Sierra Leone economy, employing about 70 per cent of the work force. In 1990, the sector contributed about 32 per cent to GDP and 25-30 per cent to export earnings*. Consequently, the Government continues to give the highest priority to agricultural development.

The basic objective of the agricultural development policy has been to attain self-sufficiency in food production, especially rice, and optimize the production of export crops. In pursuing the food processing goal, Government has intensified agricultural production programmes to enhance productivity through programmes, such as the Green Revolution, and intensified rice production schemes. The EEC integrated agricultural programmes and others are all geared to boost agricultural productivity.

The 1974 National Development Plan (NDP) as well as successive agricultural development programmes since independence have identified the following as the targets for policy objectives and priorities for agriculture:

- Increased annual growth rate in agricultural output;
- Self-sufficiency in food (particularly rice);
- Improvement of the levels of productivity, income and living conditions of the rural population;

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* Background Working Document, UNDP, Fourth Country Programme for Sierra Leone (1988-1992), Assessment Report, October 1991.

- Reduction of food imports and maximization of foreign exchange earnings through expansion of exports and import subsitution; and

- Increase in rural employment through stimulation of investment in agricultural enterprises.

However, over the years, agricultural production has declined at an annual rate of 3 per cent, while population has been increasing at a rate of 2.3 - 2.8 per cent per annum. Major crops like rice and coffee have shown steep declines.

Out of a total acreage of 7.2 million, 5.4 million acres are cultivable. Some 80 per cent of arable land accounts for uplands with relatively low fertility. Traditional cultivation is based on a low input/low output, land-extensive rotational bush fallow system. Most of the cultivated land is under food crops which include cereals, root and rubbers, cocoyam, and fruit and vegetables. The most important food crops are rice, cassava, yam, groundnut and leafy vegetables, e.g. cassava and potatoe leaves.

Rice

The production of rice, the most important crop in Sierra Leone, has declined from an estimated 630,000 tons of paddy in the second half of the 1970s to 500,000 tons 10 years later. The projected annual average for 1988-1991 is 518,000 tons. To meet effective demand, rice imports are between 50,000 tons and 90,000 tons annually. Yields have remained low, averaging 600 kg per acre for upland rice and 1,300 kg for swamp rice.

Coffee, Cocoa and Palm Produce

The main cash crops for export are coffee, cocoa and palm products. The current annual production is quite low: 290 kg for coffee and 140 kg for cocoa. Both account for 90 per cent of agricultural export. Official exports of palm kernels have fallen drastically to zero. The potential for increased production is, however, still there.

Oil Seeds

Given the climatic and soil conditions of Sierra Leone, certain oil seeds and nuts can be produced in sufficient quantities to serve as raw materials for vegetable oil industries. Research should be undertaken in order to achieve increased production of cotton seeds, groundnuts, sunflower, soya beans and other seeds. Coconut is another plant which thrives but which is not fully exploited.

Fish

About 75 per cent of animal protein intake in Sierra Leone is fish. The marine resource has a potential biomass estimate of 1,000,000 tons with a maximum allowable catch of 300,000 tons. From this estimate, the following can be exploited annually without damage to the resource base*:

- Pelagic agencies : 120,000 tons
- Shrimp : 2,500 tons

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* National Seminar on Fishery Industries Development, November 1991, Freetown.

- Tuna : 15,000 tons
- Demersal species : 18,000 tons

Although aquaculture is not widely practised, an additional 16,000 tons per annum of fish is obtainable from inland fisheries. It is estimated that the national artisanal fish catch industry has declined with consequences for a low per capita annual fish supply.

Livestock

The livestock subsector with an estimated 400,000 goats, 30,000 pigs and nearly 450,000 cattle is an important national resource. With a growing population, the demand for meat and dairy is growing and, thus, the Government has had to import the shortfall. Production is largely handled in the traditional way and therefore the animals are susceptible to diseases. The need for modern animal husbandry and provision of drugs and vaccines cannot be over-emphasized.

TABLE 2.1

PRODUCTION OF MAJOR AGRICULTURAL CROPS
('000 tons)

AGRICULTURAL CROPS	83/84	84/85	85/86	86/87	87/88	88/89	89/90
Benniseed	1.0	2.1	1.7	1.8	2.0		
Cocoa	12.5	16.6	18.6	20.9	9.0	7.0	10.0
Coffee	18.0	26.0	23.1	24.2	25.3	15.0	9.0
Ginger	1.9	0.9	1.6	1.0	1.0		
Groundnut (shelled)	10.5	9.5	18.1	14.7	15.5	19.0	18.0
Kolanuts	5.4	5.5	4.6	4.1	3.6		
Palm Kernels	40.0	39.5	37.6	36.9	36.1	30.0	30.0
Palm Oil	48.5	51.0	49.3	50.0	50.7	44.0	44.0
Piassava	4.2	3.1	4.0	4.5	4.9		
Rice (Husk)	460.2	504.5	430.0	525.0	465.7	420.0	430.0
Cassava (Manioc)		100	100	113			

SOURCE: Annual Statistical Digest. 1990 Edition. Central Statistical Office, Freetown; and FAO forecasts, in Shell, Economic Intelligence Unit Profile, 1991 - 1992. Sierra Leone.

Major Constraints

The major constraints to the full exploitation of agricultural resources is underlined by a weak macro-economic policy environment within which agricultural activities take place. These constraints are manifested in:

- Weak institutional capacity, such as inability to formulate timely and attractive producer prices; lack of access to agricultural inputs and credit; and inadequate marketing and transport infrastructure;
- High inflation and shortage of foreign exchange and imported inputs;
- Weak linkage between agriculture and industry, especially in the area of agriculture as a provider of raw materials inputs for industry and industrial products (fertilizer, etc.) as input to agriculture;
- Poor production techniques and inappropriate technology;
- Inadequate means of transportation, handling and storage;
- Shortage of trained agricultural manpower;
- Limited processing capacity;
- Low and fluctuating world prices for exports;
- Ineffective linkages between research and extension;
- Severe farm labour shortage during the peak seasons;
- Marginalization of women, inspite of their key role in all farming activities;
- Accelerated land degradation and depletion of forest resources;
- Reduced consumer purchasing power; and
- Parity prices in neigbouring countries conducive to unrecorded trans-border trade and excessive large trading margins at the cost of both consumers and producers.

A resolution of most of these problems is vital to the restoration of sustained growth of the sector in order to assure self-sufficiency in food production, strengthening the raw material base of the food sector and promoting avenues for expansion of the food industry.

2.4 Forestry Resources

It is estimated that 60 per cent of Sierra Leone was formally covered by closed high forest, but only 5 per cent of such forest which could support wood processing industries remain today. This situation underlines the need for productive forests to be brought under proper management. These forests are located largely in the Eastern Province but with some reserves in the Western area. The rest of the country is covered with secondary bush.

TABLE 2.4

SIERRA LEONE'S DISTRIBUTION OF FORESTRY RESOURCES

Forest Type		Area (000 ha)	In %
1.	Closed high forest	365	5.8
2.	Secondary forests	261	4.1
3.	Forest regrowth	3 774	59.8
4.	Savanna woodland	1 619	25.7
5.	Mangrove and associated forests	286	4.5
6.	Plantations	4	0.1
	TOTAL	6 306	100.0

Source: Forestry Action Plan, Freetown, 1991.

The most significant characteristic of forestry resources is their depletion over time. Of the original 6,300,000 ha covered by forestry, only 365,000 ha (5.8 per cent) remain as closed high forests. Agricultural activities (shiffing cultivation, cattle rearing) have modified the vegetation patterns*.

The country's forest cover is rapidly being depleted, due to human activities and poor land use practices, particularly bush fallow. The consequences of a growing population are increased pressure on forest resources and shortened fallow period. decline in food production and risk of severe environmental degradation.

The situation calls for measures which will ensure the regeneration of forests and plantations. Fast growing trees, such as gmelina, can be grown in many parts of the country. These, in turn, can give rise to new wood-based industries.

2.5 Mineral Resources

Non-Metallic Minerals

The importance of the minerals sector to the economy of the country is beyond question. Mining and export of diamonds, gold, rutile and bauxite account for a very large proportion of the export earnings and contribute their fair share to the national GNP (6 per cent) as well as towards employment generation.

However, the high unit value of these minerals tend to overshadow the significance of the non-metallic minerals which, in terms of volume and potential contribution to generate value added through low investment demanding decentralized manufacturing operations, merit a great deal more attention than they have been given so far.

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* Joint Inter-Agency Forestry Sector Review Mission, Sierra Leone, Terminal Statement, FAO, Rome, 1991.

The geology of Sierra Leone is dominated by granites, gneisses, gabbros and pre-cambrium gneisses, and schists which, in addition to the above-mentioned minerals, also contain a wide variety of less explored but potentially economically important minerals, including corundum, fluorite, graphite, ilmenite, rutile, sillimanite, nepheline syenite, talc and vermiculite. The weathering of the rocks has also lead to the creation of more recent alluvial deposits along the coast and in-land valleys.

Some of these deposits are already well documented, especially clays, laterites and granitic rocks, and their exploitation could be initiated without much delay, especially since the mining and processing technologies involved are relatively simple and inexpensive and a widespread domestic market for their products exist.

Other minerals would require some initial further exploration before they would be ripe for commercial exploitation. Such are the economically insignificant, but for the small-scale building material industry interesting, deposits of gypsum and limestone. The ease and low economic risk of starting artisanal operations producing plaster of paris and hydrated lime and a range of derived products seem to justify immediate initiatives for their economic exploitation.

Metallic Minerals

Sierra Leone is fairly well endowed with metallic mineral resources. Precious metals, such as diamonds, bauxite, rutile and gold, accounted for 80 per cent of official exports in 1989. The country's largest export commodity is diamond, and this is traditionally mined by opencast in the Eastern Province by the National Diamond Mining Company and individual alluvial miners. Since 1981, plans have been afoot to raise diamond production with the development of an underground kimberlite mine with an estimated annual yield of 750,000 carats. A United States based company is now exploiting the deposits at Koidu. Some 314,000 carats were produced in 1987, but dropped to 28,000 carats in 1988. The massive increase in smuggling has denied the Government the revenue from the mineral.

Sierra Leone is one of the few places in the world where rutile is available. In 1988, the country exported some 100,000 tons of rutile.

The country also exported iron ore until 1985 when, due to a number of problems, the company exploiting the metal pulled out. Nigeria is said to be negotiating to re-open the mines at Marampa.

The output of gold in 1989 was recorded as 2,400 oz. Like diamond, smuggling is adversely affecting the exploitation and marketing of this commodity.

2.6 Energy Resources

Due to paucity of officially published data on the energy sector, the following information on energy relies mainly on the findings of the World Bank mission of November 1989, a report of the Joint UNDP/World Bank Energy Sector Assessment Programme of October 1987 and a mission report of the UNDTCD of June 1991.

Total gross energy consumption is estimated at 1.16 million tons of oil equivalent (TOE) of which 0.213 million TOE is commercial energy. This is equivalent to a per capita commercial energy consumption of 0.058 TOE.

According to energy consumption by sectoral distribution, the transport sector is the major consumer of petroleum products, accounting for 49 per cent, followed by households (24 per cent), industry (15 per cent), agriculture (6 per cent) and mining (6 per cent). The industry sector, including commercial enterprises, consumes electricity accounting for 40 per cent, followed by mines (38 per cent) and households (22 per cent). The public sector power supply to Sierra Leone comes from hydro and thermal power stations.

In 1989/90, the public power supply system comprised 72 MW of installed capacity of which less than 20 MW was in operation, generating approximately 70 GWH annually. The transmission and distribution losses are estimated at 35-40 per cent, including non-technical losses arising from illegal connections and meter readings. Reliable public sector power supply is extremely limited to the Western area and, during 1991, virtually all the public power supply has been negligible in the Western area. For instance, power supply ceased to exist from May to July. Electricity supply was experienced by only a few areas in August to October 1991.

The supply of electricity in provincial areas is available only in Bo, Kenema, Njala and Lungi. This is complemented by private sector energy production from locally available wood fuels, either dried sticks or charcoal, and imported gasoline, kerosene, diesel oil, LPG and other fuel oil. Most of the households depend on charcoal and fuel-wood for cooking and kerosene for lighting. Those who can afford it use LPG for cooking, in addition to charcoal and fuel wood, and diesel for electricity generation.

The industry sector operates own electric generators as the major source of power supply. Private electric generator units are assumed to comprise approximately 60 MW. Annual supply of fuel wood is estimated at around 950,000 TOE, including about 40,000 TOE of charcoal.

Following a 3 per cent per year growth rate in 1970's, consumption of petroleum products declined from 172,000 tons in 1980 to 161,000 tons in 1989 caused by declining availability of foreign exchange and procurement problems.

Currently, discussions are being held to rehabilitate the Kingtom hydro-power station by EEC and GTZ on an emergency basis with the provision of spare parts and training of personnel. The emergency rehabilitation project is expected to start early 1992. Italy is also funding the Bumbuna hydro-power station which started in early 1990. The Government is also pursuing the construction of mini-hydro projects at Binkolo, Kambia, Moyamba and Mowoloko. The projects are in progress.

Furthermore, for the medium term, consultations are going on with the World Bank to rehabilitate the electric distribution system in the Western Area through training of the personnel of the National Power Authority (NPA), making NPA autonomous, and maintenance and rehabilitation of generation facilities. The project is expected to help improve reliability and adequate public power supply in the Western Area and reduce the costs associated with private electric generation, thereby releasing foreign exchange for other use. Under the World Bank project package, the Government will develop an energy sector master plan and improve policy making and energy sector management capabilities.

If the ongoing energy sector rehabilitaton programme would proceed, the emergency rehabilitation will be completed in 1992. Full rehabilitation will be implemented over the period of 1993-1994, and the Bumbuna project and KHD

set rehabilitation project will develop over the period 1995-1996. Maximum demand for electric energy will increase from 31.6 MW in 1991 to 53 MW in 1996. Whereas installed supply capacity will increase from 7.5 MW in 1991 to 75 MW in 1996, or firm supply capacity from 4.5 MW to 59 MW, actual power generation will depend on the level of rain fall in the 1995-1996 period.

Prospects for increased and reliable power supply will depend heavily on: (i) designing of a national power policy by the Ministry of Energy, Power and Labour; (ii) privatization of power generation and the sale of the electricity to main grid as well as competitive efficiency of public sector power generation; and (iii) implementation of increased autonomy of the National Power Authority and its improved electricity distribution management capability, including imporved tariff collection efficiency at a self-sustainable level.

The medium-term prospect is that, though still insufficient, there will be an increased supply of public sector electricity to the industry sector, mainly in the Western Area, by 1996/7. The tarrif will be higher at the level which will make the operation of NPA sustainable without heavily depending on Government subsidies as well as at the level to cover the costs of generation. Use of private electric generators would not be replaced by the public supply of electricity until consumers are convinced that the public sector electricity supply will be reliable for the foreseeable future. This implies that the foreign exchange to import fuel may not decline significantly in the immediate future.

Proposed Actions in the Energy Sector

(i) The above analysis has implications for industrial development. Medium- to large-scale industries that consume a lot of energy may not benefit from national grid until a few years from now, except they provide their own electricity;

(ii) Measures should be taken to improve efficiency in the use of energy by existing industries. This can be done through a proper energy audit and introduction of energy conservation measures/technology;

(iii) Industries in the same locations should be encouraged to pull their resources together and, if possible, practice electric power sharing;

(iv) Other forms of energy, including solar and biogas, should be looked into, especially for use in rural areas;

(v) Simple devices, such as coke ovens, should be introduced in the rural areas, where fuelwood is the norm.

CHAPTER 3

INDUSTRIAL POLICY FRAMEWORK AND CAPACITY TO IMPLEMENT AND CO-ORDINATE INDUSTRIAL POLICIES

3.1 Historical Development of Industrial Policies, Objectives and Strategies

Sierra Leone's post independence policy instrument for the promotion of industrial development was contained in the Development of Industries Ordinance of 1960 and the creation of the Wellington Industrial Estate where essential infrastructural facilities were provided at concessional rates. Development certificates were issued to those industries that were certified as contributing to the development of indigenous resources, utilization of manpower resources, and generation of economic activity. The 1960 Ordinance emphasized import substitution industries for domestic consumption. These industries were granted concessions with respect to duty free importation of raw materials and equipment. Various tax concessions for periods of up to five years were granted. However, the benefits that accrued to the economy in the form of new employment and savings of foreign exchange were often outweighted by the costs to the economy in the form of higher prices, lower-quality goods and loss of tax revenue through fiscal concessions.

In the National Development Plan (NDP) of 1974/75 - 1978/79 a new policy measure was instituted for the promotion of industrial development. This new measure was the result of past experience of relying on import substitution as a strategy for industrial development. Essentially, the new policy emphasized the development of industries based on available natural and manpower resources, both import-substituting and export-oriented, such as agro-based and other processing industries. It was realized that import substitution by itself was limited and insufficient as a strategy for sustained industrial development.

The principal objectives of industrial development as stated in the NDP included the following:

(a) Initiating and sustaining a process of rapid industrial growth;

(b) Mobilizing/generating resources, including financial and foreign exchange, human resources and technology for development;

(c) Generating substantial employment opportunities;

(d) Establishing beneficial linkages of raw material development and local processing;

(e) Making significant contributions towards foreign exchange earnings through export promotion and import substitution;

(f) Developing indigenous entrepreneurship, managerial and labour skills; and

(g) Alleviating rural poverty by stimulating agricultural production and encouraging artisanal activities.

The 1974 plan also gave priority status to: (i) agro-based industries and others based on natural resources; (ii) labour intensive industries; (iii) industries which aid expansion of exports and development of the traditional agricultural sector.

In 1979/80, the Government put less emphasis on long-term development planning in favour of sectoral or project planning with the responsibility for policy formulation left to the sectoral ministries. The Ministry of Development and Economic Planning (particularly the Central Planning Unit) became a co-ordinating centre. This also saw the Ministry of Trade and Industry playing the lead role in the process of industrial policy formulation and implementation.

The Development of Industries Act of 1983 replaced the 1960 Ordinance. The new Act thus became the major instrument guiding the development of industries in the country. Essentially, it was a review of the old Ordinance but included new incentive measures to local and foreign investors, such as:

(a) Exemption from customs duty payable on capital equipment, intermediate inputs and raw materials;

(b) Tax relief and capital allowance;

(c) Guarantee against nationalization;

(d) Certain rights to repatriation of capital and declared profits or dividends;

(e) Eligibility to export credit guarantee scheme;

(f) Export tariff exemption under a customs union arrangement of the Mano River Union; and

(g) Preferential treatment with respect to the granting and processing of import licences.

The 1983 Act also accords highest priority status to export-oriented, resource-based industries and those resource-based industries designed to meet local requirements. These are followed by the building material industries; export-oriented industries partly based on imported materials and services; and import substitution industries with the capacity to save or earn foreign exchange and producing domestic value added not less than 30 per cent of the finished product value.

3.2 Current Status of Industrial Policy

In the absence of a new National Development Plan to replace that of 1974/75-1978/79, the Government, with the assistance of the IMF, turned to medium-term planning. These plans are in the form of Public Investment Programme (PIP) for the period 1983-1986 and 1986/87-1988/89. Among other things, the 1983-1986 PIP calls for a rapid expansion of the modern industrial subsector with emphasis on: (i) the promotion of agro-based industries and; (ii) the efficient utilization of installed capacities in existing industries and the encouragement of labour-intensive assembly units.

As part of the economic recovery and rehabilitation programme, the PIP of 1986/87-1988/89 outlined the national objectives for the industrial sector as:

(i) Mobilizing domestic and foreign resources and technology for industrial development;
(ii) Generating substantial employment opportunities;
(iv) Alleviation of poverty;
(v) Satisfaction of basic needs of the people; and
(vi) Reducing regional disparities.

In particular, the Government's immediate task is one of assisting recovery of existing viable enterprises and restructuring the sector to bring it in line with the natural resources of the country.

Since July 1990, the Government has produced another Policy Framework Paper (PFP), jointly prepared with the staff of the World Bank and IMF under the current Structural Adjustment Programme. The PFP outlines the Government's objectives for the medium term and also reflects agreements reached between the Government, the Fund and the World Bank on the adjustment programme. Priority is being given to the improvement of the overall investment climate in Sierra Leone, reviewing the investment code and tax structures, together with reassessing the incentive structure for private investment as provided for in the Development of Industries Act of 1983, and lessening the level of administrative intervention and discretion within the industrial sector, through the complementary policy of liberalization.

3.3 Shortcomings of Industrial Policy

(i) Under the 1960 Ordinance, the objectives of generation of economic activity were taken to mean the physical establishment of factories and plants without other matching factor endowments. This meant heavy reliance on foreign investment and management, resulting in industries that tended to: (a) cater for the needs of a small expartriate community and local elites; (b) heavily depend on imported inputs, up to 80 per cent of gross output taking energy inputs into account; (c) be unable to achieve economies of scale, and (d) bias towards capital intensive technologies.

(ii) Together with its string of incentives, the 1983 Act had stringent and cumbersome controls. Thus, for example, it takes a long time for investment proposals to be approved by the Project Approval Committee. The level of descretion exercised by the Committee, indeed, turned out to be a disincentive.

(iii) Despite the predominance of the small-scale industries, this sector has not been considered important for preferential incentives, and has thus suffered from relative neglect in the past, as emphasis has been placed on the promotion of medium- to large-scale industries.

(iv) There is an absence of adequate protection to newly set up industries using domestic raw materials and satisfying domestic demand.

(v) There is a lack of incentives for industries undertaking expenditure on technology research.

(vi) There is also a lack of a clear-cut policy on technology development as well as R&D of relevance to industry.

(vii) There is an absence of any statement on incentives for industries which contribute towards abating pollution of the environment.

(viii) The 1983 Act is short of anything on quality control of industrial products and raw material inputs. The establishment of a Bureau of Standards and Quality Control has yet to materialize.

(ix) There is no clear-cut pronouncement on the role or any institutionalized mechanism for the involvement of the private sector in productive activities.

3.4 The Role for the Public Sector

Government Ministries

The Ministry of Trade, Industry and State Enterprises (MTISE) through its Industrial Development Department plays the leading role in formulating and implementing plans and policies geared towards achieving industrial growth. MTISE is also responsible for monitoring the operations of all industrial establishments and for supervising the development and implementation of industrial development projects at the sectoral level.

Other establishments which are involved directly or indirectly in industrial development include the Ministry of Finance, Development and Economic Planning; the Ministry of Agriculture and Natural Resources; the Ministry of Land, Housing and Environment; and the Bank of Sierra Leone.

With the involvement of the International Monetary Fund in the management of the economy under the Structural Adjustment Programme, the Ministry of Finance and the Bank of Sierra Leone have now assumed the leading role in formulation of short-term macro-economic policies, including industrial policy. As indicated earlier, the various public investment programmes, the Policy Framework Paper, the budget speeches, etc. are now the principal signalling devices for Government policy on industry.

The Development Part of the Ministry is the central co-ordinating organ for industrial development at the national level. It is also responsible for preparing the five year national development plans, co-ordinates, monitors and evaluates the implementation of development projects of the sectoral ministries and departments. The Central Planning Unit, in co-operation with the Industrial Development Department of the Ministry of Trade and Industry, are responsible for industrial projects and also for monitoring and evaluating their performance at the national level. The annual development budget is the instrument through which financial allocations are made towards the industrial sector development.

The Ministry of Trade, Industry and State Enterprise does not have sufficient manpower nor the technical capability and capacity to initiate, direct and monitor industrial development. Indeed, MTISE needs a new orientation, since it has dispensed with import licence administration. The focus should be more in the areas of economic analysis, policy formulation, project identification, implementation and evaluation. These call for professionalism on the part of the staff. The relevant tools and equipments to undertake the new assignments, including information data base, vehicles, office space, etc. need to be provided.

With regard to the development of small-scale industries, the division of MTISE in charge of this subsector has to be better staffed and equipped. The division's work has to be felt nationwide in terms of policy formulation, implementation, counselling, entrepreneurial development, funding of investment and marketing of products.

3.5 The Bank of Sierra Leone (BSL)

The Bank of Sierra Leone (BSL), established in 1964, is the central bank of the country. The main thrust of its activities are therefore in keeping with traditional central bank function, i.e. serving as the Government's bank; taking the responsibility for the design, implementation and monitoring of monetary policies and instruments in the country; servicing the country's balance of payments; and supervising the banking and financial system.

While the policies and instruments of the central bank are implemented in the context of macro-economic management, they also impact significantly on the manufacturing sector. This refers in particular to:

(i) Exchange rate policies through their effect on availabilily of foreign exchange for importation of raw materials, spare parts and repatriation of profits capital, etc;

(ii) Counter inflation policies through their effect on prices, real earnings on capital and long term investment planning;

(iii) Interest rate policies through their effect on the cost and availability of credit and investment finance.

The bank therefore monitors the impact of these policies on the manufacturing sector and interacts with the Chamber of Commerce, sectoral ministries and other institutions regarding the development of the sector. An example of such co-operation is a credit guarantee scheme under which the BSL provides a guarantee to commercial banks and NIDFO against default on their loans to small- and medium-scale enterprises.

Nevertheless, both the BSL and the Ministry of Finance have the onerous responsibility of planning and implementing policies to curb deficits, growth of money supply, inflation and smuggling of precious minerals. More importantly, measures have to be introduced by BSL to ensure an effective foreign exchange management.

3.6 National Development Bank (NDB)

The National Development Bank (NDB) is the only bank responsible for development banking. It was established in 1968 to cater for the needs of entrepreneurs in industry, agriculture, commerce and the exploitation of natural resources. Due to bad debt, the bank had difficulties and was, in fact, dormant till 1986, when it was reorganized. Since then, it has become active. The NDB is, however, equally affected by the general downturn in the economy. Its development activities are at a low ebb. The bank personnel and facilities need to be enhanced considerably. Finally, the operations of the bank should be reviewed to enable it offer facilities to small-scale entrepreneurs.

3.7 The Investment Promotion Unit (MFNDEP)

The Government of Sierra Leone is keen to: (i) shift emphasis from consumption to investment, especially by the private sector; (ii) reduce regional disparities; (iii) generate employment; and thereby (iv) alleviating poverty.

In order to create the enabling environment for the promotion of investments, the Development of Industries Act 1983 is being reviewed.

In consideration of these issues, the Government is keen to set up an Investment Promotion Unit as a parastatal within the Ministry of Finance, National Development and Economic Planning. The Centre will play a key role both in investment promotion and in the acquisition of technology. It will play the co-ordinating role in these matters which are currently diffused among various bodies.

3.8 The Export Promotion Council

The performance of the external trade sector in the economy of Sierra Leone is difficult to analyze. This is due mainly to the existence of a large "unofficial market". The traditional export commodities include cocoa and coffee. Minerals, such a diamonds and gold, however, contribute much more to the economy. Due to the thriving smuggling activity and the pervasive parallel foreign exchange market, the Government does not derive most of the revenue from the export of these commodities and minerals.

In order, however, to better organize its export market, the Government enacted in 1981 a law which sought to establish the Export Promotion Council. The said Council has never been operational. Under a new project (SIL/89/004), ITC/UNCTAD/GATT are currently assisting to revive the Council which will be a parastatal under the Ministry of Trade, Industry and State Enterprise.

For Sierra Leone to be competitive in the international market, industry has to produce high quality goods and efficiently.

3.9 Standardization and Quality Control

The Ministry of Trade, Industry and State Enterprise has a unit which handles issues related to weights and measures. On the equally important areas of standardization and quality control, there is no national body which establishes and monitors standards. This certainly has serious implications for industry and for exports as well as for imports. With the liberalization policy, Sierra Leone has been importing various commodities without adequate safeguard.

3.10 The Role of the Private Sector

The Sierra Leone Chamber of Commerce, Industry and Agriculture (SLCCIA) was established in 1962 and has a current total membership of 250.

The only other private sector agency of note is the Manufacturers' Association of Sierra Leone. All the members of the Manufacturers' Association are also members of the Chambers.

Out of a budget of about Le 10 million , Le 3.8 million is raised through subcsriptions and the rest through fees received from attendance at

meetings, hiring out of its conference room facilities and sale of publications. Extra budgetary resources have been raised through technical co-operation activities with United Nations agencies and the EEC. Thus, the SLCCIA is currently in the process of restructuring and strengthening its institutions with the assistance of funds from the UNDP.

As the Sierra Leone economy is being decontrolled and becoming more and more market-oriented and ushering in growing interdependence in the economic management, the private sector and especially the Chamber is beginning to play a key role in economic development. As a national body representing the private sector the SLCCIA's principal roles are to :

(i) Interact with Government and represent its members by:

- Making representations to Government at the highest political and technical levels on behalf of its membership;

- Influencing policy formulations and presenting well formulated recommendations to the Government, offering alternative policy options and acting as the main liason between Government and the private sector;

- Organizing business forums at frequent intervals to create effective dialogue between policy makers and the business community on matters affecting business and on proposals for new legislation, plans and policies affecting the direction of the economy;

- Initiating private sector advisory groups/think tank/foreign trade councils, to advise Government on issues of private sector development, and also to undertake work on streamlining the existing regulatory framework which will create an environment conducive to private sector development.

(ii) Provide a channel to access trade information for the private sector in Sierra Leone and for the West African subregion in general and to:

- Function as the most reliable authority on trade information, industry regulations, changes in legislation affecting private sector, customs and excise duties, trade facilitation, rules of origin, price information, incentives for investment, market trends, etc.;

- Collect and disseminate trade information through its newsletter and other channels;

- SLCCIA has been identified as the national focul point for the West African Trade Information Network (TINET), an information service which aims at promoting intra-regional trade among some anglophone countries (Nigeria, Ghana, Liberia and Sierra Leone), with the subregional focal point being located in Ghana.

Following a preparatory assistance by UNIDO, it has been determined that SLCCIA can be strengthened to play a more active role. Its capacities can be improved in the areas of: (a) research, information and consultancy services; (b) providing assistance for the development of the small- and medium-scale enterprises; and (c) undertaking effective trade promotion activities to assist the business sector in trade expansion, particularly in

intra-African trade activities, such as undertaking well-planned trade missions to the African markets, organize trade fairs and buyer/seller meetings for selected products.

3.11 Development of Technology

As indicated earlier, the industrial base in Sierra Leone is very weak. It is not possible at the moment to adapt or develop machinery or equipment locally. The supply of equipment components and spares is largely through importation. With the economic downturn, the few repair and maintenance workshops have been closed down and, thus, compound the situation. Even before they closed down, they maintained weak horizontal linkages, as evidenced by the total lack of subcontracting.

In the past (1985), the Ministry of Trade, Industry and State Enterprise conceived the idea of an Appropriate Technology and Design Development Centre which would involve the Engineering Faculty of the University of Sierra Leone. This is in realization of the need for adaptation and development of machinery, experimentation and application as a necessary tool for technology development. The centre was to be provided with facilities, such as mechanical workshops, heat treatment and mechanical laboratories, tool design, including press tools, and other facilities.

Two years later (1987), a new proposal was made for the establishment of a National Technology Centre (NTC). The country was concerned about its inability to help adapt technology and to ensure better use of local raw materials. Furthermore, the lack of technical infrastructure and manpower was identified as another major constraint.

The NTC was therefore proposed as a multifunctional institution with the following objectives:

(i) To improve use of industrial capacity and performance and stimulate recovery and growth of industrial operations;

(ii) To establish and strengthen the national capacity to use and adapt available technology to the current needs of the country;

Emphasis of the NTC was to be placed on working out recommendations for better performance of industry, product design and manufacture of prototypes, preparation of standards, testing the quality of products and inveasing qualification through training. It was stated that the aim "will be to increase the utilization of resources available: industrial capacities, local raw materials, skilled labour and entrepreneurial ability."

The NTC was envisaged as a parastatal with four divisions, including R&D, product design and manufacture, standardization and quality control, and training and industrial information.

As it happened, neither the Appropriate Technology and Design Development Centre nor the National Technology Centre materialized, due perhaps to scarcity of foreign exchange and lack of expertise.

3.12 Engineering Industries

The National Workshop was once the largest metal working establishment in Sierra Leone and the Mano River Union. When Sierra Leone had a national railway, the workshop handled the servicing of the rolling stocky locomotives

and other equipment. The railway was dismantled in 1971 and, since then, the National Workshop gradually deteriorated, due to neglect and personal interests. The National Workshop had various machines used in the machine shop, plating shop, saw mill, foundry, pattern shop, blacksmithry, tool room and welding room. Until lately, some jobbing was carried out in the workshop for the production of agricultural implements (hoes, axes, machetes, shovels, palm oil presses, digesters, cassava graters, corn shelters, rice shelters and threshers, ploughs, etc). They also produced steel doors, window bars, flush (wooden) doors, concrete block making machines, coal pots, diamond washing jigs, mining buckets and picks, etc. Today, the National Workshop is a mere shadow of itself. It has fallen into disuse. Worse still, no training is being conducted in the premises.

Several studies by international agencies including UNIDO were conducted to turn the National Workshop into a productive facility answering to the needs of the country. Finally in 1984 the facility was privatised by establishing a limited liability company and transferring 60 per cent of the shares to private individuals, with the Government retaining 40 per cent of the shares.

The engineering industry which basically supplies and services the other industries can be examined under four groups; casting, forging, machining and joining.

(a) Casting

There is no operational ferrous foundry (iron and steel casting) in the country. Aluminium and very limited brass casting (non-ferrous) is being done in traditional ways; using charcoal as fuel and in open moulds.

The only industrial foundry facility is located in the National Workshop compound which also has the largest machining and forging facilities. The foundry still has a largely intact cupola furnace and 3 crucible furnaces along with a pattern shop, sandmixing and fettling equipment.

The basic raw materials required for ferrous foundry operations, coke and pig iron have to be imported. However, iron and steel scrap is plentiful. In 1984, it was estimated that, if the existing foundry was rehabilitated, the scrap available in and around the country would be enough for at least 10 years. Since 1984 the iron and steel scrap has continued to accumulate, consisting mainly of auto bodies and engine blocks. Export of scrap metals is a thriving business. Due to its commercial value, aluminium and brass scrap are collected regularly and quite scarce.

A small number of generally old foundry workers are still left in the country and due to the ceasing of production activities these people are scattered to other places searching for other jobs. Considering that no training activity exists in the field of casting the human resources might be a major problem in the future.

(b) Forging

Only simple agricultural tools and machettes are the products of traditional blacksmithry work which is the only form of forging application.

Here again, the best facilities, although not operating at the moment, are within the National Workshop compound. The forging equipment can be repaired and rehabilitated easily due to their relative simplicity.

The Growth Centre Project of UNIDO has been active in the development of blacksmithry. Unfourtunately, rebel activities have stopped most Growth Centre activities. Unlike casting, the basic skills in forging do exist, but need to be technologically improved.

More often than not metals processed with heat as in forging change properties and must be heat treated. Unfortunately, again no heat treatment facility nor training programme exists.

(c) **Machining**

There are few machine shops with machining (turning, milling, grinding, drilling, etc.) capabilities. These facilities can be seperated into two groups, those open to or accessable by other industries or individuals and those which operate and service only the needs of their parent companies. Some of these firms even have excellent laboratory facilities which can be used for research and development as well as testing.

With the exception of Miatta Vocational School established and run by an Italian organisation, the common feature of all the above workshops is that they are in extremely poor condition. Actually it appears that no new investment for equipment has been made for the last twenty years, coupled with a lack of maintenance and spare parts.

It is interesting to note that parastatal and training organisations are engaged in machining activities which is generally done by small-scale firms in other countries.

(d) **Joining**

Electric arc welding is just about the only joining technique in use. Due to the existance of a large market in the form of metal framed doors and windows, many small firms are engaged in this line of business. The cutting of metals are being done solely by chiseling, the use of shears or guillotines.

The raw materials, steel plates, rods and angle irons are readily available in the market. These are all imported, and at 2 to 3 times the world market prices.

(e) **Conclusions**

- The engineering industry is vital to the development of all other industries, and especially in Sierra Leone where its components could alleviate the maintenance and rehabilitation needs of public and private enterprises.

- As in other countries small-scale industry can be the appropriate grounds for development of engineering industry.

- As indicated earlier, the small-scale industry can develop if the severe constraints, such as power and equipment supply, are at least partially remedied. This would create a reasonable industrial environment.

3.13 Environment Protection

The environmental responsibilities of Sierra Leone are vested in the Ministry of Lands, Housing and Environment which has the lead role for

co-ordinating the sectoral environmental activities carried out by other Ministries. An environmental protection and management role has been added to the Housing Division with clearly elaborated and demarcated functions and powers.

Many Government ministries are unaware of their involvement in the degradation of the environment caused by activities falling under their portfolios. This is largely because, while several ministries are involved in sectoral aspects of environment protection, there had not been a formal co-ordinating mechanism at the national level that directs environmental planning, policy and management. It was on the basis of this that, in 1988, a UNEP study proposed that a focal point at the national level was indispensable to execute a leadership function in the inter-sectoral and inter-ministerial co-ordination of environmental issues.

In order to achieve sound environment protection and management policies, the national environmental policy was approved by the Cabinet in May 1990. The policy elements are to:

- Secure a quality of environment adequate for all Sierra Leoneans' health and well-being;

- Adopt a comprehensive programme for environmental protection;

- Initiate an environment impact assessment for every major project;

- Conserve the natural and non-renewable resources for the benefit of present and future generations;

- Protect, conserve and develop the different wildlife forms in Sierra Leone; and

- Raise the public awareness and promote understanding of essential linkages between environment and development, and to encourage individual and community participation in environment improvement efforts.

Industrial Environmental Issues

The concern of the environmental dimension is over the impact of industrial development on environment in general and over a policy framework or mechanism that will lead to initiating an environment impact assessment on a consistent basis for industrial projects. The environment impact assessment is usually built into the methodology of social benefit cost analysis with safeguards that industrial projects will not simply go through on the basis of commercial profitability alone.

Though industrial activity is negligible in Sierra Leone, environmental degradation has resulted from the industrial sector, especially with the mining activities. Any economic exploitation of rutile, iron ore, bauxite and gold will normally result in environmental degradation. In the case of Sierra Leone, while in principle mining concessions contain clauses requiring reclamation of mining wastes, very little is done to recover lands damaged by mining activity. In other words, agreements entered into between the Government and the mining companies make no firm provisions for the rehabilitation of the mined-out areas and the over-exploitation of the minerals. This is true of large mining companies as well as small independent miners throughout the country. Watersheds and the inland swamps important for rice production are the most common sites for alluvial gold and diamond mines.

(a) Erosion and Landslides

The domestic energy use of wood fuel and kerosene by the majority of Sierra Leoneans is also a source of environmental damage. Unplanned exploitation of fuel wood has led to disappearance of the forest. The loss of the trees on the slopes of the hills, mountain sides and watersheds has, in turn, led to severe soil erosion and reduction in soil fertility. Besides soil erosion from denuded hill slopes, landslide is now of serious proportion. The problem is aggravated by the increasing use of shifting cultivation and a decline in the time land is allowed to lie fallow.

(b) Human Settlements

About 30 per cent of the population live in urban areas, mainly in Freetown, Bo, Kenema, Makeni and Koidu. These towns have grown in an unplanned manner. The main environmental issues are poor housing, sanitation and services, especially the provision of water and energy. According to UNICEF, in 1989, 64 per cent of Freetown families had houses made out of timber and metal sheet as compared to 54 per cent in 1970. Congestion of houses and overcrowding in each house are major environmental concerns. The worst insanitary living conditions are found in the informal settlements at the hillsides, valleys and foreshores. These conditions of urban squalor undoubtedly lead to reduced application and hence productivity of the work force.

In the rural and small urban settlements, where overcrowding is not a serious problem, the population lacks proper means of human waste disposal and removal. Nearly every household obtains drinking water from untreated wells and rivers.

(c) Recommendations

It does appear that there is no national policy relating to environmentally sustainable industrial development. Assistance can be given to the relevant authorities by UNIDO in setting up an effective institution, in developing the policies and standards, and in monitoring developments. A programme for assessing environmental impact of new industries will be established. Assistance can also be given to check unplanned mushrooming of small-scale industries. An energy audit will assist the Government to plan ahead. Finally, clean technologies can be introduced, especially to existing industries which produce effluents considered hazzardous. A programme for recycling or reuse of industrial wastes can be looked into.

CHAPTER 4

THE MANUFACTURING SECTOR

4.1 Preamble

In terms of overall structure, the manufacturing sector of Sierra Leone is characterized by a relatively small urban-based modern enclave of medium- and large-scale enterprises and a widely despersed subsector embracing small-scale and informal manufacturing activities. The historical evolution of this structure has largely been determined by the choice of macro-economic policy and development strategies dating back to 1961.

The Central Statistics Office Census Survey of Manufacturing Establishments in 1986/87 classified manufacturing establishments into three categories according to the number of employees per unit, i.e. 6-19, 20-100 and more than 100. Results on the number of establishments, value added created and industrial inputs, excluding labour, are presented below as:

TABLE 4.1

	Number of employees		
	6-10	20-100	more than 100
Number of establishments	106	76	12
Value added/industrial inputs, exluding labour	55%	25%	29%

Source: C.S.O. Census of Manufacturing Establishments, 1986/87.

The results show that the value added per industrial input, excluding costs of labour, of the establishments with 6-19 employees had 55 per cent whereas the establishments with 20-100 employees and more than 100 employees had 25 per cent and 29 per cent, respectively.

The modern medium- and large-scale manufacturing subsector owes its origin, structure and development to the pursuit of the orthodox import substitution strategies which of the 1961-1983 period. But the rapid growth of the informal sector and redefinition of industrial policies and strategies embodied in the 1983 Development of Industries Act account largely for the development and growth of the small-scale industries subsector.

4.2 Medium- and Large-Scale Enterprises

4.2.1 Structure and Composition of the Medium- and Large-Scale Manufacturing Subsector

In this section an analysis is made of the current structure of the medium- and large-scale manufacturing subsector. Following from this, an evaluation is made of the performance of these enterprises in the light of identified constraints. In the absence of more recent official statistics, the analysis will be based largely on the 1987 Report on the Survey of Industrial Establishments in Sierra Leone, volume I.

For the purposes of this analysis, medium- and large-scale manufacturing enterprises refer to those establishments with 10 or more paid employees engaged in the manufacture or transformation of a given commodity. Moreover, it also relates to enterprises employing modern capital equipment and investment capital of over US$20,000.

Following from this definition, the most recent survey of manufacturing establishments in 1986/87 recorded 194 medium- and large-scale enterprises in Sierra Leone, including twelve enterprises employing over 100 people each. The figure also included 12 manufacturing parastatals, such as National Workshop, Magbass Sugar Complex, National Diamond Mining Company (NDMC), Forestry Industries Corporation, Oil Refinery, the Palm Kernel Oil Mill, etc. The distribution of medium- and large-scale modern manufacturing enterprises indicates a significiant concentration under only three of the ten ISIC classifications of industrial activities, viz:

(i) Manufacture of food, beverages and tobacco products;

(ii) Manufacture of chemicals and chemical products, petrol, coal, rubber and plastic products; and

(ii) Manufacture of wood and wood products, including furniture.

A key feature of medium- and large-scale enterprises in Sierra Leone is that they are single unit monopolies. They produce a wide range of consumer goods, such as beer/stout, cigarettes, plastic wares, nails, sugar, etc. This concentration can be attributed to the overwhelming emphasis of the traditional import substitution strategy on the production of consumer products required by the urban middle class. A few enterprises, such as Magbass and Sierra Leone Oxygen Factory, produce intermediate goods. There is no equipment or capital goods manufacturer in Sierra Leone.

The enterprises are highly dependent on imported raw materials. They employ capital intensive technology and have very little backward and forward linkages at the firm and sector levels. The type of technology used dates back to the 1970s when most of the pioneer industries modernized their plants. They also require very generous protection in the form of tariff and administrative control to even compete in the domestic market.

The food, beverages and tobacco subsector is the most developed in terms of product range and number of establishments (38). It also contributes 66 per cent of total industrial local manufacture value added and about 40 per cent of industrial employment in the formal sector. The three most important enterprises are Sierra Leone Brewery, Aureol Tabocco Company and T. Chanrai and Sons. The largest manufacturing parastatal in this subsector is the Magbass Sugar Complex in the Northern Province.

The wood and wood products subsector is dominated by the Forest Industry Corporation and the Panguma Saw Mill, both in the Eastern Province. Salt, soap and plastic ware manufacturing dominate the chemical and plastic subsector.

Medium- and large-scale mordern enterprises demonstrate very low export awareness. However, ten enterprises in the food and beverages sector have exported about 5-10 per cent of their output to neighbouring countries. Another important feature of the modern manufacturing sector is the key role of foreigners (Indians, Multinationals and Lebanese) who own or have majority shares in at least 60 per cent of all medium- and large-scale enterprises.

Average capital investment is US$100,000. Over 70 per cent of medium- and large-scale enterprises are located in the Western Area of the country and were established prior to 1985. The rest are scattered in other parts of the country.

In general terms, there has been very little change in the basic structure of the medium- and large-scale modern sector since 1980. The 1986/87 survey also points to a high rate of birth and death of new enterprises related to the deepening domestic economic crisis and volatile market conditions. The indications are that this trend still obtains and may have, in fact, intensified over the last two years.

4.2.2 Assessment of Performance in the Manufacturing Sector

The performance of the medium- and large-scale enterprises during the last five years in particular could be described as poor. Output has remained "depressed". Indeed while there are important varations, the empirical indications are of a significiant decline in the level of output, employment and capacity utilization by medium- and large-scale enterprises.

The overall size of the subsector contracted from 210 enterprises in 1980 to 194 in 1985/86. Three enterprises employing more than 100 people each ceased operation. According to a study by T. Fukuchi (UNIDO), manufacturing output is estimated to have declined by 20 per cent between 1980 and 1990. The magnitude of contraction is vividly demonstrated in the table below which shos the trend in production of a representative group of the medium- and large-scale enterprises.

TABLE 4.2

Large-scale Manufacturing Enterprises

Name of enterprise	Product	1985 Output	1989 Output
Sierra Leone Brewery	beer/stout	5,675,000 l	4,288,000 l
Aureol Tabacco Company	cigarettes	1,519 million sticks	1,159 million sticks
Sierra Paint	paint	100,000 l	5,000 l
Cement Factory	cement	525,000 bags	52,000 bags
Chanrai	soap	3,284 tons	804 tons
National Confectionary	sweet/biscuit	1,272,000 lb	734,000 lb

Source: Survey of Industrial Establishments, 1986/87

The above adverse trend in manufacturing output has manifested itself at the macro level in terms of a fall in the contribution of this sector to GDP from 6 per cent in 1980 to 30 per cent in 1990*. At the firm level it has also served to worsen the already low level of capacity utilization, raise unit costs and dampen employment prospects. On the

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* Budget speech of the Minister of Finance - June 1989.

basis of interviews with manufacturers, the average level of capacity utilization has fallen from about 50 per cent to about 30 per cent in the last 10 years.

It is also estimated that by 1986, average real productivity of labour had fallen by 25 per cent compared to the 1980 level, and the aggregate total paid employment in the manufacturing sector was also declining.

The poor performance of medium- and large-scale enterprises was even more pronounced for parastatal enterprises. Presently, the Magbass Sugar Complex is operating at only 50 per cent, the Oil Refinery at 30 per cent, the National Workshop and Palm Kernel Oil at about 10 per cent, while the Forest Industries Corporation and NDMC are in serious management and financial crisis.*

Several other private enterprises, including some in which Government have a stake, have also closed down pending rehabilitation and refinancing. They include the Sierra Leone Knitting Factory, the Integrated Fish Meal Company, Sierra Leone Investment Company and Solar Salt Processing Factory.

The equipment of the Mabola Fruit Canning Factory, which ceased operations several year ago, has now been sold to the Freetown Cold Storage which has recently started similar operations.

Investment in the medium- and large-scale enterprises has apparantly dried up over the last two years. In 1989/90 total investment in the economy represented only 11 per cent of GDP and investment units of the private sector manufacturing are even lower.

4.2.3 Constraints to Manufacturing Sector Growth

From the mid 1970s, it was evident that the import substitution strategy had failed in its role as engine of growth and structural transformation. The current poor performance of the medium- and large-scale manufacturing sector system derives from a combination of a wide range of adverse structural macro economic and institutional factors, namely: (i) structural and policy framework; (ii) trends in the enabling environment for production and investment; and (iii) institutional capacity for promoting industrial development.

(a) Structural and Policy Framework

As indicated above, most of the enterprises established in the 1960s and 1970s are heavily dependent on imported raw materials and spare parts. Given the significant balance of payment problems being experienced and equally severe scarcity of foreign exchange, the pioneer import substitution industries, like all other enterprises, now face a dilema. On the one hand, they are unable to obtain foreign exchange on a regular basis and so they are forced to operate at low levels of capacity. On the other hand, their operations at such low levels undermine their ability to generate sufficient funds to finance the purchase of new equipment that will enable them utilize locally available raw material. In the same vein, most enterprises have failed to develop their export potential to generate foreign earnings.

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* Survey of Industrial Establishments 1986/87.

In effect, the current economic situation poses serious problems for the continued ability of those pioneer industries that are unable to restructure their production plants, either in terms of technology or raw materials. This problem assumes even greater dimension, given the absence of a capital market in the country and the expectation that the private sector will absorb the labour force that will be laid off from the rationaiization exercise of the public sector.

There is therefore a need for a comprehensive and systematic approach to rationalize and rehabilitate existing enterprises. Among the enterprises that need attention in this regard are the Sierra Leone Oil Refinery, the Palm Kernel Oil Mills, including the animal feed component, and the National Workshop. These and other enterprises will need financial and technical assistance to develop backward and forward linkages or reorient their production lines to meet new market conditions.

With the opening up of the economy and market-determined macro-economic policies, production will need to be more export oriented to alleviate the foreign exchange problem.

As shown above, the current structure of the labour force shows a surplus of unskilled workers simultanously with acute shortage of skilled technicians and managers. This affects production by requiring expensive expatriate personnel and staff training programmes. Future rehabilitaton programmes therefore have to pay additional attention to human resource development.

(b) Policy Constraints

Despite the key role of industrial development and repeated Government policy statements to that effect, Sierra Leone has been without a coherent industrial policy and development master plan since independence in 1961. Issues relating to industrial development are usually treated as part of the country's development plan. As a result industrial development has not proceeded as would be expected. Thus, private investment decisions have not followed the framework of any Government priorty programme for industrialization.

Another obvious consequence is that there has been no systematic effort to develop core strategic industries that will serve as catalyst to industrialization. The attempt to develop the National Workshop into a technology and machine tool factory has been thwarted by private interests. Efforts to develop agro-based industries to provide backward linkages for import substitution industries have been progressing in a largely unco-ordinated manner. For instance, the 1983 Development of Industries Act highlights the development of local resources-based industries as one of the major priorities. But there has not been any systematic survey and evaluation of the country's resources to guide and encourage investment decisions in this regard. Indeed, the tariff regime tended to discourage investment in intermediate industries or the establishment of industries that can process local raw materials. On the contrary importation of raw materials and machinery were allowed at concessionary rates or even free of import duty.

4.2.4 The Enabling Environment for Production and Investment

The already small size of the domestic market limits the range of the size of industrial plants. This situation was exacerbated by the negative growth trends in the economy and falling levels of income. This situation has

had adverse implications for the level of output of major industries, particularly producers of beer/stout, confectionery, soft drinks, footware, furniture, petroleum products, alcoholic beverages etc.

Moreover, soaring annual rates of inflation estimated at 100 per cent - 1990/91 and massive devaluation of the Leone (1985 US$1 = 20 and December 1991 US$1 = 425) have undermined the cash flow and financial viability of a number of enterprises. It has also seriously undermined the profitability of long term investments. Commercial bank financing has proved expensive for medium-scale enterprises as the current interest rate on overdraft facilities is about 80 per cent. In the absence of a capital market, let alone a sound financial infrastructure, there is therefore an acute shortage of financial resources for operations, rehabilitation or expansion by manufacturing enterprises. The scarcity of foreign exchange has had a pervasive and negative impact on the entire manufacturing sector.

Equally important is the unreliable supply of electricity. As shown above, only 2.2 MW is generated and distributed in the Western Area out of an estimated demand of 35 MW.

The combination of the macro-economic problems and the near collapse of public utilities, especially power, further explains the current low level of capacity utilization and depressed state of output. Most enterprises now have to resort to generators whose efficiency is further compromised by frequent shortages of fuel in the country.

Another important constraint on the growth of the manufacturing sector is the "open market" liberalization philosophy embodied in current macro-economic reform programmes. To the extent that domestic producers have to operate in a totally unfavourable economic environment, the liberalization of imports will, at least in the short run, seriously threaten the viability of manufacturing enterprises at two levels:

(i) Increased demand for imports will increase competition for scarce foreign exchange.

(ii) Domestic manufacturers will be unable to compete with imported goods that are of better quality and relatively cheaper largely because of rampant customs evasion/smuggling.

These factors have combined to produce a very unstable environment that is not conducive to expansion of output or new investment. It is therefore hardly surprising that the level of new investment has fallen to very low levels, while existing enterprise are not planning any significant expansion. The general view is that the economic environment is more conducive to trade and rent seeking activities than to production.

However, it is expected that the ongoing macro-economic reforms at the policy and institutional levels will promote a more conducive investment climate and also have an impact on the pattern of resource allocation in a manner favourable to domestic production.

4.2.5 Proposed Action

Therefore, a primary condition for the relaunching of growth in the manufacturing sector must be the elaboration of a well thought-out industrial master plan that will provide clear signals to investors on the expected

course of industrialization and also provide the conditions necessary for the attainment of stated objectives. The industrial master plan is also expected to facilitate the strengthening of inter-sectoral and intra-industry linkages in a systematic and coherent manner.

A strategic aspect of the new approach will be the establishment of an effective maintenance and rehabilitation programme based on the development of light engineering industries producing spare parts and intermediate goods and equipment for both the agricultural and manufacturing sector. In order to achieve better results, however, UNIDO's new approach to strategic management of the industrialization process is also recommended. The process involves an institutionalized consultative system among all the agents in the economy in the planning and execution of programmes. In all of these endeavours, human resource planning emphasizing the development of skills at the technical and entrepreneur levels will have to be given priority.

4.3 The Small-Scale Industry Sector

In discussing this sector, two important comments need to be made at the outset:

(i) The various constraints mentioned above relating to the macro-economic framework, enabling environment and institutional inadequacies which affected medium- and large-scale industries also had some effect on the development of small-scale industries. Indeed, in some ways, the impact of the policies were felt more by the small-scale industries. Thus, for example, liberalized import of finished goods led to influx of foreign goods and therefore shifted demand from domestic to imported goods. Due to financial constraints, small-scale industrialists could not upgrade the technology of their production. Subcontracting is a rarity in Sierra Leone, because the large self-sufficient monopolies, over-valued currency, high rate of interest, etc. did not encourage investment by small-scale entrepreneurs in those areas where they could supply high quality intermediate goods at competitive prices.

(ii) Inspite of the foregoing, it is self-evident that the small-scale industrial sector represents the cornerstone for industrialization and economic growth in Sierra Leone. While the benefits of and reasons for having small-scale industries are known, in the case of Sierra Leone, the level of economic and infrastructural dislocation dictates that efforts be geared towards promoting small-scale industries as a viable alternative. Small-scale industries are less dependent on the urban locational amenities. They help to stem the rural-urban imigration. They require less capital and yet use a lot of local raw materials. Small-scale industries, especially in areas, such as grain and oil milling, wood, forging, processing, etc., have a lot of forward linkages. There is also evidence that the role of women, especially in terms of ownership and employment, is significant, since they predominate in food, garment and craft industries. In fact, given the current economic difficulties in Sierra Leone, small-scale industries are the main source for goods, such as clothing, soap, shoes, clay pot, baskets, charcoal, furniture, building materials, etc., used by the general populace. Adequate attention should therefore be paid to the development of this sector.

The following characterization of small-scale industries relies heavily on the findings of a small-scale industry sector survey* undertaken by UNDP/UNIDO project "the Establishment of the National Industrial Development Financing Organization (DP/SIL/87/003)", in close collaboration with the Central Statistics Office (CSO). The Survey was carried out between March 1989 and August 1990. The survey counted 2,100 industrial enterprises nation-wide. The small-scale industry sector can be classified into the following three categories:

(i) Traditional informal subsector which includes cottage and handicraft industries using specialized skills of craftsmen and high linkages with agriculture sector.

(ii) Small-scale industrial subsector consisting of units using a mix of traditional and simple electrical/mechanical equipment. They are less dependent upon imported inputs and motive power; and

(iii) Modern small-scale industrial subsector which use modern technology and equipment with motive power.

4.3.1 Size, Distribution and Characterisitics of Small-Scale Industries

The SSIs are easily distinguished by size distribution, type of ownership, sectoral and geographical distribution of the units. Out of the total number of 2,100 counted, 1,240 units had in employment 1-4 workers, 535 units had 5-9 workers, which, in terms of definition is a cut-off point for the SSI. 154 units had 10-14 workers and 171 units more than 15 workers. Even though there is no clear definition, whetehr the 10-15 workers category lies in SSI or in medium-scale industries, the predominance of the SSI sector in the Sierra Leone economy is confirmed. Naturally, larger units are located in urban areas and more smaller units in rural areas.

Sole proprietorships account for 86 per cent of all units surveyed and the largest number of units are sole proprietorships. Even for larger investments of over Le 100,000 sole proprietorships far exceed other ownership like partnerships and limited companies, accounting for 68 per cent or 236 out of 346 units in that category. This indicates the importance of immediate and medium-term support programme to focus on the sole ownership smaller-scale industries, since the group of owners represents the seed-bed for future entrepreneurs for larger industrial undertakings.

Most numerous sub-sectors are wearing apparel, including tailoring, and woodwork/furniture industries accounting for 55 per cent of total units which employed less than 10 workers, or 30 per cent and 25 per cent, respectively. They are followed by metal works (14 per cent), food processing (8 per cent) and repair and maintenance of motor vehicles and motor cycles (7 per cent). In another words, the 5 sub-sectors alone had 84 per cent of the share with the enterprises which employed less than 10 workers. It is indicative that consumer goods production and repair and maintenance functions of small-scale industries dominated to sustain basic daily life under the deteriorating economic conditions.

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* CSO/MISE/NIDFO/UNDP/UNIDO, Report on in-depth sample survey on manufacturing and related services sector in Sierra Leone, 1990. Ministry of Industry and State Enterprises (MISE) has become the Ministry of Trade, Industry and State Enterprises since October 1991

A survey of 75 villages covering chiefdoms of Gbo, Kakua, Selenge, Tikonko and Valunya, carried out in a period between September and November 1991, within the framework of a UNDP/UNIDO project "Growth Centre Programme (DP/SIL/86/002)" identified 24 types of small- scale industrial activities. According to this survey, basket making was located in 36 villages involving 97 full-time producers and 154 part-time persons. There were 27 full-time and 41 part- time black smiths in 38 villages. Mat making, carving and weaving were identified in 29, 28 and 25 villages respectively, involving 6 full-time and 81 part-time, 12 full-time and 42 part-time and 8 full-time and 53 part-time persons respectively. Soap making was located in 19 villages involving 36 full-time and 95 part-time people. Both carpentry and mortar carving were identified in 16 villages involving 8 full-time and 19 part-time and 2 full-time and 14 part-time persons. Rattan work and cane work were identified in 10 and 12 villages involving 70 part-time for the former and 5 full-time and 14 part-time people for the latter. Other activities identified are board ripping and raffia work (both in 6 villages), fish net weaving and gara work (both in 4 villages), fana making, canoe making and hammock making (all in 3 villages), cotton spinning, gold smith, tin smith, charcoal making and musical instrument making (all in 2 villages) and tailoring and art work (both in one village) involving 19 full-time and 84 part-time producers.*

Other important characteristics of SSIs relate to longevity of established units, maintenance of records and unreliable information on profitability of units. Of the 2,100 units surveyed, 1,176 or 56 per cent were above 10 years old, 862 or 41 per cent were between 10 and 30 years old and the remaining 3 per cent were older. More urban units were established during the period 1980-89, than their rural counterparts, but in terms of longevity, it seems that more rural establishments tend to survive than the urban ones.

87 per cent of the units in the 1 - 4 worker category do not keep any records; 70 per cent of the SSI units and 34 per cent of the larger ones were also found to be the same. Overall, 77 per cent of the enterprises did not maintain any books. This finding corresponds to 1986 CSO survey which found almost 90 per cent of establishments covered either did not maintain any record or kept very scanty records of their activity. It is suggestive that a record keeping training would be one of the essential elements of required training.

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* These findings should be interpreted with caution because of i) the seasonality of rural based activities during the survey, ii) historical development of the area, iii) declining and emerging complementary and alternative economic activities, iv) availability of production tools and instruments in relation to overall economic condition and foreign exchange, v) income elasticity of demand, vi) availability of alternative and complementary products, vii) raw material endowment, viii) tradition in a particular chiefdom, ix) other economic activities in and around the surveyed villages, x) visited villages were mostly approachable location by a motor vehicle, xi) security situation, xii) road condition associated with rainy season, xiii) degree of cooperation from village chiefs and people with the interview and xiv) simple techniques involved in the survey etc.

According to the Survey, of the 2,100 units surveyed, the most profitable enterprises were small businesses in the 1 - 4 worker category, with investments of less than Le 10,000. These enterprises constitute 31 per cent of all profitable units and most of them were located in rural areas. However, since there is no clear criterion on the measurement of profitability of these enterprises and especially given the fact that most of them do not keep records, the results of the Survey must be treated with caution. This, however, does not dispute the potential and by far the most promising aspect of development of industry through SSIs in the Sierra Leonean economy.

4.3.2 Human Resources and Small-Scale Industries

Education and training levels are very low. 65 per cent of entrepreneurs involved in the surveyed enterprises, had no formal education whatsoever. This figure corresponds to the findings of a study on rural youth which showed that 60 per cent of employed youth had never been to school and 40 per cent had some form of western education*. Among the rest, 13 per cent had primary education, 20 per cent secondary and 2 per cent higher education. The Northern and Eastern Provinces are most afflicted with illiteracy, where 77 per cent and 71 per cent respectively had no formal education, as compared to Western Area and Southern Province which recorded the proportion of 45 per cent and 59 per cent respectively. There are about twice as many respondents with no formal education in rural areas than in urban areas.

4.3.3 The Entrepreneurship in Small-Scale Industries

Only 5 per cent of the entrepreneurs have had specific education in business and technical areas. Technically trained entrepreneurs are virtually all male and prefer working in urban areas. Only 8 per cent of them are found in rural areas. Most technically trained people are found in establishments with 6 - 15 workers in urban areas.

Most of them have learnt their skills through "apprenticeship" rather than through systematic vocational training. They are engaged in a particular trade or vocation because it is a family business and they are trained "on the job". They are traditional or conservative in outlook and are not keen to change their vocation. It is more a means of livelihood for themselves and the family rather than a "growth oriented" venture. They are not "entrepreneurial" in the strict sense as they are "followers" of the family tradition.

Productive enterprises are dominated by males in the age group 30- 50. A survey carried out by UNIDO during the preparation of the NIDFO project in 1987, found that only 7 per cent out of 88 interviewed were women entrepreneurs. It has been recorded that, even in early days, women were actively involved in entrepreneurial activities in selling fresh fruits, vegetables, fish imported consumer goods, pots and pans, crockery etc. both in urban and rural areas as well as along railway lines in order to supplement family income.**

Classification of the entrepreneurs on the basis of their experience reveals the following trend: 87 per cent of the entrepreneurs have over 5 years experience. Most of those having less than 5 years experience are to be

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* O. Kargbo, 1986.

** A. Wyse, 1989.

found in rural areas. This indicates the ease of entry in the rural setting as amongst the more competitive and difficult business environment in the urban areas as well as possible nature of small-scale industrial activities that complement agriculture dominated economy. Within the groups having 5 - 14 years and over 15 years experience, the urban/rural distribution is balanced. Generally, entrepreneurs prefer to set up their own business after gaining adequate experience, confidence and required capital to take the necessary risks.

4.3.4 Financing of Small-Scale Industries

Only 54 per cent of surveyed units were financed with an initial investment of Le 10,000 or less, 32 per cent with a sum between Le 10,000 and Le 100,000 and the rest of the units with investments of over Le 100,000.

Majority of sole ownership enterprises surveyed had borrowed from informal credit sources or loans under "OSUSU" system. In the case of partnership, only 9 out of 202 units had resorted to bank finance while the rest had depended on traditional sources. Among the limited liability companies, 45 per cent had borrowed from banks.

4.3.5 Institutions Providing Support to Small-Scale Industries

National Industrial Development and Financing Organization

The National Industrial Development and Financing Organization (NIDFO) was established by the cooperation of the Ministry of Industry and State Enterprises (now the Ministry of Trade, Industry and State Enterprises), UNDP and UNIDO. NIDFO is an institution specifically formed to support SSIs. It is a private organization with the following as its shareholders: Barkclays Bank, National Development Bank, International Bank for Trade and Industry, Sierra Leone Commerical Bank, Standard Chartered Bank, James International, Sierra Leone Produce Marketing Board, Sierra Fishing Company, National Insurance Company, Sierra Leone State Lottery, Aureole Insurance Company, Ecumenical Development and Co-operative Society and the Government of Sierra Leone. Grants have been provided by the Ministry of Development and Planning and UNDP.

NIDFO is conceived as an institution providing an integrated package of development and financial services to ensure its financial viability while facilitating the self-sutainability of the assisted enterprises. The development services are supported by adequate funding from the same institution so that the small- scale industries that can not obtain existing commercial banks will be provided with thorough support services such as an assessment and training of the proponent's entrepreneurial, technical and managerial capabilities, in addition to post-financing assistance in the form of industrial extension services. NIDFO's major target subsectors are food processing, wood working, metal working, leather work, mechanical works, electrical works and textile, including gara dyeing.

The range of loan is Le 20,000 - 100,000 for smaller units and Le 360,000 - 1,800,000 for larger units. Interest rate is 5 per cent below the prevailing prime rate charged by commercial banks. Service charge is 2 per cent of total amount sanctioned and 1 per cent fee on the total amount sanctioned is charged for the Credit Guarantee Scheme of the Bank of Sierra Leone. Security is one of the following depending on case-by-case decisions of the management meeting: (i) registered mortgage of land and building;

(ii) simple deposit of Title Deed of Property; (iii) hypothetication of machinery, equipment, spare parts and stocks; and (iv) personal guarantee of an approved third party. An entrepreneur has to provide at least 20 per cent of a loan component of the total approved project costs.

In the period between August 1989 and October 1991, 15 Entrepreneur Motivation Training (EMT) courses were held and 200 entrepreneurs participated; 11 Basic Business Management courses (BBMC) were held and 148 entrepreneurs participated; and 7 Technical Training Programmes (TTP) were held and 53 workers participated. EMT is conducted by the NIDFO staff and BBMC and TTP are designed jointly by NIDFO and local training institutions and conducted by the training institutions. Participants pay 25 per cent of the costs of fees and the rest is met by the subsidy provided by the Government through NIDFO to the training institutions. Female participation was 27 per cent, 24 per cent and 13 per cent, respectively. In the period between March 1990 and October 1991, 42 projects were funded with a total amount of disbursement at Le 12 million, or Le 290,000 per project (official exchange rate of Leone per US Dollar depreciated from Le 120 in February 1990, after a drastic official depreciation, to Le 450, or approximately Le 500 in parallel market, in December 1991).

The Growth Centre Programme

The Growth Centre Programme (GCP) introduced in 1986 consolidated the already existing village level compounds of small-scale industrial activities as well as a compound at Tower Hill in Freetown being supported by various non-governmental and bilateral agencies. The Programme was formally supported by the Ministry of Industry and State Enterprises and UNDP/UNIDO by a project DP/SIL/86/002. The basic aim is to promote the development of entrepreneurship and industrial knowledge leading to increased industrial contribution to rural economy. Emphasis was put on employment of rural people in simple productive industrial activities and women's involvement. In the light of the need to expand the availability of basic needs in rural areas, blacksmith, tailoring, gara dyeing, weaving, carpentry and soap making are selected. The rural industrial compounds (workshops) are located in Binkolo, Kpandebu and Pujehun and a GCP Coordinating Office is located in Bo.

At the Binkolo Growth Centre, activities, i.e., carpentry, blacksmith, soap making, gara dyeing and tailoring, started in 1986 and the construction of the workshop with the floor space of 200 sqm was completed in 1987. Kpandebu Growth Centre is located 14 km south of Kenema. There are three concrete buildings and the total area covering an office space and two workshops is 300 sqm in addition to a mud house for a guard. Main production activities are blacksmith, weaving, carpentry and soap making. Pujehun Growth Centre has two workshops totalling 250 sqm, one is made of concrete floor and a bush wood upper structure and the other with concrete structure and sheet metal roof. Major activities are tailoring, gara dyeing, carpentry and blacksmith. Kpandebu and Pujehun Centres were closed down in April 1991 when unrest started to enter the area. Pujehun Centre is reported to be totally looted. Kpandebu Centre has continued operation with frequent interruptions even during the invasion. These Centres are entirely managed by a local GCP Committee headed by a Paramount Chief and day-to-day management is entrusted to a manager appointed from the village. The Bo Coordinating Office is currently organizing a network of village small-scale industries to expand their market opportunities and to provide technical advice to improve the quality of their products.

4.3.6 Constraints Faced by the Small-Scale Industry Sector

The following constraints faced by small-scale industry sector have been identified:

(i) Low purchasing power of overall population;

(ii) Uncertainties surrounding overall economic prospect and inconsistent administrative requirements are contributing to short-term oriented business perspectives among small-scale industrial entrepreneurs including make-shift management behaviour;

(iii) The target sector had difficulties in obtaining foreign exchange through official channels for purchasing critical inputs and spare parts;

(iv) Irregular supply of electricity seriously affected the wood- working, metal working, fishing, bakery, printing shops, motor repairs, electric and electronic repair shops;

(v) Non-availability of tools and spare parts was a major constraint faced by metal working, motor repairs and electrical and electronic repair shops;

(vi) Non-availability of credit from formal financial institutions. The SSI sector is dependent mainly on their own and other traditional sources of finance to meet their requirements;

(vii) Most enterprises do not maintain a stock of raw materials and spare parts mainly due to paucity of working capital. These are purchased at exorbitant prices to meet their immediate requirements from nearby retailers;

(viii) Business records are generally not kept, beyond a mere collection of sale and purchase invoices;

(ix) There is no set pattern of work processes or division of ownership, management and labour. Production is piecemeal, quality poor and design is not based on planning;

(x) Except in the Western Area, almost all entrepreneurs had received no formal training;

(xi) The tools and machineries are often bought second hand and are in poor condition due to their very old age and lack of proper maintenance;

(xii) Generally, the premises are rented and are mere make-shift worksheds without definite layout;

(xiii) The average Sierra Leonean prefers to be independent and self- employed rather than go into business in partnership with others.

CHAPTER 5

INTEGRATION OF WOMEN IN INDUSTRIAL DEVELOPMENT

5.1 The Role of Women in the Economy

The paucity of data in many areas of economic activity is equally evident in the role of women in the economy. The available information is neither complete nor entirely reliable. Statistical information on the role of women is generally scarce because, among other things, the majority of women operate in the informal labour sector, such as agriculture and trade, for which statistics are grossly inadequate. Nevertheless, women make a very useful contribution to the national economy, even if this contribution is underestimated. They form an integral part of the human resources needed to achieve maximum development in Sierra Leone.

Women constitute approximately 55 per cent of the total population and 51 per cent of the labour force in the country. Since most of the women live in the rural areas, their participation in economic activities is largely conditioned by the rural environment in which they operate.

Traditionally, the majority of women in Sierra Leone, as in other countries in the subregion, is engaged in subsistence agriculture. It is estimated that women perform 70 per cent of the farm activities, including planting, harvesting, processing and marketing*. They also produce 60 per cent of the food requirements since they handle the processing of major food items, such as rice, cassava, palm oil, grains, fish and vegetables.

For example, while palm oil trees are considered a "man's crop", the women are responsible for the harvesting (usually through hired labour), transportation to processing sites, extraction of the oil and marketing. Larger amounts in tins and drums are generally marketed by the men outside the village, where they get better prices. Men, as heads of the households, normally control the benefits derived from the sales.

Rice and cassava are major staple food items in Sierra Leone. Women are responsible for dehusking and winnowing of rice, using mostar and pestle. They also process cassava into gari. For fish, they are solely engaged in the smoking, which is done on "bandas". In major fishing areas, such as Tombo and Shenge, the "bandas" are being replaced by ovens. Women also dry and store grains and vegetables and take care of livestock. In all these, women contribute to the nutritional level of the population.

Apart from agriculture, trade is another activity in which women's contributions are significant. As petty traders, they sell various items, such as food items and manufactured products.

In the services sector, women are engaged as nurses, teachers, office workers, sales girls and in the public service. The exact number and level at which they operate in these services is not clear. Nevertheless, it would appear from the foregoing that women generally perform jobs in which they are

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* C.S.O. Report on Labour Force Survey (1988-1989), Freetown, January 1991, Table 6.1

poorly paid, often monotonous, labour intensive and requiring few qualifications.

5.2 Participation of Women in Manufacturing

There is no legal barrier on the employment of women in industry but, in the absence of relevant data, it is difficult to determine the share of women in the total labour force in the manufacturing sector. There are indications, however, that men greatly exceed women in the formal sector. This is mainly due to the nature of the industries which are clustered in the urban areas. As there are few industries in Sierra Leone, there is competition for the few available jobs. In that situation, men generally have an advantage, since employers prefer them to women for the reason that women may get married and have children and therefore proceed on maternity leave.

The table below, taken from the 1988/89 Labour Survey, indicates that the bulk of the workers are found in technical, administrative and clerical positions. The largest percentage of women are to be found in the clerical position, which tends to attract low wages and has little chances of advancement to decision-making categories.

TABLE 5.2 (a)

Distribution of Currently Employed Persons (in 1000s) in the Formal and Informal Sector by Sex and Occupation (large towns)

Occupation	TOTAL			FORMAL SECTOR			INFORMAL SECTOR		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Professional Technical	26.1	16.5	9.6	22.5	14.2	8.3	3.6	2.3	1.3
Administration Management	1.2	1.0	0.2	1.2	1.0	0.2	-	-	-
Clerical Workers	32.7	18.8	13.9	32.1	18.2	13.9	0.6	0.6	-
Sales Workers	146.2	46.6	99.6	10.6	4.4	2.2	135.6	42.2	97.4
Service Workers	24.4	20.1	4.3	18.0	14.5	3.5	6.4	5.6	0.8
Agri. Animal Hus.	29.6	12.8	16.8	1.0	1.0	-	28.6	11.8	16.8
Hunt, Fishery Production	79.4	75.3	4.1	39.6	36.5	3.1	39.8	38.8	1.0
Transport Workers NC	6.1	6.0	0.1	-	-	-	6.1	6.0	0.1
TOTAL	**345.7**	**197.1**	**148.6**	**125.0**	**89.9**	**31.2**	**220.7**	**107.3**	**117.4**

Source: C.S.O. Labour Survey 1988/89

In Sierra Leone, there is a dearth of professionals and technicians. This is reflected in the following table culled from the Labour Survey of 1988/89 by C.S.O. Of the educated women, only a few are at intermediate levels as artisans and technicians.

TABLE 5.2 (b)

Number of Currently Employed Persons (in 1000s) Trained by Subject (or no Training) and Sex

SUBJECT OF	NATIONAL			LARGE TOWNS			SMALL TOWNS			RURAL AREAS		
TRAINING	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE
1. Technical	61.4	45.7	15.7	30.8	22.1	8.7	10.7	7.6	3.1	19.9	16	3.9
2. Administration	0.4	0.3	0.1	0.3	0.2	0.1	0.1	0.1	-	-	-	-
3. Clerical/ Typing	8.2	3.4	4.8	7.6	3.2	4.4	0.3	0.1	0.2	0.3	0.1	0.2
4. Trade	0.9	0.3	0.6	0.6	0.3	0.3	0.2	-	0.2	0.1	-	0.1
5. Servicing Repairs etc	10.6	8.7	1.9	8.5	6.7	1.8	2.1	2	0.1	-	-	-
6. Agriculture Fishery etc.	3.6	3.4	0.2	0.5	0.4	0.1	1.6	1.5	0.1	1.5	1.5	-
7. Production/ Transport	62.2	60.1	2.1	42.4	40.9	1.5	7.2	7.1	0.1	12.6	12.1	0.5
8. Others	0.1	0.1	-	0.1	0.1	-	-	-	-	-	-	-
9. No Training	1833.4	863.5	969.9	255.1	123.3	131.8	164.3	80.7	83.6	1414	659.5	754.5
TOTAL	1980.8	985.5	995.3	345.9	197.2	148.7	186.5	99.1	87.4	1448.4	689.2	759.2

Source: C.S.O. Labour Survey 1988/89.

As stated earlier, no significant new industrial investments have been recorded in the last few years because of the unfavourable climate. In other words, there has been an absolute shortage of jobs. Indeed, in view of the inflationary pressure, high interest rates, scarcity of foreign exchange and cost of imported inputs, including spare parts, a large number of industries have been forced to close down and to retrench staff. Thus, the few women already engaged in such enterprises have been laid off.

Because of its weak industrial base, Sierra Leone has not been able to develop certain types of industries which traditionally favour women. This relates to textiles and clothing, electronics and pharmaceuticals which prefer to employ women because they are reputed to be adaptable, patient and more careful than men.

The few industries in Sierra Leone are capital intensive and thus have preference for men who have the relevant mechanical, technical and other professional qualifications.

In Sierra Leone, the principle of equal pay for work of equal value is recognized and respected. But as wages are related to educational qualification, men tend to earn more than women in industries, since they are generally better qualified.

5.3 Factors Affecting Women Participation in Industry

5.3.1 Education

The most serious constraint to women in industrial activities is the inadequate level of education. While the national level of illiteracy is estimated at 80 per cent, it is higher for women (89 per cent) than for men (71 per cent). Although access to education is open to both sexes, it is estimated that primary school enrolment is only 40 per cent for girls as compared to 60 per cent for boys. Fewer girls proceed to high schools and institutions of higher learning. In times of economic difficulties, parents prefer to train boys rather than girls. With time, either through high rates

of drop-outs or low education, girls tended to end up in vocational centres, where they take up commerical and secretarial studies, home economics, needle work and dressmaking. This is because the predominantly female fields of study are the commercial type, i.e. typing, book keeping, secretarial studies, etc., and social studies. At the university level, the representation of women as a whole is low. Their choice is generally in non-technical and non-scientific fields. They prefer to study law, literature and liberal arts. The few women who studied engineering have not been able to secure jobs in local industries, probably because the course content did not equip them to work in existing industries. Since women are generally expected to work at home - preparing food, bearing children, etc. - a good number get married quite early and thus do not further their education.

There is at present a proliferation of training institutions in Sierra Leone to help the entrepreneurs become successful business persons. But very few girls as compared to boys make use of these training facilities to upgrade their skills.

An ILO/JASPA employment advisory mission* classified the skill development structure in Sierra Leone as falling within the following categories.

(i) Those providing technical education and vocational training through the formal education system;

(ii) Sectoral training activities (job oriented, pre-service and in-service) offered by various ministries to meet their own needs for skilled manpower;

(iii) Non-formal training activities (mainly in the informal sector of the economy).

In principle, all secondary schools offer instruction in vocational subjects. However, due to the lack of appropriate training facilities, most of them can hardly fulfill this task satisfactorily.

In the absence of a co-ordinated and formal apprenticeship system, technical institutes in Freetown, Kenema, Magburaka and Kissi were intended to play a vital role in skills development. If run properly and with appropriate training, the programmes of these institutions would have been in a position to fully meet the country's demand for skilled crafts personnel and middle level technicians. However, due to chronic shortages of funds for running the training programmes and maintaining training facilities, their contribution to the development of skills is extremely limited.

There is no formal Government-recognized and managed system of apprenticeship in Sierra Leone. Apprenticeship, mainly through on-the-job training, has no structure. It is important to upgrade the current informal training so that required standards can be met.

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* ILO/JASPA, Alleviating Unemployment and Poverty Under Adjustment: Issues and Strategies for Sierra Leone, 1990, Addis Ababa.

5.3.2 Social and Other Factors

Socially, boys are expected to work as electricians, engineers, plumbers, furniture makers, mechanics and the like. Conversely, girls are not expected to take up those activities which are believed to be more physically demanding. In practice, it is the nature of eduction that limits opportunities for women in industrial undertakings.

Traditionally, girls tend to work at home rather than to venture out. As wives, most women of child bearing age are kept busy looking after the children and undertaking other house chores.

While the laws of Sierra Leone permit women to own land, in practice, especially in the rural areas, women do not own land. This creates an additional problem, should they be in need of collaterals in order to borrow money.

Men tend to dominate in politics and economic matters. As at 1989, there was only one female permanent secretary. Out of 146 paramount chiefs in the country, only 12 are women. According to the Labour Force Survey of 1988/89, conducted by the Central Office of Statistics, only 3 per cent of women are entrepreneurs.

Employers generally prefer to engage men rather than women in order to avoid social costs, such as maternity leave.

5.3.3 Financial Constraints

A disproportionately high number of women compared to men are engaged in retail trading, mainly due to lack of finance. The main sources of finance are own savings or "osusu" - a type of credit system widely practised in West Africa. Requirements for borrowing from the banks are stiff and therefore discourage the women from borrowing to establish industries.

On the other hand, banks merely display traditional prejudices against women, especially as female entrepreneurship is a new phenomenum. Money is needed to import machines and for working capital even for small-scale industries. As finance is difficult to come by, women entrepreneurs are handicapped.

The Women's Finance Trust Ltd. is the only institution set up to give credits to women, but it is still new and its operations are not well known, especially in the rural areas. The World Women Banking does not exist in Sierra Leone.

5.3.4 Health

Infant mortality rate in Sierra Leone (1985-89) is estimated at 150/1000. The fertility rate for women is said to be 6.5. These figures are on the high side. The health situation therefore adversely affects the larger segment of the population, i.e. women.

5.3.5 Other Constraints

Lack of appropriate technology is a major problem for the women engaged in food processing and other activities. They have the additional problems associated with storage and marketing of their products. Historically, men tended to migrate to the towns for jobs, while the women remained in the rural

areas. As industries took root in the towns (mainly Freetown), men got most of the jobs available. The unavailability of child care or day care centres makes it difficult for some women to take up jobs in places "far from home".

5.4 Institutional Framework

5.4.1 Women's Bureau

The framework within which women's issues are addressed is primarily through the Women's Bureau which is situated in the Social Services Division of the Ministry of Health and Social Services. The Bureau was established in 1988 to facilitate the effective participation of women in development. The overall mandate of the Bureau is to advise Government on matters relating to the full integration of women in development. The Bureau is also supposed to co-ordinate women's projects and women related research. It has an Advisory Council of 28 members which comprises of senior representatives from line ministries as well as individuals invited to become members in their own right. The Bureau has desk officers in the line ministries who act as channels for a two way information dissemination.

5.4.2 Non-Governmental Organizations (NGOs)

Two new NGOs are about to be set up in the country. One of them, the Women's Association for National Development (WAND) will be more research oriented. In doing the research, WAND will be expected to get information from the grass roots and villages. It is yet to formulate its policies and operational modalities.

Another NGO worth mentioning is the National Organization of Women in Sierra Leone (NOW SL). This is also being established and it is hoped that it will mobilize the rural community for development.

The YWCA is an older NGO which looks after young girls and teaches them home economics and commercial subjects. The Association of University Women is currently inactive. There is equally some discussion about establishing a group to be known as Women Entrepreneurs in Business.

In general, it could be said that organizations looking after the interest of women and their integration in development are just about taking root. Care should be taken at this early stage not to duplicate their roles. Indeed, because of the fluid nature of things, there seems to be some struggle going on among the various groups for Government patronage and recognition.

5.5 Proposed Actions for Integrating Women in Development

5.5.1 Policy Dimension

A national policy for women in Sierra Leone is said to have been approved in March 1991. The mission was unable to lay hands on the policy document. As stated earlier, since the women's organizations are at their embryonic stage, it is necessary that a policy framework is developed and the role of each group is determined. In the same vein, if the Women's Bureau is the umbrella organization which co-ordinates the work of the others, it should be clearly stated. Its structure should be such that it could perform the supervisory and co-ordinating role.

5.5.2 Training Programmes

Since there are several vocational establishments in Sierra Leone owned by religious bodies, private people and the Government, the courses offered should be harmonized in terms of content and duration. Here again, the Women's Bureau has a major role to play. More women should be exposed to entrepreneurship development programmes. Girls should be encouraged to take up non-traditional courses in order to acquire skills. A vigorous adult literacy campaign targeting on women would help.

5.5.3 Advisory Services and Career Counselling

Lack of information and advice are problems which need to be addressed. The various NGOs can contribute to creating awareness and sensitizing women about various opportunities and new methods and processes for undertaking certain activities. The Government could consider setting up a few business advisory service centres which would advise women entrepreneurs on possible areas for investment. In schools, career counselling and guidance should be intensified.

5.5.4 Credit Facilities

Credit facilities and arrangements have not been sufficiently developed, largely because of lack of national policy, poor follow-up and monitoring. The Women's Finance Trust Limited which is fairly new, is the only financial institution specifically designed to make credit facilities available for women. It has been shown that, while women have participated in the credit guarantee scheme, they have received only 14.8 per cent of the total number of guarantees issued. This low proportion of women's participation in the scheme may be due to ignorance of its existence and lack of collateral. Rural women have more disadvantages arising from any factors, including: complete lack of information, illiteracy and lack of rural banking networks.

5.5.5 Technology Improvement

It is possible to improve the methods of production and processing of the products involving the majority of women. Simple devices for gari processing, fish smoking and drying, spinning and weaving, palm oil extraction, etc. can be produced locally. Extension services have to be provided to train the women on the use of these devices.

5.5.6 Legal Status

Issues of land and property ownership should be researched into so that the Government can formulate workable policies backed by relevant legislation. Similarly, improvements can be made on laws of inheritance.

CHAPTER 6

PRIORITY INDUSTRIAL SUBSECTORS

6.1 Agro-Based Industries

As an agricultural country, Sierra Leone is expected to provide a rich resource base for the growth of agro-industries. Rice, cassava and fish are the main staples of the population. The Government is committed to the provision of food staples on a sustainable basis through increased primary production, preservation, storage, and efficient processing. This is in order to boost production so as to meet nutritional needs and assure domestic food security. The broad objectives of the Government include: (a) promotion of industrialisation; (b) creation of employment; (c) stimulation of agricultural production; (d) development of rural areas; and (e) improvement of the balance of payments by increasing value added of exports and substituting imports.

The food industry in Sierra Leone is still at a rudimentary stage geared to supplying the local market. The bulk of the main exports (coffee, cocoa and palm kernel) are in the unprocessed form. As the export incentives and the export promotion programmes are largely inoperative, there is hardly any serious processing for exports. Over the years agricultural output has declined by about 3 percent.

Within agriculture, forestry and fishery, the principal products are:

(a) Food crops: e.g. cereals (rice, maize, sorghum, millet), roots and tubers (cassava, sweet patato, yam, cocoyam), legumes (groundnut, beans, cowpea, benniseed), vegetables (leafy cassava and potato leaves), fruit vegetable (tomato, pepper), oils (palm-oil), and fruits (orange, mango, pineapple), tree crops (cocoa, coffee, oil palm), industrial crops (tobacco);

(b) Timber; and

(c) Fish species (pelagic, demersal): shrimp and tuna.

6.1.1 Food Processing and Beverages

Agro-food industry is the most predominant manufacturing branch in Sierra Leone. According to one estimate, in 1986 it contributed 66 per cent of the total number of jobs in the organized manufacturing sector of the country and accounted for 48.6 percent of gross output and 65.3 percent of MVA*. This is followed by wood products and chemicals. In 1986/87, food production's contribution to GDP was 10 percent and 17 percent for large-scale and of small scale manufacturing, respectively.

Sierra Leone's food industry can be categorized into two major sectors: cottage industries and medium and large-scale industry. The former are small-scale industries engaged in baking, rice milling, edible oil extraction, fish smoking, gari and foofoo making. Cottage industries are in the informal sector where most food processing takes place. These industries process local

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* Regenerating African Manufacturing Industry : Country Briefs Studies on the Rehabilitation of African Industries No: 2, UNIDO PPD 97 Nov.,1988.

raw materials except in the bakeries which use imported wheat. All equipment and machinery are imported, as well as raw materials. There has been little or no research on new food products based on local raw materials. Technological capacity to fabricate equipment and inputs used in small-scale food processing enterprises is limited.

Medium and large-scale industries largely produce high quality food products and are oriented towards the urban elite. Large-scale firms have tended to process those food products which depend on imported inputs, e.g. wheat and confectionary. While there is processing of locally grown rice (paddy) on a wide-scale by small-scale producers, available data is not reliable. The only food crops with considerable local processing are the roots and tubers.

TABLE 6.1 (a)

CONTRIBUTION TO GROSS DOMESTIC PRODUCT OF SMALL SCALE MANUFACTURING
(At Current Prices - in mill. Leones)

	INDUSTRY	1972-73	1980-81	1984-85	1985-86	1986/87
1.	Food					
	1.1 Fats and oils	0.8	1.7	3.5	5.0	6.9
	1.2 Rice milling	2.9	3.5	1.1	1.5	3.8
	1.3 Other food (bakery)	0.7	1.3	2.7	3.8	5.3
	Total	**4.4**	**6.5**	**7.3**	**10.3**	**16.0**
2.	Textiles	1.0	2.0	4.0	5.8	8.0
3.	Tailoring	4.6	9.3	18.7	6.8	37.1
4.	Wood industry	2.2	4.4	8.7	12.5	17.4
5.	Metal	1.0	2.0	4.0	5.8	8.1
6.	Others	0.8	1.5	3.0	4.4	6.1
	Total	**14.0**	**25.7**	**45.7**	**65.6**	**92.7**

TABLE 6.1 (b)

CONTRIBUTION TO GROSS DOMESTIC PRODUCT OF LARGE SCALE MANUFACTURING
(at current prices - in mill. leones)

	INDUSTRY	1972-73	1980-81	1934-85	1985-86	1986-87
1.	Food	1.6	4.8	18.0	31.0	66.9
2.	Beverages and tobacco	3.7	13.3	40.1	75.3	453.1
3.	Textiles and leather	0.2	0.4	1.8	2.3	3.0
4.	Wood and wood products	0.3	1.3	14.3	24.0	33.0
5.	Paper and printing	0.4	0.9	1.7	1.0	2.0
6.	Chemicals, petroleum and plastics	0.7	6.1	22.6	25.0	31.7
7.	Metal and non metal products	0.4	1.2	21.6	32.0	52.8
8.	Repairing of Electrical/ Electronic Goods and Automobiles	N.A.	N.A.	4.0	10.0	30.
	Total	**7.3**	**28.0**	**124.1**	**200.6**	**672.5**

Source: National Accounts of Sierra Leone (1984-85 to 1986- 87)
Central Statistics Office, Freetown.

6.1.2 Roots and Tubers

Organized cultivation of cassava is not carried out in any large acreage and therefore data on its production should be treated with caution. This not withstanding, cassava consumption is second only to rice in the nations food basket. Production rose from 100,000 tons in 1984 to 113,000 tons in 1986, an increase of 13 per cent. Current estimates are well over 120,000 tons a year.

In addition to obtaining gari and foofoo as main food items, many agricultural by-products that could be obtained through industrial processing include dried (sweet) cassava, macaroni, cassava bread, cassava grist, starch alcohol, cassava chips and animal feed.

Cassava processing is a major informal industrial activity. Gari and foofoo, two of the traditional food products in the country are made from fresh cassava roots, involving very simple and rudimentary technology largely in the rural areas. Some units are semi-mechanized, involving petrol-driven motorised grating gadgets. Large scale processing (400-500 kg of cassava tuber per hour and production capacity of 700 metric tons per annum on one shift) at Robinki is now hampered by a host of problems. These include the inadequacy of raw materials - raw material availability does not match the processing

capacity of the plant -, limited working capital, infrastructural problems of power, fuel and water, transportation and lack of organised marketing channels.

6.1.3 Proposed Actions

There is considerable potential for the growth of the sector, given the adequacy of raw materials. To this end, the FAO on-going project on the planting, and propagation of cassava is expected to increase production. UNIDO'S new technical assistance project involves the setting up of a gari making demonstration plant, with the objective of training local entrepreneurs in the design fabrication, maintenance and operation of the plant. Rural dwellers can be assisted by upgrading the traditional methods of gari processing so as to remove the drudgery involved and increase productivity. Through research, better varieties of the tubers can be introduced in order to increase productivity - thereby increasing the raw materials for industry. Considering the various other possible uses of the tubers, entrepreneurs should be encouraged to invest in new industries, e.g. starch and glucose.

TABLE 6.1 (c)

CONTRIBUTION TO GROSS DOMESTIC PRODUCT FROM AGRICULTURE, ANIMAL HUSBANDRY, FORESTRY AND FISHING
(at current prices - in mill. leones)

	INDUSTRY	1972-73	1980-81	1984-85	1985-86	1986-87
1.	Agriculture	91.1	293.3	1154.4	1471.2	4907.0
2.	Animal husbandry	5.6	17.5	182.9	300.1	376.3
3.	Forestry, logging and hunting	6.8	26.4	232.4	285.3	561.2
4.	Fishing	4.0	42.0	500.5	832.7	1796.5
	Total	**107.5**	**379.2**	**2070.2**	**2889.3**	**7641.0**

Source: National Accounts of Sierra Leone (1984/85 to 1986/87)
Central Statistics Office, Freetown.

TABLE 6.1 (d)

Principal Crops 1984-1986. (000 tons).

	1984	1985	1986
Maize	14	14	8
Millet	23	23	23
Rice(paddy)	504	416	525
Sweet potatoes	13	13	13
Cassava(manioc)	100	110	113
Taro(coco yam)	21	22	22
Tomatoes	17	19	20
Dry broad beans	1	1	1
Citrons	66	68	70
Mangoes	4	4	4
Palm Kernels	30	30	30
Palm oil	37	44	44
Groundnuts(in shell)	14	15	18
Coconuts	3	3	3
Coffee(green)	2	10	11
Cocoa beans	11	9	9

Source: FAO production year book 1988; printed in Investor Guide to Sierra Leone. UNIDO

6.1.4 Cereal and Cereal Products

(a) Rice Milling

Rice is the major staple food in Sierra Leone. During the 1980s the per capita consumption of rice was estimated to be between 100kg/year to 115kg/year. Self-sufficiency in rice production has been a consistent policy objective of the Government since the early 1970s. About 600,000 tons of rice is consumed annually in the country. However, this objective conflicts with the absence of price incentives and the readily available imported rice.

Processing

In quantitative terms, rice processing represents one of the largest informal food sector processing activities. Production areas are littered with small scale rice and milling equipment. These processes are followed in the milling or harvesting of rice.

The husk rice is soaked overnight in water about 60^{C}. In moving this rice is parboiled for about 1.5 hours in drums or large pots. The water is then drained and rice is spread on drying floors to benefit from solar drying before it is milled.

Problems and Constraints

- There is complete lack of grading and standardization;
- Pre steeping in cold water prior to parboiling results in poor flavour and off-colour of the finished product;

- Parboiling operation is labour intensive and energy inefficient. It requires constant stiring of paddy to forestall over cooking of the grain at the buttom of the drum;

- Incidence of microbial growth on parboiled padding during natural drying operations. Inefficient drying also lead to high incidence of breakage;

- Improper drying floors lead to addition of foreign matter, such as stones and sand in the finished product; and

- The problem of disposing rice bran is an environmental issue.

Recommendations

- The rice product industry requires better pricing and marketing incentives. Rice imports should be discouraged so that farmers can receive real market prices for their products;

- There is need to modernize rice processing mills and training programmes should be monitored to encourage producers and reduce post harvest losses;

- Input supply to rice farmers should be reliable and efficient;

- Local rice should be graded to compete with imported rice;

- The entire system of rice processing should be examined and improved; and

- The rice husk can, in addition, be converted as input to other industries, such as feed mills.

(b) Flour Milling

Seaboard West Africa Limited, manufacturers of " Life Flour" brand, is the only company in Sierra Leone milling imported wheat into baking flour. It has an installed capacity of 1050 metric tons of wheat per week and an extraction rate of 75-76 per cent. With a share of 60 per cent of the local flour market, there is a 40 per cent opportunity for exports. The mill is capable of producing 788 tons of flour and 262 tons of meal feed. The operations are highly mechanized involving the application of up-to-date technologies from cleaning to packaging.

Capacity utilization which was estimated at 17 per cent six months ago has improved to 60 per cent under a new managing director. Bottlenecks such as irregular supply of raw materials and power problems inhibiting production are being addressed. Efforts are underway to improve production efficiency and to introduce aggressive marketing to displace imported "cake flour" in the market place.

Future development objectives include the modernisation and adaptation of the mill to process other grains such as rice and maize as soon as the investment climate improves, and there is market potential.

The consumption of wheat flour, particulary bread and biscuits, makes up a significant amount of total food consumption in the urban centres where it appeals to both low income workers and urban elites. Thus, additional capacity in flour milling may become necessary in the future in Sierra Leone. Given the foreign exchange constraint, and the irregularity in raw material supply, it is prudent to set up plate-mills to process local grains eg. maize in strategic locations around the country.

(c) Bennimix Baby Foods

Bennimix is a local company that produces high protein weaning food under the brand name of bennimix. Bennimix is a nutritious and convenient baby weaning food for the low income groups. It uses locally produced ingredients and competes with imported weaning food substitutes. It is recommended for children from 6 to 18 months old.

Its production is based on local raw materials and represents a great potential in the diversification of cereal based products. It is produced from parboiled rice, dehulled sesame cowpeas and sugar. Packaging materials are imported.

The authorized capital of the company is Le 11 million, wholly owned by nationals. Total investment is Le.30 million and installed capacity is 250 tons per annum. The company has demonstrated considerable potential for growth. In 1989 a marketing study recommended production at 100 tons per annum and an aggressive marketing and sales promotion strategy. Production rose from 10 tons in 1988 to 75 tons per annum in 1990. Sales are 100 per cent local and market share is 45 per cent. Value added has also risen from Le 140,000 in 1988 to Le 1.33million in 1990.

Sustaining such growth depends on the availability of cost effective raw materials. In addition, the company should embark on product development based on the varieties of locally grown grains and a number of programmes to promote the production of cereal grains, storage and preservation techniques on a long term basis.

6.1.5 Confectionery Production

National Confectionery Company Ltd (NATCO) is the only manufacturer of confectionery products in Sierra Leone. It is a large-scale manufacturer and its main product lines are confectionery and biscuits. Raw and packaging materials, equipment and machinery are imported.

With a total investment of Le.60million, the installed capacity is 2500 metric tons each of confectionery and biscuits. Current capacity utilization is 50 per cent. The market is 100 per cent local with 75 per cent market share. Although value added increased from Le 277,000 in 87/88 to Le 367million in 1989/90, effective demand is stagnating. The major drawback is that there is no quality control facility and product safety is at risk.

6.1.6 Beverages

In the formal sector, lager beer, stouts, hardliquor products are the alcoholic drinks produced while the non-alcoholic products include soft drinks such as soda water, tea, coffee, and fruit juice - based squashes.

Sierra Leone Brewery Limited, established in 1963, is 89 per cent foreign-owned, is the only brewery in the country. It produces Star beer and Guiness Stout. Equipped with modern production facilities, the installed capacity is 120,000 hectoliters per annum but capacity utilization is 45 per cent. Sales are 100 per cent local with 45 per cent market share.

The brewery is faced with a complexity of problems, including the lack of foreign exchange to import raw materials, capital equipment, bottles, and spare parts. Government's complex fiscal measures seem to discourage further investment; export opportunities are limited as sucess depends on returnable packaging. Duty on imported beer is not considered high enough to protect local industry.

Successful partial substitution of barley with rice has been accomplished at the brewery, thus strengthening the backward linkage to agriculture. The company's interest in the seed multiplication project stimulates extra rice production and farmers are persuaded to grow rice for the brewery. About 400 tons of husk rice are required, and the company has invested in two rice mills.

The company also plans to go into local printing of labels for their brands and the manufacture of plastic crates for the bottles.

6.1.7 Oil Milling

The Palm Kernel Oil Mill, a subsidiary of Sierra Leone Produce Marketing Board is the only mill working exclusively on palm kernel raw material, using expellers to press out oil from deshelled, conditioned kernels. The plant has a crushing capacity of 100 metric tons of palm kernels per day, yielding approximately 40 tons of crude oil.

Palm kernels and the oil cake are further used as raw materials in the production of refined palm kernel oil, laundry soap, pig and poultry feed.

Capacity utilisation is less than 30 percent. The problems and constraints inhibiting production include: (a) irregular supply of cracked kernels; (b) lack of publicly supplied power as standby generators are incapable of coping with the power requirements; (c) lack of spare parts; and (d) obsolete machinery and equipment.

6.1.8 Palm Oil

Production

Palm oil is a major staple in the diet of the people of Sierra Leone. Yearly per capita consumption is estimated to averge 9 kg but this may go up to 15 kg in urban areas. An analysis of the present market shows a growing deficit in the demand for palm oil with an alarming trend in the future.

About 90 per cent of palm oil produced in Sierra Leone comes from small holders. This means that oil produced by local farmers comes from old palm trees. A substantial part, although difficult to quantify, comes from plantations abandoned mostly for lack of processing capacities.

It is a general view that palm oil production in Sierra Leone has a high potential. However, a field survey by Mano River Union confirmed that production is currently on the downward trend. This is due to short comings

in the plantations sector owned partly or wholly by the public sector. For example, the Sierra Leone Produce Marketing Board has a number of palm tree estates which have been abandoned because the mills attached to them are out-dated and have outlived their usefulness.

The palm industry faces deficiencies in the physical infrastructure such as poor road conditions, unfavourable demographic features, like scattered farming population which poses a labour problem. In addition, most palm oil mills operating in Sierra Leone face serious financial and managerial difficulties. Continuous mismanagement in the public sector has allowed processing capacities to deteroriate to such an extent that farmers have lost interest in palm oil production beyond subsistence needs.

These problems have been worsened by the relatively low prices of the commodity on the world market, since 1985. However, in macro-economic terms, the actual neglect of this sector is not justified as large quantities of this commodity has to be imported to close the widening gap in domestic demand.

Processing

Both the traditional and industrial processing of palm oil take place through the following steps even though the traditional method utilize only some of the processes: harvesting, sterilisation or boiling, threshing, digesting, extraction or pressing, clarification, and fine treatment.

Sterilization is always the first step in industrial processing cycle. Some traditional method include sterilization at the end of the processing cycle. Threshing separates the fruit from the bunches, traditional processes generally apply mannual threshing before boiling. Digestion prepares the fruit for easy oil extraction. During the action pulp and nuts are separated and the oil cells are crushed. In the industrial process a small portion of the oil is released during this operation. This is often referred to as the "virgin oil". Extraction is the process during which the fruit is either crushed/mixed or pressed to release the palm oil. Clarification separate oil from impurities such as sand, water and fibre in the traditional system.

Constraints

- The poor state of physical infrastructure, especially the road network, has adversely affected production. Most roads are in deplorable condition, reducing dramatically the supply of goods and the evacuation of produce, especially during the rainy season.

- There is a lack of viable small-scale oil palm farmers. Processing at present is mostly done by the traditional method.

- There is also lack of trained technicians to operate simple small-scale machinery.

6.2 Aureol Tobacco Company

Established in 1959, the company is the sole large-scale manufacturer of cigarettes in the country. Using the most up- to-date technology, the company imports all tobacco wrapping paper and most of the tobacco required for the international brand. For the local brand, up to 75 per cent of the raw

material required is obtained locally. Arrangements to switch over to the utilisation of 98 per cent local raw materials in its operations.

Over 90 per cent of the company's products are sold in the local markets where the market share is 60 per cent. Value added increased from Le 181m in 1988 to Le 497m in 1990.

Capacity utilization currently stands at 50 per cent. The company has invested in machinery, farms and manpower. To generate foreign exchange, the company has invested in the exports of semi-processed tobacco. Tobacco manufacture is a highly protected monopoly in Sierra Leone. However, judging by the quality of its products in the local market, there is room for improvement.

6.3 Fish Processing Industry

Sierra Leone has one of the richest marine fishing zones in West Africa, with an estimated sustainable yield of over 300,000 tons per annum. At present, some 60 per cent of the resource is being harvested. The marine resource is made up of four major groups of species - sardines, tunas, demersal species and shell fish. At current prices, 28.8 per cent of the GDP from agriculture, forestry, hunting, logging and fishing is contributed by fishing*.

The Government's policy objectives of the fishery subsector are outlined in the Green Revolution Programme of August 1986 as follows:

- To increase the domestic production of fish and other aquatic resources to satisfy the local demand for protein requirement;
- To increase foreign exchange earnings through the export of surplus fish and shellfish;
- To improve the efficiency of small-scale fisheries;
- To establish the necessary infrastructural facilities to support both the industrial and the small-scale fisheries;
- To promote research activities on all aspects of fisheries to ensure the national management and utilisation of the resources;
- To establish an efficient credit, pricing, marketing and distribution system;
- To provide an effective extension system; and
- To monitor, prevent and combat pollution and adopt conservation measures in order to protect the aquatic environment and its resources.

However, these policies have not been translated into concrete action and the development of the sector has been disappointing. Currently and considering the potentialities, the country is getting little foreign currency

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* National Accounts of Sierra Leone (1984 -85 to 1986 -87), Central Statistics Office, Freetown, April 1989, Table 13

earnings and little supplements to the national fish food supply from the offshore fishery. Therefore, domestic demand for fish is not being met and per capital consumption of 18.3kg of fish recorded in 1986 is declining.

The fish processing industry can be categorized as (a) an artisanal or small-scale operation; (b) a semi industrial operation; and (c) a full scale industrial operation. In 1987, the artisanal fishery produced approximately 45,000 tonnes of fish, about 70 per cent of the total national consumption. Artisanal fisheries are labour intensive and have relatively low fuel and capital requirements, when compared with industrial fisheries. Investments in the sector can employ over 20 times more people and produce five times as much fish as similar investments in the large scale commercial sector.

Industrial fisheries constitute the backbone of the country's fish export trade. The vessels in the industrial fishing fleet consist of trawlers, purse seniners, shrimpers, long liners, and carrier-motherships. The industrial fleet operates under local registration by the Sierra Fishing Company plus foreign vessels flying the flags of 16 nations, operating under various forms of joint venture agreements with companies engaged in fishing activities in Sierra Leone. Dependency on the foreign fleet will not change until such a time that local fishing crew and expertise can be developed.

The traditional method of preserving fish remains largely smoke-drying although salting and sun-drying are also used to a lesser extent. Thus at the artisanal level, fish processing is rudimentary with considerable loss in quality of the products. However, it still remains the most practical way of preserving fish where cold storage facilities are lacking.

Industrial fish processing is limited to only basic freezing. Shrimps are exported mainly to the European market either head-on or head-off, peeled or unpleeled but in each case, only the frozen form. However, the increasing number of shrimp trawlers is producing reduction in catch.

Problems and Constraints

- There is a dominance of foreign fleet in offshore fishery. 90 per cent of the fleet is foreign owned and there are difficulties to expand and support the national fleet because of foreign exchange problems;

- There is a lack of fishing harbour and port facilities to support the fishing industry. Attempts to construct a fishing harbour in the 70s failed for unknown reason;

- There are few cold storage facilities and ice plant. The operation of two existing ice plants is handicapped by the shortage and high cost of fuel, and lubricants;

- There is a shortage of qualified high level and intermediate level technical personnel for offshore vessels, and for fish plants, workshops and cold stores. There is also a lack of technology and trained manpower for proposed semi-industrial fishing fleet, and shortage of competent trained fish industry managers; and

- Spare parts and fishing gear are not readily available and must be imported. Repairs of vessels are undertaken under difficult and high cost conditions. There are no parts and materials. There is a lack of an aquaculture industry and of technology and funding.

6.4 Wood Processing Industries

There are at present five sawmills in Sierra Leone four of which operate in the Eastern Province, with an average capacity of 6,400 roundwood and 3,520 sawwood. Logging for industrial roundwool (170,000 m^3) are used for poles and fuelwood. About 2,850 m^3 of loggs are imported annually, while log exportation is prohibited.

The wood processing industry is roughly divided into two categories: industrial sawmilling and pitsawn timber. The capacity of the industrial mills is as follows:

TABLE 6.4

Formal Sector Roundwood and Sawmilling Capacity

	Company	Roundwood input m^3	Sawwood output m^3
1.	Forest Industries Sierra Leone Ltd. (FISL)	12,000	6,600
2.	Panguma Sawmill	15,000	8,500
3.	Kenema Sawmill	2,000	1,000
4.	Sierra Leone Wood Industries Company (SWICO)	2,000	1,000
5.	Kasewe Sawmill	1,000	500

Source: Forestry Action Plan, Freetown, 1991

The newly privatized company, the Forest Industries of Sierra Leone (FISL) was set up in 1988 to take care of the assets of the former Forest Industries Corporation. This is by far the most important Timber Industry in Sierra Leone. Prior to privatisation it employed over 600 qualified and trained workers. The plant is equipped with modern machinery for sawmilling, moulding, furniture manufacture and wood waste powered electricity generating plant.

The Panguma Sawmill is the second most important sawmill in the country. The company has a logging input of 12,000 to 15,000 m^3 per year and an annual Sawmill output of 7,000 to 8,000m3 used for export, local sales for carpentry and house fabrication. It employs more than 260 workers. It is regarded as one of the better managed sawmills in West Africa in all technical and commercial aspects except regeneration of forest resources. Out of the five sawmills, only the Panguma Mill operates at full capacity. Others are constrained by technical and organizational problems.

Both the Kenema Sawmill and the Sierra Leone Wood Industries sawmills are small privately owned operations. The companies have saw milling equipment comprising a horizontal band saw, a table bandsaw and circular triming and grinding machine. Both have log supply problems.

Kasewe Sawmill is Government owned. The mill was closed between 1979 and 1987 due to over logging of the area by an adjacent private sawmill which is now closed.

There is currently an increased demand for Pitsawn timber due to cut backs in the production of sawn timber by FISL. In 1977, it was estimated that out of an annual timber production of 20,000m3 Pitsawn Timber represented 40 per cent of that value. The quality of pitsawn timber is poor but this is compensated for in pricing which is less than 50 per cent of mill sawn timber.

The woodwork industry has gradually expanded over the years. It employs between 5 to 25 people which its contribution to GDP increased from Le2.2million in 1972/73 to Le17.4million in 1986/87. This trend continued in the large scale manufacturing industries, where its contribution to GDP increased from Le0.3million in 1972/73 to Le33.0million 1986/87.

Problems and Constraints

- The projected single shift production capacity of FISL has hardly been attained. Even in 1984, the best production year, only 50 per cent of target was obtained. This dropped to 20 per cent in 1987, the reasons being the over estimation of the forest potential and problems of opening up the forest and extraction. All the sawmills have problems of material supply, over logging as well as problems of equipment and maintenance.

- The sawmilling industry relied heavily on external finance yet there is little improvement in the industry. The productive capacity has been reduced. As a result, there is shortage of sawnwood in the country. As the sawmilling industry is concentrated in the South East of the country, sawnwood tend to be in short supply in the Northern part of the country.

- Lack of training facilities for foresters at all levels is a setback in the development of forest resources.

6.5 Textiles and Leather Work

The present consumption of cloth in Sierra Leone is estimated at about 14.million m2 per annum. The country has traditional textile weaving . In the traditional sector, there are a number of scattered handloon weavers and gara printers but their contribution to the total domestic demand for textile fubrics is marginal. Most of the cloth used in Sierra Leone is imported. This involves substantial foreign exchange component. Women groups in various parts of the country have organized gara dying establishment but they all complain of raw material availability and access to credit for expansion.

There is a high demand for traditional clothing but the industry is not expanding due to shortages of capital, raw materials and training facilities. The possibility of establishing a modern textile factory should be examined along with production of cotton.

6.5.1 Dress Making and Tailoring

There is a a large number of dress makers and tailors. In every settlement, it is common to find tailors in nearlly every houshold. This industry's contribution to the GDP increared from Le4.6 million in 1972/73 to for Le37.1 million in 1986/87 financial year. Freetown and the provincial headquarters have limited organized tailoring companies operating impressive enterprises. These companies complain of lack of training facilities high cost of equipment and lack of access to capital for expansion. Some of the more enterprising tailors can be assisted to grow into garment manufacturers.

6.5.2 Leather Works

The leather works industries operate on a very small scale. A notable one is the Yamina shoe manufacturing company. This company was established in 1989 after the Bata Shoe factory closed down. It employs 19 people and produces about 30 shoes per day. The main incentive enjoyed by the company is the large market for its products. The demand for shoes produced by the company far outweighs the company's output.

The factory lacks appropiate machinery, raw materials and credit to expand operation. Raw materials come from Guinea, Ivory Coast and also from the local market.

Small-scale business enterprises, like the Yamina Shoe Manufacturing Company, cannot meet the requirements that will entitle them to credits. In addition the industry suffers from over taxation both for imports and export. This gives very little incentive for growth and expansion.

The industries mentioned above are in a great need of training for the entire staff and management. In country training for workers and study tours for the general management will enhance quality production.

6.6 Problems and Constraints of the Food and Agro-Based Industry

- There is no clear cut Government policy on science and technology and industrialisation with appropriate strategies to achieve it. There is also no clear policy yet on the development of the agro-industries sub sector. Hence, there are no incentives for the sector to grow.

- Technological availability and the strengthening of its capacity are bedevilled by various problems which border on inadequate development of human resources. There is a shortage of technically qualified personnel, both managerial and middle level supervisory staff with qualifications relating to food technology.

- Public institutions give inadequate service and support to manufacturers;

- Technical institutions are poorly structured and have inadequate resources to support the development needs of medium and small scale manufacturers, especially informal ones.

- Small entrepreneurs have difficulty getting working and equity capital.

- Data base is inadequate for industry, planners and decision makers.

- Marketing information is inadequate, marketing is not structured in a way in which farmers can receive the best prices for their products.

- Institutional facilities for supporting export marketing and promoting investments are poor.

- There are no food laws and regulations. Thus there are no minimum standards set for food marketed products.

- Industrial spares and raw materials are in short supply.

- There is inadequate storage and preservation facilities for seasonal saturations. Post harvest losses are estimated at more than than 30 per cent.

- Industrial support infrastructure - roads, electricity, water, communication, banks, training, extension services, are inadequate.

- Inter-industry linkages are underdeveloped between small, informal and large manufacturers.

- There is generally no investment in reasearch and development and many facilities lack quality control facilities.

- There is a lack of technical capacities for maintenance and many processing plants have either closed down or are operating at low capacity with obsolete machinery.

- Difficulties of access to credit, high interest rates and transaction costs militate against the expansion of primary production and food processing.

- Excessive dependence on imported packaging materials leads to high costs of production and lower margins.

6.7 Non-Metallic Mineral-Based Industries

6.7.1 Clay-Based Industries

The clay-based industries can roughly be divided into five broad categories in order of increasing complexity and investment cost: (a) pottery, traditional and modern; (b) un-fired, sun dried or coement stabilized bricks and blocks; (c) heavy clay products, including fired bricks and tiles; (d) ceramic white ware, including wall and floor tiles, utility ware, sanitary ware, etc.; and (e) advanced ceramics, including high resistance, high performance and high purity products.

Presently, only the first three groups have industrial potential in Sierra Leone. On the other hand, pottery has a long tradition in the country which forms a fertile basis for a concerted development effort in this field. The development of local building materials industry incorporating, inter-alia, the second and the third product group in terms of growth potential appears to be one of the most promising areas of industrial development. The building materials sector is treated extensively in section 6.9 of this chapter.

6.7.2 Rocks, Gypsum and Limestone-Based Industries

Although laterite stone products, plaster and lime all have wide ranges of application, their most promising industrial potential at the present stage of development of the Sierra Leonean economy is in the building materials sector.

It is appropriate to keep in mind the scope for artisanal manufacture of a range of other products which normally would carry a significantly higher value added than the building materials. Ornamental stone products could even become an interesting export commodity in modest quantities, and plaster could, once available as an input to the construction sector, at very modest cost be transformed into school chalk and mold making material for the pottery sector.

6.7.3 Non-Metallic Minerals Inventory

There is a large and considerably varied range of industrial minerals some of which most probably would be sufficiently accessible and available in qualities and quantities to justify their exploitation either for consumption by local industry of for export in a beneficiated form. This would require further and, in some cases, extensive geological exploration activities, which only in the medium and long term would lead to economically vialbe operations, possibly in the form of international joint ventures. In order to initiate this process in a stage-wise manner and at minimum cost, it is proposed to carry out a desk type inventory of the industrial mineral resources without further delay.

The Geological Survey Division of Sierra Leone has in its records a considerable amount of information on the geology and the mineral reserves of the country, but for obvious reasons, the attention has so far been focused on the most valuable and easily exportable of the existing minerals.

6.8 Chemical Industries

There are a few industries engaged in chemical products and the rest is largely confined to artisanal soap making. Other than soap there are paints, candles, insecticides, putty and some lubricants, all in small quantities and often the production is limited to mixing and packaging of imported petro-chemical products.

6.8.1 Soap

Soap making is by far the most popular production among chemical industries. Due to its very low capital investment requirement hundreds of artisanal level entrepreneurs are engaged in this production. Also, because of low overhead costs, there are viable competitors to the three industrial enterprises which comprise most of the capacity but only about 25 per cent of the production.

The average demand is about 10.000 m.tonnes per year which is largely met by local production.

The basic raw materials are palm and coconut oils, readily available at reasonable costs. Palm-oil, constitutes 55 per cent of the soap by weight. However, the other raw material, caustic soda, although only constitutes 11 per cent of the weight makes up about half the cost of production. These two materials (palm oil and caustic soda) account for more than 80 per cent of the total cost.

Over 70 per cent of soap making activities are undertaken by small scale entrepreneurs, mainly women. In general household utensils are used as production equipment and the firewood as fuel.

6.8.2 Petroleum products

Established in the 1960s the Oil Refinery is generally out of action and the required refined petroleum products are imported, generally by private importers. There are at present plans to transform the Refinery into private hands, following the introduction of structural adjustment programmes. Unlike other products the prices are controlled by the Government which may be the reason for shortages, sometimes severe.

6.8.3 Paint and Putty

There is only one firm engaged in paint production with a capacity of about 800 metric tonnes/year. Closed down in 1988 the firm has only been reactivated recently. Putty is also produced by some small entrepreneus, the largest of which has an average production of about 15 - 20 metric tonnes/year.

6.8.4 Other Products

A small amount of lubricants, insecticides and detergents are also produced, generally by mixing and/or packaging imported petroleum products except for Sirena Products Company which is engaged in various types of coconut oil derivatives including alcohol.

6.8.5 Constraints

The high cost of caustic soda appear to be a major constraint in soap making effecting consumers more than the local producers since imported toilet soaps cost several times higher and are only consumed by a small group.

There is very limited and insufficient research in the form of trials of some raw materials are conducted by small entrepreneurs. The team has not uncovered any governmental support for such activities.

6.9 Building Materials

The main characteristic of the building materials sector of Sierra Leone is its overwhelming dependance on high priced, imported products and products manufactured from imported raw materials. This has a number of negative effects on the national economy, including (a) very high construction costs in the formal and semi-formal sectors; (b) severe under-utilization of domestic raw material resources; and (c) loss of the potential contribution of the sector to job creation and increased economic activity.

Most severely affected by the lack of appropriately priced building materials is the housing sector, where this problem is compounded with an extremely limited availability of resources and mechanisms for housing financing. The cumulative effect is that, currently, a large and growing proportion of the population and especially the rural families and the urban poor are living under unsatisfactory and deteriorating shelter conditions.

The Government's objective to provide every Sierra Leonean with acceptable and affordable shelter is being addressed by the project SIL/91/002 "Improving affordability of shelter through cost reduction in building materials and provision of morgage financing" approved in July 1991 for implementation by the Sierra Leone Housing Corporation (SALHOC). The project proposes a framework for alleviating these problems through: (a) formulation of an appropriate housing and shelter policy; (b) establishment of an

effective mechanism for mortgage lending operations; and (c) improvement of affordability of shelter by reducing costs of selected building materials.

In the absence of a formal Government strategy, the project provides a useful background for a programme for the development of an indigenous building materials manufacturing sector.

6.9.1 Description of the Sector

Over 95 per cent of both rural and urban housing are buildings constructed more than ten years ago, and presently construction activities in both sectors are negligible.

In the rural areas, the majority of houses consist of mud and waddle and mud block walls covered by elephant grass or swamp reed thatch on a lattice work of bush sticks. These materials represent little or no cost to the builder but offer very limited durability. More durable housing is achieved through rendering with a sand-cement plaster or through the adoption of the presently prevailing urban housing type using concrete blocks and corrugaged iron sheets sawn timber trusses with timeber or gum pole purlins. In spite of the high costs of imported cement (in bags or as clinker) and corrugated iron sheets, these materials offer comparably inferior living comfort and only limited durability due to substandard cement content in the blocks and very low corrosion resistance of the metal sheets.

The major large-scale building material enterprises: SERACEM (a clinker grinding plant producing cement), Sierra Brick and Ceramics Co. Ltd (a mechanized brick and tile factory), and Nail Factory (producing nails from imported wire) have closed down. Whereas SERACEM produced Portland cement from imported cement clinker and gypsum, today all cement is imported in bags, and so is the case with nails.

6.9.2 Existing Manufacturing Enterprises

Concrete Block and Tile Manufacturers

In Freetown and, presumably, also in other larger towns, the production of hollow concrete blocks, decorative fence blocks and wind breakers, painted concrete floor tiles and related products is positively flourishing. At least 200 such enterprises exist in Freetown alone with a roughly estimated total output of 5-10 million blocks per year. The quality if mediocre and the prices exorbitant, even in the light of the high price of imported cement. A concrete block of 22.5 x 22.5 x 30.0 cm would cost a minimum of Le 750 or US$1.80 in Freetown today, and still the manufacturers find it difficult to meet the demand, illustrated by the much lower price the blocks are able to fetch up-country, such as Le 250 in Mokanji.

Marble Processing Plants

A few marble processing plants exist in Freetown producing marble tiles and other marble products using imported marble. The prices reflect the luxury character of this product group. No evidence is found of any processing of the local granite although easily exploitable deposits exist close to Freetown.

Fibro Cement Roofing Tile Plants

This technology allowing the production of vibrated roofing tiles based on imported cement and local sand and sisal fibres was introduced to Sierra Leone about two years ago and is now well established in the Baptist Mission in Lunsar and in two small production units in Mokanji and the nearby company Sierra Rutile. A new entrepreneur in Freetown has very recently completed the production of the first batch of such tiles and used them for the roofs of four experimental houses built in co-operation with Sierra Leone Housing Corporation (SALHOC).

In spite of their high content of imported raw material (33 per cent cement), the products represent a significant improvement, both in term of quality and price, over the corrugated iron sheets they are aiming at replacing. Their promotion as clay-based products, which are entirely based on local raw materials, is fully justified.

Small-scale Brick and Tile Making Units

In spite of the widespread occurences of good quality clay throughout the country, it was only recently that another unit followed the now defunct Sierra Brick and Ceramics Co. Ltd. in producing fired clay bricks. This was the Baptist Mission Brick Factory in Lunsar, established in 1985. It is based on hand-moulding using the excellent local clay and operates, mainly for the own consumption of the mission and its small eye hospital and generally does not supply the public. Its yearly production is approximately 20,000 hand made bricks, equivalent to one firing of its rudimentary Scottish kiln.

More recently, two additional brick making units have been established by the Ceratec Engineering Company, the first in Mokanji using an original Ceratec press from Belgium and the second in the village Mabettor colse to Lunsar. The Lunsar operation also comprises a hand press for clay roofing tile production which, so far, is only being used on an experimental basis.

These small-scale brick and tile making units will be dealt with in more detail together with the fibro cement roofing tiles manufactured under the description of the proposed future programme.

6.9.3 Existing Institutional Infrastructure

Sierra Leone Housing Corporation

The Sierra Leone Housing Corporation (SALHOC) was established by Act of Parliament in 1982 as a parastatal organization under the Ministry of Lands, Housing and Environment. The main sources of funds for the Corporation are rents from the houses it owns or revenue from the sale of such houses and deposits from its savings and loans department.

The SALHOC's main business is the maintenance of its assets in Freetown: (a) Kissy Low Cost Housing Estate; and (b) OAU Village Estate (80 units). It also supervises the presently ongoing construction by Chinese contractors of the 218 unit Middle Income Estate at Goderidge Rifle Range. Although the Corporation owns or controls a substantial amount of land up-country, it is not involved in any low-cost housing activities outside Freetown, nor is it actively promoting the concept of site and service schemes.

The original part of the Kissy estate which dates back to the 60s is constructed with concrete blocks and corrugated iron sheets, while a newer part built in the early 80s used the bricks from the Sierra Bricks and Ceramics Co. Ltd. Fired bricks from this factory were also the main material used for the construction of the OAU Village built at the same time. This commitment to local materials unfortunately is not present in the new 218 unit project which uses concrete blocks and imported corrugated impregnated felt roofing sheets.

Senior officials of the Corporation, including the Chairman, are, however, fully aware of the advantages offered by local materials and interested in promoting their use. There is concrete evidence of this policy in small demonstration projects now under implementation in the immediate vicinity of the Kissy Estate. In co-operation with a local entrepreneur who took the initiative to buy the necessary equipment and contacted the Corporation for assistance in realizing the project, four 2 to 3 bedroom houses are now under construction using stabilized soil blocks on a foundation of laterite rocks, a traditional building material in Sierra Leone, and fibro cement roof tiles.

It may be expected that this first demonstration effort will lead to increased interest in these materials among potential users, including the Housing Corporation itself. In this connection, it should be recalled that the Corporation, which is responsible for the implementation of project SIL/91/002, is committed to promote the increased production and use of the type of materials used in this demonstration project.

University of Sierra Leone

This university which is among the oldest in Africa consists of two separate colleges, Fourah Bah University College in the Freetown area which is primarily devoted to humanistic studies but which does have a soil laboratory, and Njala University College in Njala focusing more on technically and rurally related matters, in addition to a Faculty of Education and Agriculture.

Of specific interest to the ceramics and building materials sector are the Department of Agricultural Engineering which, in connection with a programme on renewable energy resources carried out in the 1980s under French bilateral assistance, started the development of ceramic cooking stoves, thereby taking its frist steps into the field of ceramics. The Department of Soil Science, thanks to its soil laboratory, has the capability to carry out a number of basic tests on clays, including wet chemical analysis and particle size distribution.

At present, the Njala University College does not have any staff or ongoing activities in the field of ceramics or building materials. However, the research assistant with whom the French bilateral ceramic experts carried out the ceramic stove programme up to the end of 1988, is still attached to the college and recently supervised the research project of a student in the Agricultural Engineering Department leading to the construction and optimization of mechanical clay mixers.

Discussions with the Acting Principal, the Registrar and other senior staff of the College, including the directors of the two departments concerned, have confirmed the full support of the College to a project involving the establihsment of a ceramic centre at the College along the lines of an official request presented by the Government in August 1991.

6.9.4 Past and Present Technical Co-operation Activities

Over the years, a number of UNDP and UNIDO activities have been implemented in Sierra Leone with the purpose of exploring the potential for or promoting the establishment of domestic building materials manufacture. The following activities have been carried out with UNIDO's co-operation:

- A pre-feasibility study for a fired clay brick and earthenware manufacture (June 1981);
- An exploratory mission aimed at the eventual establishment of a granite cutting and polishing plant (May 1982);
- An exploratory mission aimed at the eventual establishment of a plant producing composite ceiling pannels (January 1985); and
- A preliminary assessment of the potential of establishing a ceramic industry (November 1991). This is being undertaken with the assistance of the Growth Center Programme.

The last of these activities is still ongoing at the time of fielding the programming mission. It comprises the analysis of 96 clay samples collected from eight different locations in the country and an assessment of a number of other factors influencing the suitability of these eight locations as future sites for ceramic industry development. The final report will serve as a valuable guide for further development in this field.

6.9.5 Government Policies and Strategies

In line with the Government's decision to assign maximum priority to resource based industries, the building materials sector has been identified as an area where tangible results can be achieved within a limited time frame and at a realistic cost. It has therefore specifically been identified as a sector for concentration of the industrial development effort in the short and medium term.

The Government further wishes this effort to be labour intensive and based on appropriate technologies in order to minimize capital investments and dependency on foreign inputs, including raw materials and spare parts.

A declared Government policy aims at alleviating rural poverty and to improve over-all living conditions in rural areas in order to slow down the rural exodus and sees it as its responsibility to provide the necessary basic services. Decentralized building materials manufactures satisfying demands of the local community and, at the same time, providing jobs and further economic activities are expected to play an important role in this respect.

6.9.6 Constraints

An analysis of the present pattern of material demand clearly shows a strong preference of the market for imported products and products with a high import content which are obviously more expensive. Even quality appears to play only a minor role in the choice of building components. There are several reasons for this.

- An unreflected disbelief of the general public in the quality of local materials, which, rightly or wrongly, are considered traditional and backward, including ceramic products;

- A deeply rooted preference in the economically active part of the private sector for trade (i.e. import);

- A vast majority of the population is deprived of access to manufactured building materials due to their abject poverty, while, on the other hand, the financially affluent make cost considerations practically irrelevant;

- The absence of a coherent Government policy for low cost housing and of financial mechanisms, such as mortgage facilities, which would allow a certain middle class to consider hime construction using economically accessible materials;

- An apparent lack of determination on the part of relevant ministries and Government institutions or of the architects with whom they co-operate to give preference to local materials in public construction projects;

- There is, even among the professionals in the construction and building materials sector, a lack of awareness of the potential offered by the raw material resources of the country and of the technological options available for their processing into high quality and comparatively inexpensive building products.

6.9.7 Recommended Model

Taken as a whole, the odds against the entrepreneur embarking upon the adventure of establishing a small-scale rural industry applying simple technologies for the production of quality building components from local raw materials are frightening. This, therefore, explains why so few have succeeded or even made the attempt.

So much stronger is the justification for turning to international co-operation for initial support, including access to the lessons learned by other countries where this process has been effective. However, no example could be more relevant as a source of guidance than the case story of the only successful local resource based building materials industry established in Sierra Leone in recent years: the story of CERATEC to which reference has already been made at various points.

The renewable energy resources project, financed by the French Government, at Njala University College which, in 1986, turned into a project to develop efficient clay cooking stoves, provided one assistant with years of fruitful co-operation with three ceramic experts and the possibility to carry out research on clay mineralogy, ceramic technology and kiln design and to gain practical pottery experience.

When the project came to an end and ceramic activities ceased at the College in April 1989, he had sufficient confidence in his technical know-how to resign from his research position in order to establish his own private

ceramics enterprise in near-by Mokanji. From a very modest start with a self-built potters wheel as the only equipment, the pottery has grown into an industrial operation producing fired bricks and fibro cement roofing tiles employing some 60 workers, including a subsidiary pottery and brick and tile making unit located in Mabettor.

An indispensable basis for this achievement was obviously the sound theoretical and practical background of the entrepreneur in this chosen field of technology combined with a strong entrepreneurial spirit and an equally strong determination not to give up in spite of all difficulties. However, what in this case made the difference between success and failure, undoubtedly was the result of the mutally beneficial linkages established between the enterprise and the "partners" essential for its survival: the Njala University College, the two communities in which the production units are located and, last but not least, the large-scale bauxite mining company SIEROMCO.

There are strong mutual benefits, synergetic effects and co-operative linkages between the enterprise on the one hand, and the univeristy and the community, on the other hand. For example, the university initially provided the entrepreneur with his technical background and continues to back the enterprise by making its laboratory facilities available and by assigning research activities of direct relevance to the enterprise to students. The enterprise, in turn, provides valuable feedback on improved production technologies to the university and also gives students interested in this field the possibility of gaining practical and theoretical experience and support.

The community provides the necessary labour (and some infrastructure) for the enterprise and also represents a makret of growing importance for its building materials, while the enterprise, in turn, offers the community members jobs and the possibility of upgarding the skills as well as improved materials for their homes. The small-scale building enterprise, i.e. the Mokanji Fibro Cement and Roofing Plant, in turn, provides the community and large-scale enterprises with good quality clay bricks and fibro cement roofing tiles at competitive prices.

6.9.8 The Potential for Local Building Materials Development

In the context of the proposed programme, the term "local building materials" is defined as products manufactured in Sierra Leone using domestic raw materials exclusively or, at least, to the extent that these inputs can be derived from local resources. Not all local materials are recommendable nor should products with high proportions of imported raw materials automatically be excluded from being promoted. The potential list of eligible building materials could include:

- Fired clay bricks and blocks;
- Stabilized soil bricks and blocks;
- Fired or stabilized paving tiles;
- Fired clay roofing tiles;
- Fibro cement roofing tiles;
- Hydrated lime (from sea shells);
- Pozzolanic cement (including 20 per cent local laterite);
- Plaster of Paris;
- Laterite blocks;
- Granite tiles ans slabs.

Except for the pozzolanic cement and the fibro cement roofing tiles, all products are based on 100 per cent local materials. Also these two products offer significant potential savings compared to imported cement and corrugated iron sheets, in addition to the local value added in the production process.

CHAPTER 7

TECHNICAL CO-OPERATION PROGRAMMES AND AID CO-ORDINATION

7.1 External Assistance

The information in this section is culled from the UNDP Development Co-operation Report for 1989.

External assistance constitutes a significant portion of the economy's development financing in Sierra Leone. According to available data, total external assistance to Sierra Leone in 1989 amounted to $92.85 million, representing an increase of 41.6 per cent in technical co-operation programmes in 1988.

Of the total $92.85 million, bilateral donors contributed $57.7 million of 62 per cent in 1989 and multilateral sources $31.4 million of which $14 million were provided by the United Nations system.

UNDP, as the major contributor in the United Nations system, disbursed $5.5 million followed by UNICEF with $3.8 million and UNCDF with $2.9 million.

The external NGOs contributed $3.7 million or about 4 per cent of the total external assistance.

TABLE 7.1 (a)

Breakdown of External Assistance by Donors in 1989 (000$)

Bilateral donors	57,750	62.2%
Non-United Nations system	17,420	18.8%
United Nations system	14,000	15.0%
External NGOs	3,680	4.0%
TOTAL	**92,850**	**100.0%**

The five top bilateral donors in 1989 comprising Italy, Germany, China, United Kingdom and the United States of America contributed $23.8 million, $16.3 million, $5.4 million, $4 million and $3.2 million, respectively.

With regard to technical assistance, a significant drop of funds was recorded in 1989 in comparison with 1988, from $40.6 million to $27.4 million. This trend had, in fact, been noticed since 1987, when IMF suspended its facilities to Sierra Leone. Correspondingly, the major donors started to hold back financial assistance to Sierra Leone. This was a clear signal that the international donor community would want to see an adherence to better economic management policies.

The share of disbursements by the United Nations system as a whole also dropped from $12.6 million in 1988 to $7.8 million in 1989, mainly due to the decrease in the contributions by UNICEF. On the bilateral side, the contribution of Germany dropped from $5.0 million in 1988 to $0.5 million in 1989.

The table below gives a summary of technical assistance expenditures by donor category for 1988 and 1989.

TABLE 7.1 (b)

Donor Category	Expenditures (000 US$) 1988	1989	% share
Bilateral donors	15,712	15,732	0.1%
United Nations system (other than UNDP)	6,266	1,812	-71.1%
UNDP	6,315	5,514	-12.7%
Other	12,291	4,332	-74.8%
TOTAL	**40,584**	**27,390**	**-32.5%**

Because of the difficulties in getting relevant data, ti has not been possible to fully differentiate the types of aid into investment assistance, technical co-operation, food aid and budgetary/balance of payments assistance (e.g. in support of SAP/ERP). Nevertheless, the largest technical assistance ($4 million or 25 per cent) on a bilateral basis in 1989 was given by the United States of America, in the form of food aid, followed by China with $3.4 million (22 per cent), the United Kingdom with $3.2 million (20 per cent) and Egypt with $2.1 million (14 per cent). Most of the donations were spread as food aid or investment related technical co-operation.

The single multilateral source was the EEC which contributed $17 million or 18.7 per cent of total disbursements in 1989. Among the NGOs, Foster Parents Plan contributed $2.6 million, CARE gave $1. million, while the Association Française de Volontaires du Progrès disbursed $0.14 million.

The United Nation system provided $14.0 million in 1989 with UNDP as the main contributor ($5.5 million).

In 1989, the World Bank, FAD, UNFPA, WHO and UNHCR made no disbursements. Also DANIDA, Italy, Norway, Sweden and Australia made no disbursements towards technical co-operation in 1989.

7.2 Sectoral Distribution

On the basis of the new sectoral classification system, the sector which benefited most from external assistance was transport and communications, receiving US$16.7 million (18 per cent). Within this sector, road transport captured $8.4 million, while telecommunications received $7.9 million, both predominantly under investment project assistance for the purpose of improving road communication links and the construction of feeder roads to gain access to the rural population (road transport) and to provide technical assistance in setting up an independent telephone company with its attendant management training and investment requirements.

Other sectors which received sizeable support in 1989 were agriculture, forestry and fisheries ($15.1 million); energy ($15.3 million); health ($12.3 million); and general development issues ($11.1 million). The bar and pie charts below illustrate sectoral distribution of total external assistance disbursed to the major beneficiaries in 1989, while the following table illustrates the sectoral distribution of total development assistance.

TABLE 7.2

Sectoral Distribution of External Assistance, 1989

	1989 (000 US$)	% share
General development issues	11,069	11.9%
Natural resources	3,468	3.7%
Agriculture, Forestry and Fisheries	15,053	16.2%
Industry	419	0.5%
Energy	15,263	16.5%
Transport and communications	16,747	18.0%
Health	12,330	13.3%
Social Development	4,404	4.7%
Others	9,357	10.1%
TOTAL	92,859	100.0%

A comparison between the overall external assistance of the above with UNDP, the major donor in the United Nations system during the Fourth Cycle Programme (1988-1992), indicates that sectoral distribution has consistency with the national development priorities.

The main portions of technical assistance were channelled to development issues, including investment requirements for the construction of roads, communications and agriculture. However, due to non-availability of information, it is difficult to asses what percentage of technical assistance was allocated to human resource development.

It should be observed that industry had the smallest allocation. In consideration of the fact that industry has linkages with virtually every sector and, thus, should be the engine of growth in the economy, it is expected that, in the future, the allocation to that sector will be increased substantially.

7.3 Management and Technical Assistance Programmes

Management and co-ordination of technical co-operation programmes which include bilateral and multilateral contributions, are rather decentralized.

The Ministry of Finance, Development and Economic Planning, by virtue of its functions, plays the leading role as the clearing house and co-ordinating agency for all matters relating to external assistance.

There are, however, several other institutions which handle negotiations with donor agencies and aid management. These include the Ministry of Foreign Affairs which is reponsible for some bilateral co-operation; the Ministry of Rural Development which deals with NGOs; and the responsibility of aid from the Economic Community (EEC) lies with the National Authorizing Office.

The main functions of the co-ordinating ministry with respect to external technical assistance include:

- Focal point for all matters relating to technical assistance within the ministries, key multilateral and bilateral donor agencies as well as the private sector;

- Process and co-ordinate overseas development assistance projects;

- Initiate and process payments of assessed contributions to United Nations and other agencies;

- Process, co-ordinate and monitor technical assistance by the Mano River Union, UNDP, CFTC, British technical assistance, Germany, France, ECOWAS and ECA.

In view of the foregoing, when external aid is identified, the respective sectoral ministry or specialized Government agency, proceeds with the necessary follow-up actions in order to assume the responsibility for its execution. This, however, will be carried out with the backstopping and monitoring body of the co-ordinating ministry.

Therefore, the Ministry of Finance, Development and Economic Planning shall exercise its responsibility for the formulation, approval, implementation and evaluation of all development projects and programmes, in close collaboration with the donor agency.

7.4 Aid Co-ordination

Aid co-ordination has been a major concern of the Government and the international donor community in Sierra Leone. This concern is mainly focused on the Government's institutional capacity to manage its development resources with effective co-ordination.

The creation of a National Aid Co-ordination Unit within the Ministry of National Development and Economic Planning was first proposed in 1985. Later, in March 1986, the cabinet approved the establishment of the National Aid Co-ordinating Committee to operate directly under the Office of the President.

The main functions of the Committee included monitoring and co-ordinating the implementation of the external assistance to Sierra Leone; advising the Government on matters relating to international assistance and, in consultation with the ministries concerned, liaising with the local representatives of donor agencies on matters relating to technical assistance.

The Committee, however, could not function effectively due to duplicating of responsibilities with the Ministries of National Development and Economic Planning, Finance and Foreign Affairs.

Subsequent efforts generated some initiatives in 1986 and 1987 with little success.

7.5 The Role of the United Nations System

UNDP has taken the lead role in collaborating with the Government to enhance the co-ordination of technical co-operation and aid management within the donor community on one side and between the Government and donors on the other.

The Resident Co-ordinator convenes and chairs regular informal donor meetings and acts as an intermediary between the donor community and the Government. These monthly meetings, which are held at UNDP, aim at information sharing among donors, discussion on policy issues, aid co-ordination, sensitizing and maintaining a dialogue on Rour. Table issues.

Following the set-up of a joint Government of Sierra Leone/United Nations Task Force, its recommendation for an improved system for aid co-ordination has now been submitted to the Cabinet for consideration.

Meetings of Heads of United Nations agencies are convened monthly, aiming at co-ordinating major activities of common concern to the United Nations community, i.e. information sharing and strengthening inter-agency co-operation at the country level. In addition, bi-annual CTAs reatreats are organized by UNDP, with the participation of the Government counterparts, for experience sharing.

With regard to the industry sector, a monthly meeting is convened with the participation of the Director of Industries, the Assistant Development Secretary, the Desk Officer for UNIDO, and the UCD, to discuss and co-ordinate issues for technical assistance relating to the industrial sector.

7.6 Aid Co-ordination Issues and Recommendations

The Government and major donor agencies have accorded top priority to the issue of aid co-ordination, to the extent that the World Bank has made aid co-ordination a pre-condition for disbursement of imports on credit loans, to be signed in 1992.

In view of the fact that aid co-ordination is effective only if it is linked with the development programme objectives, the aid co-ordination process should develop the capacity building for improved management of internal and external resources. To this end, the following may be considered:

(i) Strengthen the aid co-ordination mechanisms, to link with macro-economic policies and sectoral development plans. This approach to strengthen capacity building should be carried out at sectoral levels simultaneously with the co-ordinating ministry;

(ii) Identification of needs and priorities by each sector through consultations and information sharing;

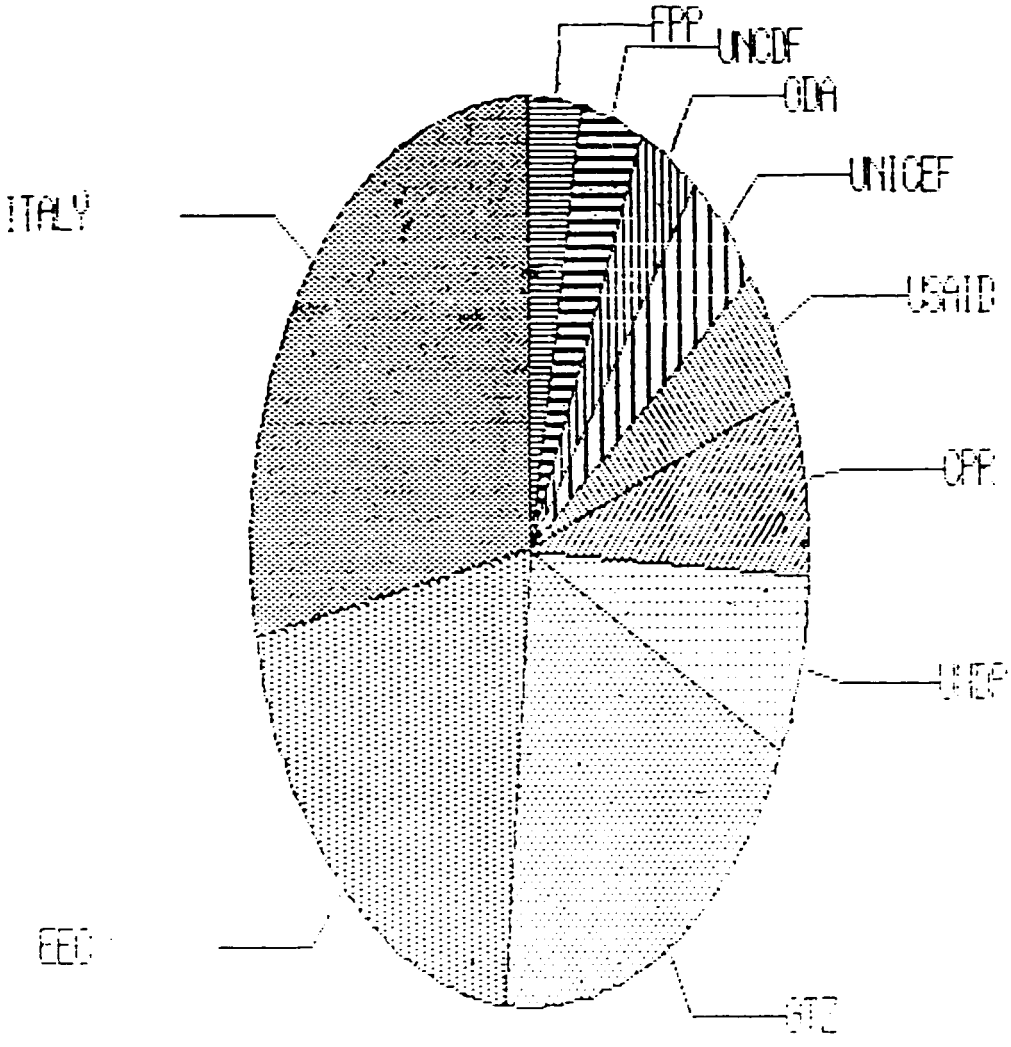
(iii) Implementation of the Government's aid co-ordination policy which was approved by the Cabinet in 1987;

(iv) Collect data on and assess technical co-operation and formulation of a technical co-operation policy, as the preparatory phase of the NaTCAP exercise; and

(v) Holding a national workshop focusing on major development issues, methods of strengthening the co-ordination of technical co-operation programmes and guidelines to the NaTCAP exercise.

TOP TEN DONORS, 1989 (USD)

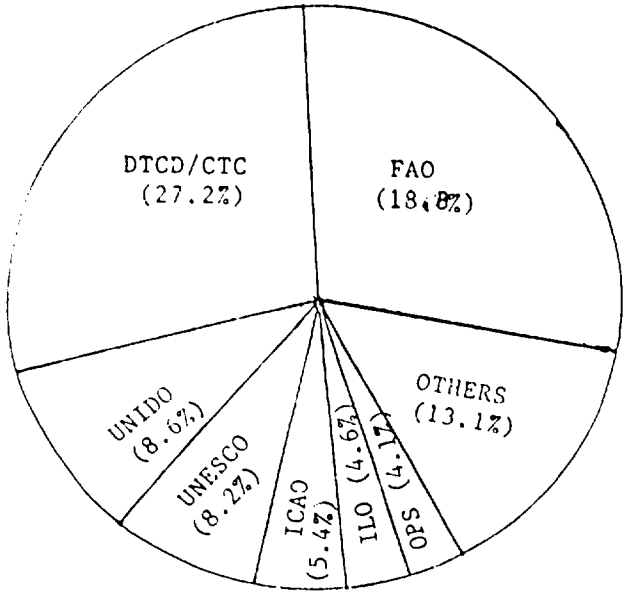
SIERRA LEONE



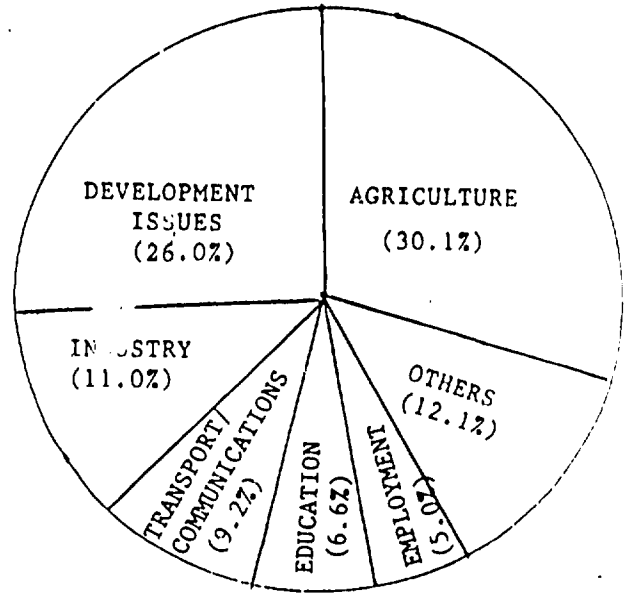
IPF COMMITMENTS FOURTH CYCLE (1988 - 1992) - SIERRA LEONE

(Projects approved as at October, 1991)

IPF FUNDS BY EXECUTING AGENCY

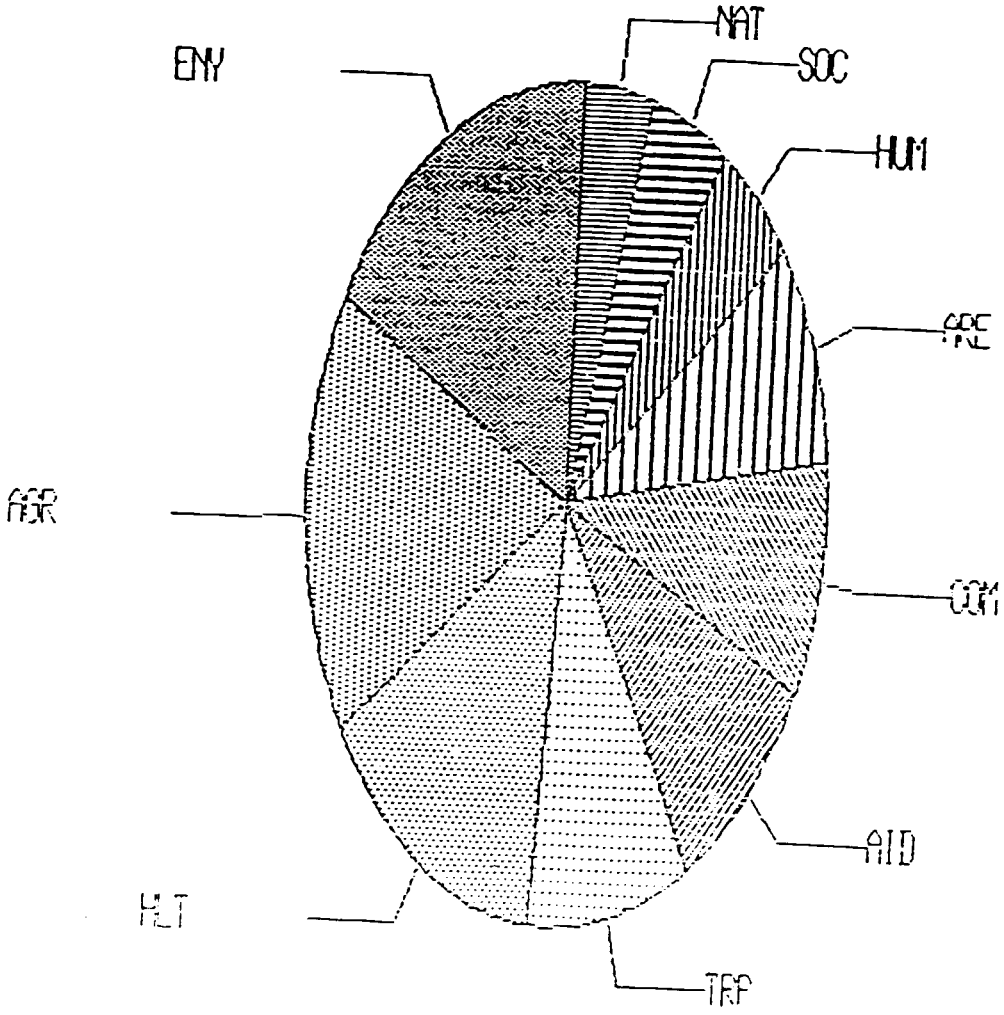


IPF COMMITMENT BY SECTOR



1. IPF Funds available for the Fourth Cycle: US$27,366,000
2. As of October, 1991, US$25,017,000 had been committed, leaving a balance of US$2,349,000.
3. IPF Funds available for the Fifth Cycle: US$41,426,000

TOP TEN SECTORS, 1989 (USD)
SIERRA LEONE



CHAPTER 8

PRIORITY AREAS FOR TECHNICAL ASSISTANCE TO INDUSTRY

8.1 General Observations

In the previous chapters the economic situation in Sierra Leone was discussed with particular emphasis on the performance of industry in the country. Before going into the priority areas for technical assistance, it is useful to highlight some general observations arising from the information in the preceding chapters.

In the area of macro-economic policies, while the Government continues to introduce measures on an ad-hoc basis to stabilize the economy, there seem to be difficulties in carrying through the various policy measures. This piece-meal approach designed to tackle immediate economic crisis seems to have created the unintended impression among the international community that the Government is unwilling or unable to keep to any agreed economic recovery programme. This impression needs to be corrected urgently, if Sierra Leone is to continue to benefit from the financial assistance of the donor community.

The above situation is amplified by the fact that no recent donors roundtable conference has been called for Sierra Leone in order to mobilize the international community to pledge grants and loans in support of the Government efforts. Such a conference will, however, be feasible when the economy is back on course through a coherent and forward looking programme.

For the moment, however, the current macro-economic environment is characterized by heavy dependence on imports without a commensurate tariff structure being put in place, much to the detriment of industry. This is compounded by high inflation rate (120 per cent), high and real negative interest rates (a nominal rate of 80 per cent), and a weak taxation policy, including revenue collection. It is therefore expected that measures will be taken to study and introduce a tariff regime which will complement the various economic measures being introduced by the Government. In an economy with a weak industrial base, the answer is not bans nor total liberalization. Effective rate of protection is necessary, especially for products of new industries. This is normally the subject of a full study which the national authorities have to undertake.

In order to face the challenges posed by the crisis, the Government is aware of the need to develop long-term perspective plans for the development of the entire economy. Short-term measures have to be in line with the overall development plan. Moreover, it is the means by which Government can ensure the proper integration of the various sectors of the economy.

8.2 Recommended Programmes

Considering the level of economic difficulties in the system, the absorptive capacity for the various programmes being recommended has to be carefully assessed. Nevertheless, the programmes are being recommended on the presumption that the economy is bound to improve. In this connection, it seems prudent not to recommend any elaborate structure or too many new establishments but to work with existing institutions.

On the basis of the presentation made above, the following priority technical assistance programmes are recommended, based on an integrated programme approach. While some of the recommendations are general in nature, others are sector specific.

Finally, it is expected that financing for the programmes will be provided not only from the IPF but also from other multilateral and bilateral sources.

8.3 Programme for the Rehabilitation and Modernization of Existing Industries

It has been amply demonstrated in the foregoing chapters that, due to the economic downturn, many industries in the public and private sectors have either closed down or are operating at an average of less than a quarter of their installed capacity. This is true of many agro-industries, such as palm oil mills, the jute bag factory, the feed mill, fruit processing plants, fish meal plants and the sugar factory. The same applies to engineering industries, as examplified by the National Workshop.

Since most industries import their factor inputs, they have been affected by the lack of foreign exchange. They have also contended with other problems, including inadequate infrastructures and manpower. In view of the extremely difficult situation in the country, it is prudent to embark on a programme of rehabilitation and regeneration of existing industries using an integrated approach.

Subprogrammes

(i) Identification of the industries in need of rehabilitation in the various sectors;

(ii) Diagnosis of the (technical, management, financial) problems of the specific enterprises, taking into account the root census of the problems, the macro and micro framework;

(iii) Preparation of rehabilitation programmes;

(iv) Identification of financial packages and investment related activities;

(v) Execution of programmes of rehabilitation and modernization.

(vi) In the event that the Government decides to continue its privatization drive, a programme in support of the scheme can be worked out, including:

- Adapting the conceptual framework (legal, investment and financial incentives);

- Formulating and executing appropriate strategies and evaluation methodologies;

- Innovating and adapting models;

- Identifying potential investors willing to take over public enterprises;

- Identifying and training local cadres willing and able to manage the process.

8.4 Programme to Strengthen the Institutional Capacity to Formulate and Implement Industrial Policies

While it is acknowledged that the country is in need of a new industrial policy, it is also known that the Ministry with the primary responsibility for industrial policy formulation and execution is ill-equipped to undertake this task. With the abrogation of import licensing, MTISE requires a new orientation. There is a case therefore for formulating a comprehensive programme to strengthen the Ministry of Trade, Industry and State Enterprise.

Subprogrammes

(i) An assessment of the role of the Ministry in industrial development;

(ii) A review of the structure and functions of the Ministry in the light of its new role;

(iii) Assessment of training needs;

(iv) Establishment of an effective structure;

(v) In addition, the Ministry will be assisted in setting up a Department which will be responsible for standardization and quality control, together with training of staff and supply of necessary facilities, such as a laboratory.

(vi) Industrial information is an indispensable element in industrial policy and planning. In view of this, the unit responsible for collecting, analysing and diseminating industrial statistics should be strengthened. Relevant training should be planned to equip the staff with the tools for their work.

(vii) Sierra Leone has to take measures to be competitive internationally. This requires putting in place the necessary environment for attracting investment. A starting point could be to undertake a comprehensive review and updating of the Industries Development Act of 1983 as well as a revision of the macro-economic environment. The introduction of a new industrial policy with clear objectives, strategies, incentives and institutional framework will be most welcome to the domestic and foreign investors. Such a policy will not only reduce administrative interventions but it will also simplify the procedures for obtaining industry related approvals and permits. However, in formulating an industrial policy together with the related investment code, there is need for concensus. Thus,

(viii) A national conference on industrial policy is useful for national policy makers, captains of industry, bankers, representatives of multilateral and bilateral agencies and other experts. An important aim of the conference will be to identify areas where Sierra Leone has comparative advantage, products for export and to agree on strategies for development. Such an approach, which is in keeping with UNIDO's strategic management approach to industrialization, could contribute to the eventual preparation of an industrial master plan.

(xi) Additional institutional support will be defined and given to other establishments whose functions relate to those of the Ministry of Trade, Industry and State Enterprise. These establishments include the Ministries of Finance, Development and Economic Planning; Agriculture and Natural Resources; Land, Housing and Environment; the Bank of Sierra Leone; and the Chamber of Commerce, Industry and Agriculture.

8.5 Programme for the Development of the Private Sector

Subprogrammes

(i) As Sierra Leone continues to promote a liberalized market economy, the role of the private sector is bound to be further enhanced. Over the years, the Sierra Leone Chamber of Commerce, Industry and Agriculture has developed as the main body representing the private sector. To date, its impact on the economy as a whole has, however, been marginal and its interaction with the Government unsystematic. For the Chamber to win the respect of the Government and for it to contribute meaningfully to the economic advancement of the country, the organization needs to be better equipped. A UNIDO preparatory assistance (XP/SIL/90/129) has indicated areas of possible assistance, including information, management, research and training. A follow-up on the proposed programme is recommended.

(ii) Entrepreneurship development in Sierra Leone deserves special attention. An economy, such as that of Sierra Leone "faced with sluggish growth, financial austerity measures, the need for reducing public sector employment and increasing availability of products", needs to develop a strategy for identifying and creating entrepreneurs who, in turn, will create the jobs.

There is need to have a programme for identifying people with entrepreneurial spirit and potential and supporting their ideas and business plans. UNIDO already has such a programme of technical assistance for providing advice and guidance on a wide range of approaches and methodologies as well as offering a network and entrepreneurial linkage strategies. This includes:

- Advice to Governments on improvements in their business climate for facilitating entrepreneurship through enabling policies, tax structures and administration, simplified licensing procedures, development of market-oriented institutions and other technical support systems;

- Establishment of business incubators for providing direct consultancy and technical assistance in every aspect of the fledgling business;

- Advice on new buisnesses linked to a network which facilitates access to institutional support systems; and

- Training of entrepreneurs in specialized production skills for producing the right product at a competitive quality level and for adaptability to market demands.

(iii) Attention will be paid to the Small-Scale Industries Division of MTISE with a view to equipping it to perform its new role. This is the division that is supposed to plan and promote the development of

small-scale industries throughout the country. At the moment, there is no comprehensive policy for the development of this subsector. Indeed, a Small-Scale Industries Act which has been in the making is yet to be promulgated. Small-scale industrialists need to be supported to organize into an association which will be able to articulate their needs. Issues of credit delivery, cost of inputs, training, marketing, subscontracting, etc., need to be looked into.

(iv) The concept of the Growth Centre Programme needs to be taken to other areas and to cover various activities, including pottery, ceramics, tailoring, natural dye, dama cloth (kpokpoi), weaving, ginger processing, fish net weaving and raffia. Due account should be taken of the local resources available in setting up new centres.

(v) The issue of the creation of a feasible industrial estate integrated into the overall industrial development plan needs to be examined.

(vi) In this connection, the feasibility of converting the premises of the National Workshop into an industrial estate should be examined.

(vii) The issue of credit delivery to the private sector in the light of the conditionalities imposed by commercial tenders which constitute an impediment to small-scale entrepreneurs and women also deserves special attention. In this connection, the activities of NIDFO, NDB and similar bodies should be evaluated with a view to making them more responsive to the needs of entrepreneurs. The existing credit and guarantee scheme for small-scale industries operated by the Bank of Sierra Leone has to be made more effective. The possibility of securing loans for on-lending to small-scale entrepreneurs and women at concessary interest rates should be examined.

(viii) Another equally important sub-programme which is closely related to the development of the private sector concerns the promotion of new investments. For the Government to effectively direct investment, especially by the private sector, to the areas of high returns, there is an urgent need for a resource endowment survey in the country. This should encourage the establishment of resource-based industries - thereby ensuring diversification of the economy.

(ix) Furthermore, some selected staff of establishments, such as the NDB, MTISE, Chamber of Commerce, Bank of Sierra Leone, etc. have to be trained in the mechanics of project identification, feasibility studies, project preparation, appraisal, monitoring and evaluation. They should also be equipped with the techniques of appraisal using computer methodologies (COMFAR).

(x) In order to ensure an orderly development of small-scale industries, some high level policy workshop is desirable. The workshop should, inter alia, examine in depth the policy dimensions, institutional framework for promoting small-scale industries, credit facilities, role of association of small-scale industrialists, etc.

8.6 Programme for the Development of Human Resources

As discussed earlier, adult literacy rate in Sierra Leone is quite low. For the industrial sector, the shortage of skilled manpower, especially with technical, administrative, managerial or industrial training, constitutes an additional constraint.

A good number of the industries, especially in agro-food processing and metal working, hire unskilled labour and train them on the job. This practice cannot adequately replace formal or industrial training. Thus, strengthening the industrial labour force is an important programme. There is equally a need to address under-employment, since some graduates of the higher institutions find it difficult to secure suitable jobs. This can be done through retraining.

Because of their level of education, the new available entrepreneurs are unable to undertake simple book keeping, accounting and management for their enterprises. This has an adverse effect on their productivity as well as the benefits to be derived by the Government, if they are registered.

Subprogrammes

Some of the specific subprogrammes to address the issue of human resource development include:

(i) A comprehensive human resource programme, including a survey and assessment of training needs for the industrial sector, should urgently be prepared. The programme should emphasize the role of women in development and other disadvantaged groups.

(ii) Training institutions need to be rationalized and strengthened.

(iii) A scheme for greater utilization of indigneous capabilities (experts, consultants, etc.) needs to be set up.

(iv) Linkages between the Government, industry and training institutions, especially technical colleges and universities, need to be strengthened.

(v) The Science and Technology Council needs to be revitalized.

(vi) A corps of consultants need to be identified and encouraged. In this connection, it is necessary to develop a directory of consultants on different disciplines.

In addition, with regard to the training institutions, the following subprogrammes are recommended:

(vii) Technical and management training institutions should closely assess what small-scale industry entrepreneurs and workers are interested in learning.

(viii) Training institutions should give more emphasis to practical subjects rather than to academic subjects. The courses should be employment oriented. This way, the human resource needs of the country will be better addressed.

(ix) There is a need to pay attention to the issue of repair and maintenance, but more particularly preventive maintenance. In this connection, a special national programme together with the relevant training should be mounted to create awareness and to assist enterprises to develop a maintenance programme.

(x) Training institutions may wish to undertake income generating activities, in connection with practical training, in addition to fees in order to improve revenue, to reduce burdens from Government budgets and to increase budgets to offer higher salary to qualified instructors. This would ensure self-sustainability.

(xi) The Ministry of Education, Cultural Affairs and Sports should continue and accelerate classification of training institutions so that prospective trainees will be awarded with clearly defined certificates that are recognized by employers and appropriate skill levels. The officially recognized certificates would contribute to monitoring supply of skills and improving job matching and thereby to reducing unemployment as well as to planning Government policies for human resource development.

(xii) The donor community should provide assistance to improve training skills of instructors, skills in training institutions management as well as training facilities.

(xiii) Universities should be more integrated with the productive sectors and should be involved in skill training as well as in income generation activities from production oriented programmes which can include production of prototype products development, repair and maintenance services and applied researches in appropriate technologies that are not available off-the-shelf.

(xiv) The possibility of setting up an industrial training fund should be examined and implemented.

8.7 Programme Concerning Industry and Environment

As industry continues to grow and to make its impact in the economy, steps have to be taken to ensure an environmentally sound industrial development. For Sierra Leone, the immediate objectives should be:

- Building up institutional capacity to design, formulate and appraise projects with a built-in impact assessment on the environment;

- Provision of incentives for industries that take measures to abate pollution resulting from operations and working out control measures and penalties for companies who do not comply with the laid down environmental standards as set by the Government; and

- Zoning policies which encourage industries to be located in the less congested regions of the economy.

Specifically, the programme will entail a series of activities, including the following:

(i) Examination of the institutional arrangement;

(ii) Evaluation and use of regulatory and other policy instruments;

(iii) Strengthening research and higher education;

(iv) Identification of sectoral and subsectoral priorities that would result in competitive and environmentally sound industrial activities;

(v) Specification of measures needed to rehabilitate existing industries to operate in a more "friendly" environment;

(vi) Identification of factors that will encourage efficient and environmentally sound activities and preparation of guidelines;

(vii) Provision of advice on cleaner production methods, such as designing, establishing, operating, evaluating and monitoring cleaner production practices;

(viii) Carrying out of energy audits;

8.8 Programme for the Minerals Subsector

(i) The starting point for a programme of activities in this field is the New Minerals Act for Sierra Leone now being finalized and planned to be published in 1992. For the first time, the Act acknowledges the importance of the non-metallics or industrial minerals sector and emphasizes the importance of promoting the exploitation of these minerals.

It is proposed that a desk study be carried out in close co-operation with the Geological Survey Division which has a staff of some ter geologists. The programme should be executed in two phases:

- A desk type mineral inventory should be mounted to summarize the records of all human deposits or commodities in a standardized format - preferably in the form of a computerized database providing essential basic data, such as name of commodity, mining or claim registration data, infrastructure, geology, production/mining statistics (if any), technical specifications fo the commodity (mineralogical, chemical and physical data), possible technological applications, and references to geological records available.

  This data base should be supplemented by a set of industrial profiles outlining the technological and economic aspects of the mining, beneficiation and industrial exploitation of the most interesting commodities. This information would give Government planners and industrial entrepreneurs a valuable basis on which to evaluate the potential of further activities and the viability of additional investments leading towards full economic utilization of selected commodities or entire deposits.

- On the basis of the desk type inventory, actual detailed explanation work could be initiated on the most promising locations engaging the staff and material of the Division. This could be backed up or supplemented, as required, by international staff and additional exploration and testing equipment. The work would involve: surface exploration, drilling of trenching, sample testing, mapping, and technological trials based on larger representative samples.

(ii) Of particular short- to medium-term interest in this connection is the use of clay minerals. It is therefore proposed to give particular attention to this area and to provide the Division of Geology which is already well equipped for gold, rutile and bauxite investigations with the necessary material and know-how to carry out a full programme of clay investigations, including technological trials.

8.9 Programme for the Chemical Industries Subsector

(i) Supporting existing small-scale research activities for the use of local raw materials which would greatly enhance the competitiveness of soap making and other chemical industries is essential.

(ii) A technical assistance programme to determine the better use of local raw materials and already proven technologies for new products and to upgrade the quality of existing products, such as toilet soap, would be necessary.

(iii) The feasibility of industrial use of various coconut oil derivatives should be looked into.

(iv) The feasibility of the rehabilitation of the existing oil refinery should be examined.

(v) Until energy is widely available, the production of plastic injection moulding would not be encouraged.

8.10 Programme for the Building Materials Subsector

This programme is proposed to link with the already approved project SIL/91/002 which requires the introduction of a limited range of local building materials but does not incorporate the financial resources to reach even this limited objective. The programme will include at least four distinct subprogrammes:

(i) Launching of a process for the successive establishment of a number of small-scale labour intensive units for the production of fired or stabilized bricks, blocks and paving tiles and of fired clay or fibro cement roofing tiles, as well as for the proper introduction of these building materials into the housing and construction sector;

(ii) Establishment of a small-scale demonstration unit for each of the following products representing innovative technologies in Sierra Leone: hydrated lime, plaster of Paris and granite tiles and slabs;

(iii) Rehabilitation of existing large-scale factories, i.e. Sierra Bricks and Ceramics Co. Ltd. and SERACEM;

(iv) Establishment of a ceramic centre (which could be expanded into a building materials centre) for technology acquisition, adaptation, development and dissemination and for training at various levels.

8.11 Programme for Engineering Industries and Development of Technology

As a mineral based economy, the importance of the engineering subsector and the development of technology cannot be over-emphasized. The programme should therefore aim at upgrading the skills and capacity of the nationals to produce various types of tools, equipment and material - using local resources. In order to create the necessary environment, the following activities are recommended:

(i) Diagnosis of the current status of the National Workshop with a view to recommending a rehabilitation/modernization programme;

(ii) Examination of various options on maximum utilization of the premises at the Workshop, including conversion to an industrial estate, common facility, etc.;

(iii) Liaison with the University of Sierra Leone and MTISE on reviving the National Technology Centre and preparation of a programme to realize the objectives;

(iv) Survey of existing indigenous technologies with a programme for upgrading them;

8.12 Programme for the Integration of Women in Industrial Development

A programme specifically targeting on women is being proposed, because, at the moment, they are disadvantaged in many respects, as indicated in Chapter VII. The size and contribution of women to the overall development of the country dictate that measures be taken to ensure equality and justice. The subprogrammes focus on a few areas:

Subprogramme for Institutional Infrastructure

The Women's Bureau still appears to be weak and poorly staffed. Its activities and those of the NGOs should be clearly set out to avoid duplication. The Bureau must stand out as the apex organization which acts as the advocate of women's interests in all matters, especially when the Government is considering new plans and projects.

More importantly, the authority of the Women's Bureau in relation to other bodies must be clearly defined together with its functions and structure. The current practice of having representatives of the Bureau in the line ministries is commended, provided these representatives are well informed on what to do, what to look out for and how to render reports. The specific subprogrammes recommended for the integration of women in development are the following:

(i) The Women's Bureau should be relocated in the Office of the President and made semi-autonomous. This will ensure high visibility for the Bureau and adequate attention on its programmes.

(ii) The Bureau should be headed by an Executive Secretary with deputies covering administration, programmes and finance.

(iii) The Advisory Council of 28 appears unwieldy. The number should be reduced to about 15.

(iv) The Bureau should pay particular attention to national macro-economic plans and should submit memoranda on concrete ways to integrate women in development.

(v) For effective co-ordination of women activities, the Bureau should have a modern information management outfit. This will involve the development of systems for information gathering, storage and retrieval, using computers.

(vi) The core staff of the Bureau should be trained in project identification, project preparation and appraisal, monitoring and evaluation.

(vii) The Bureau has responsibility to create national awareness on gender specific issues; efforts to remove all forms of discrimination against women; and improvement of the legal and inheritance status of women; In short, the Bureau should be a vanguard for addressing women in development issues in all sectors, but especially industry. Perhaps a national workshop on women in development may be necessary.

(viii) Similarly, the work of the NGOs has to be streamlined to avoid undue competition and duplication. Some may be involved in grass-roots mobilization, creating awareness and enlightenment. The work of undertaking research can be made easier, if an NGO is involved. NGOs can also launch social programmes and help to introduce/demonstrate new processes and technologies to the women.

Subprogramme for Credit Delivery

Women's access to credit is a fundamental problem, especially if funds are required to set up industries. The Women's Finance Trust Ltd. is at its embryonic stage and its resources quite limited. There is no special or concessionary funding for women to set up industries. The issue of funding is therefore an area for priority intervention. Specific subprogrammes may include:

(i) A re-examination and strengthening of the role, structure and operations of the Women's Finance Trust as well as the rural banks being set up by the Bank of Sierra Leone.

(ii) Special loans from commerical banks and international agencies, such as the World Women Banking, should be negotiated for on-lending to women at concessionary rates.

(iii) The United Nations Development fund for Women and IFAD should be approached with industrial programmes designed to benefit a large number of the womenfolk.

(iv) The laws on inheritance should be re-examined with a view to providing women land and property which are generally needed as collaterals.

(v) Women acting in groups or co-operatives can get credits. Such groups should be organized.

Subprogramme for Education

The curriculum in institutions should be reappraised and harmonized. Girls should be encouraged to take technical courses. To this end, financial incentives or bursaries should be given to female students undergoing such courses. Functional literacy programmes should be mounted for the benefit of the adult rural and urban women. Such programmes should be an opportunity to introduce new ideas, such as co-operatives and other income-generating activities. Career guidance and counselling should be provided in schools. The Government has the ultimate responsibility of introducing measures to ensure better enrolment of women in primary and secondary schools as well as the university. Specific subprogrammes may include:

(i) Bursary awards or scholarships to girls studying technical or science subjects;

(ii) Improvements in the general and vocational training of girls. They should be made "employment oriented". This calls for a re-examination of the school curricula and course content.

(iii) Efforts should be made to influence parents as to the benefits for educating girls. This progressive change of attitude will guarantee equality of access to education.

(iv) Self-employment should be promoted so that women can make gainful use of their individual abilities, capacity and time. Entrepreneurship development programmes should be mounted for women.

(v) Entrepreneurship techniques can be introduced as part of the educational programmes for women.

(vi) Since the majority of women are engaged in agriculture, it is useful to train women extension workers in agricultural subjects, including horticulture and agricultural technology, co-operatives and production credit schemes for rural women.

(vii) Officials in women co-operatives should be taught book keeping, accounting and management skills. Women can operate as participants, beneficiaries, producers and consumers in co-operatives.

Subprogramme for Technology

Most women are in the rural setting using traditional methods in thier work. It is recommended that measures be taken to reduce the tedium and drudgery through the introduction of simple devices targeting on industries engaging a lot of women. In setting priorities, the role of the users of technology must be taken into account. R&D should focus on removing the tedium in every day experience of women. This way, even the rural women can contribute to modernization, if they are consulted. The present methods of processing fish, cassava, palm oil, rice and other staple food items can be looked into with a view to improving the techniques as well as productivity. Such improvements will enhance the earning capacity and remuneration of the women.

Subprogramme for Industrial Planning

In the development of an industrial plan, it is important that women participate effectively and that the Women's Bureau is consulted. Women must strive to positively influence policies. This can be done, if they undertake research and present well articulated programmes or alternative proposals to the Government in areas, such as employment, agriculture, rural development, industry, credit, education and training, and resource allocation. Women's actual and projected role should be carefully documented in order to influence decision makers. Monitoring and evaluation mechanisms should be developed and built into programmes.

8.13 Programme in Support of Agro-Based and Food Industries

The climate and soil of Sierra Leone caters for various crops which themselves can be processed by industries for home consumption or export. Improvement and expansion of the food processing industry is therefore considered very important. To be able to do this effectively, attention should also be paid to related issues, including:

(i) Increasing the skills and efficiency of the labour force through improved education and job-oriented pre- and in-service training programmes and inducement for improving work attitudes and self-reliance;

(ii) Articulation of a Government policy on science and technology for industrialization;

(iii) Establishment of direct links with the training institutions to reorganize their training programme to serve the needs of the food sector;

(iv) Improvement of price incentives to farmers will stimulate agricultural production;

(v) Investment in R&D to improve raw material supplies through improved storage and packaging structures and to develop alternative resource-based packaging;

(vi) Upgrading of technologies in the traditional and informal sector.

8.14 Programme for the Fisheries Subsector

A range of projects under UNIDO's integrated development programme for the fisheries industrial system has been prepared. The investment potential is $5.3 million. Using the integrated programme approach, the following actions are considered to be of highest priority:

- Construction of modern self-contained fisheries harbour complex for the industrial fleet;

- Manpower and training needs assessment and short-term training for the fish industry personnel;

- Establishment of a semi-industrial fleet and facility at Goderich.

Follow-up actions and subprogrammes by UNIDO would involve preparation of project documents for:

(i) A feasibility study for the fishing harbour for which a proposal was prepared in 1990 and has recently been updated and completed. The interest and support of the private sector is amply demonstrated by the Sierra Leone Fisheries Industries Development;

(ii) A manpower and training needs assessment;

(iii) Economic and managerial training for the fisheries industry;

(iv) Preparatory project for semi-industrial fleet and facility at Goderich; and

(v) Comprehensive technical assistance requirements for the new fisheries port industry complex, once the feasibility study mentioned in (i) has been completed with positive results.

Other subprogrammes, probably involving FAO technical assistance packages, include:

(vi) Aquaculture and fish farming feasibility study;

(vii) Legal advice on management, control and surveillance (MCS) of resources;

(viii) Marine training school improvement programme; and

(xi) Assistance to fishing research and management.

The investment potential of this subsector is worth $4.54 million.

8.15 Programme for the Forestry Industries Subsector

In the long term, the objective of forest resources has the potential to make a significant contribution to development by meeting basic needs in energy and other industries which provide employment and income and by maintaining environmental stability. Uncontrolled exploitation must be replaced by appropriate management of the entire forest production chain, from the establishment through maintenance and harvesting of forest crops to the processing and marketing of forest products.

The following subprogramme elements derive from the foregoing objectives:

(i) Portable saw mills for the development of village enterprises could be a solution. Secondly, pitsawing industry which is established throughout the country can be upgraded to meet the needs of village commodities.

(ii) There is a need to reopen the training school at Bambawo with either full Government assistance or active participation of the forestry industry. It is also essential to establish training programmes at the five sawmills.

(iii) A re-afforestation programme with fast growing tees has to be embarked upon.

ANNEX I

BASIC FACTS ON SIERRA LEONE

Size: 27,925 sq. miles (about 72,325 km^2)

Location: Sierra Leone is located on the West Coast of Africa. It is bounded in the north-west by the Republic of Guinea, on the south-east by Liberia and on the south-west by the Atlantic Ocean, with a coastline of about 300 miles from the boundry of Liberia at the mouth of the Mano River.

Climate: The climate is tropical, with high temperatures, marked by dry and wet seasons. The wet season lasts from May to October.

Population: 3.7 million inhabitants (1986 Census), projected at 3.9 million by 1990, with approximately 460,000 living in Freetown

Growth Rate: Approximately 2.7 per cent per year

Density: 52.8 persons per km^2

Urbanization: 30 per cent of the population live in urban areas

Literacy: Approximately 15 per cent (1989)

Life Expectancy: About 42 years, with a high infant mortality of 20 per cent

Infant Mortality: 165/1000

Economy:

GDP (Current prices)

GNP (per head): $310 (1986)

Inflation: 100 per cent (1990/91)

Export: $79 million FOB (1988-1989)

Import: $134 million CIF (1988-1989)

Labour Force: 66 per cent of the labour force are employed in agriculture which contributes only 35 per cent to the Gross Domestic Product (GDP).

External Debt: $560 million (1986); $1,057 million (1989)

Exchange Rate: 1000 Le = $425.00 (December 1991)

Industry: Industry contributes about 5 per cent to the GDP. Small-scale industry accounts for 3 per cent and provides employment for 90 per cent of the work force.

ANNEX II

LIST OF INSTITUTIONS, AGENCIES AND PERSONS CONTACTED

UNIDO

Mr. Shadrack N. Ndam	Head, Africa Programme
Mr. Felix Ugbor	Area Programme Officer, Africa Programme
Mr. Yob Y. Okello	Industrial Investment Programme Unit for Africa
Ms. Ayumi Fujino	Unit for the Integration of Women in Industrial Development
Mr. Ph. R. Scholtes	Industrial Planning Branch
Mr. Niels Biering	Chemical Industries Branch
Mr. George Assaf	Regional and Country Studies Branch
Mr. Igor Loguinov	Industrial Human Resource Development Branch
Mr. Ubolda Antinori	Agro-Based Industries Branch
Mr. George Tabah	New Technologies Unit
Ms. T. Salazar de Buckle	Chief, Programme Development and Support Unit
Mr. Selichiro Hisakawa	Institutional Infrastructure Branch
Mr. Hussein Kamali	UNIDO Country Director, Freetown, Sierra Leone
Mr. Hans Blank	Expert, Bayernwerk AG

UNDP

Ms. Zara Nuru	Deputy Resident Representative
Mr. C.J. Jackson	Senior Economist

UN/UNDTCD, SIL/90/001

Mr. Hashim Al-Ali	Chief Technical Adviser/Senior Macro-Economist, Economic Management and Planning Project, Government of Sierra Leone

MINISTRY OF FINANCE, DEVELOPMENT AND ECONOMIC PLANNING

Mr. F. Karemu	Development Secretary
Mr. S.G. Pessina	Acting Development Secretary
Mr. T.M. Kortequee	Acting Deputy Secretary
Mr. Olabisi Taylor	Deputy Director of Planning, Central Planning Unit
Mr. H.A.B. Fofana	S.A.S. MISE
Mr. S.S. Kamara	Director
Mr. Chisambwe M. Kapihya	Technical Adviser, Commonwealth Fund for Technical Co-operation
Mr. I.L.M. Sessay	Senior Development Officer: Industry, Mining and Manufacturing
Mr. U. Konneh	Development Officer
Ms. Lorna French	Senior Assistant Secretary

NATIONAL INDUSTRIAL DEVELOPMENT AND FINANCE ORGANIZATION

Mr. Zac A.C. Richards	General Manager
Mr. S. Pattoo	Chief Technical Adviser (DP/SIL/87/003)
Mr. V.M. Oner	UNIDO Expert, Industrial Engineer (DP/SIL/87/003)

FOOD AND AGRICULTURE ORGANIZATION

Mr. Horatio Mends	Resident Representative

WORLD FOOD PROGRAMME

Mr. Bai K.M. Bojang	Deputy Resident Representative

NATIONAL WORKSHOP

Mr. K.T. Savanneh	Acting General Manager
Mr. Salu B.J. Allieu	NIDFO
Mr. A.R. Tejau	Personnel Administration Officer

SIERRA LEONE CHAMBER OF COMMERCE, INDUSTRY AND AGRICULTURE

Ms. F.C. Iscandari	Executive Secretary

INTERNATIONAL MONETARY FUND

Mr. Franz Drees	Resident Representative

CSO

Mr. Myint Tin	Chief Technical Adviser

UNICEF

Mr. Mohammed B. Jalloh	Resident Representative

BANK OF SIERRA LEONE

Mr. Abdul Rahman Turay	Governor
Mr. Sidique Sesay	Personal Assistant to the Governor
Mr. N.S.B. Wellington	Director, Research Department

NATIONAL POWER AUTHORITY

Mr. Sylvanus S. Labor	Deputy General Manager

MANO RIVER UNION

Mr. Abdoulaye Diallo	Secretary General
Mr. Isaac L. George	Deputy Secretary General
Mr. Stewe Kanu	Deputy Director, EAD
Mr. Justin B. Bancura	Head Project Officer, Agro-Industries Section
Mr. Isaac Marue	Director, EAD
Mr. Patrick Elliot	Head, Development Planning and Statistics
Mr. Steve Swaray	Budget/Finance Controller

NATIONAL DEVELOPMENT BANK LTD.

Mr. Sanah Marah	Managing Director
Mr. Abu Banguro	Director of Finance
Mr. Santos A. Conteh	Deputy Managing Director
Ms. Kadijatu Kamara	National Development Bank

MINISTRY OF TRADE, INDUSTRY AND STATE ENTERPRISE

Hon. T. Kargbo	Minister
Hon. B.M. Koroma	Deputy Minister
Mr. E.B. Osho Coker	Permanent Secretary
Mr. A.T. Morgan	Director of Industries
Mr. H.A.B. Fofona	Senior Assistant Secretary

MINISTRY OF SOCIAL SERVICES, WELFARE AND HEALTH

Ms. Pose Njie	Head, Social Services

UNIFEM

Ms. Elizabeth Q. Akpalu	UNIFEM Consultant to WAND

ANNEX III

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