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TRANSFER OF TECHNOLOGY *

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SIERRA LEONE

Mission Report

Findings and Recommendations

by

S. Glembocki
UNIDO Consultant

* The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the secretariat of UNIDO.

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INTRODUCTION

The Government of Sierra Leone has requested UNIDO to send a mission to review the current conditions prevailing in the country in the field of transfer, appraisal, adaptation and development of technology.

In order to fulfil this purpose, the mission interviewed officials from the Office of the President, the Vice-Presidency, the Ministry of State Enterprises, the Ministry of Trade and Industry, the Ministry of Mines and Lands, the Ministry of Transport and Communications, the Law Officers Department, Fourah Bay College and the National Federation of Employers.

Special gratefulness is due to the Ministry of Development and Economic Planning for the assistance they provided permanently thus enabling this mission to perform its tasks. This assistance and the efforts of the joint work of this Ministry with the UNDP in preparing and implementing the current Five-Year Plan, provided an excellent analytical basis for the mission.

Special thanks are extended to :

- Mr. Willem Brackel, Special Adviser to the President of the Republic
- Mr. P.J. Kuyembeh, Deputy Development Secretary, Ministry of Development and Economic Planning
- Mr. J.D. George, Secretary to the Vice-Presidency and Ministry of State Enterprises
- Mr. F.B. Sawei, Deputy Secretary, Ministry of Trade and Industry
- Mr. M.S. Jonjo, Permanent Secretary, Ministry of Mines and Lands
- Mr. H.M. James, Senior Assistant Secretary, Ministry of Communications and Transport
- Mr. H.D. Bart Williams, National Development Bank
- Mrs. N.D.M. Beckeley, Senior Assistant Secretary, Ministry of Development and Economic Planning
- Mr. Eldred Jones, Principal, Fourah Bay College, Freetown
- Mr. Ken Lloyd Davis, Industrial Employers Association
- Mr. David Fraser, President, National Federation of Employers

and to all official and private businessmen who kindly co-operated with the mission.

Very high appreciation is given to the assistance received from the UNDP office in Freetown and especially from the Resident Representative, Mr. B. Halbert, as well as from the Deputy Resident Representative, Mr. Metcalf. The co-operation of the Senior Industrial Development Field Adviser in Freetown, M r. Ivan Contreras, - by working hand in hand with the mission - was the contribution which permitted the attainment of its objectives in such a short time span.

I. FINDINGS

I.1 General Background

The economy of Sierra Leone, based mainly on a broad traditional sector, includes subsistence agriculture, smaller trade and handicrafts all of which absorb over four-fifths of the labor force estimated at around one million people. The remaining fifth is distributed evenly between manufacture and services, the first of which contributes around 6% of the GNP of the country and amounts to 450 million US\$ approximately.

The country relies thus heavily on imports of food and other consumer goods, as a consequence of the limited size of the manufacturing sector. In the last year, imports have amounted to 171 million while exports were slightly below that figure. An important fact to be underlined is that agricultural exports have significantly increased their participation in the total from a historical 15 % to 20 % to over 40 %, exceeding the participation of mineral exports- diamonds and iron ore - in the total exports figure.

This fact relates very closely to the shift in the industrialization strategy which the Government is now defining.

A breakdown of the number of workers employed in factory-type industrial activities in 1967 follows here :

	Number of Workers	%	Number of Establishments
Grain and mill products	546	8.07	1
Bakery products	120	1.77	5
Distilling	62	0.92	1
Tobacco manufacture	377	5.57	1
Beer "	182	2.69	1
Apparel "	132	1.95	2
Saw mill	950	14.03	2
Furniture manufacture	78	1.15	3
Printing	533	7.87	8
Chemicals manufacture	76	1.12	3
Oil industry	2.222	32.82	8
Clay products	44	0.65	2
Cement manufacture	381	4.15	1
Basic metal industries	20	0.30	1
Repair of motor vehicles	827	12.22	16
Manufacture of soft drinks	320	4.73	5
Totals:	6.770	100.00	60

which gives an average employment of 113 workers per establishment, strongly influenced by the three sectors which employ nearly - or more than - 400 workers per establishment.

No substantive change took place ever since.

The National Development Plan (1974/75 - 1978/79) says that employment in industry declined in 1971 to 5,500 and has not recovered much at any later moment.

The policy of stimulating industrial development through the 1960 Act Appendix 1) was based on the following criteria :

- " (a) That the proposed activity was not being conducted in Sierra Leone
- " on sufficient scale or at all, or that it is otherwise in the public
- " interest to encourage such activity;

"(b) That there is need to give concessions to this industry for the benefit of the economy.

After a first period - during the sixties - in which 24 certificates were granted - only two more industries started operation in the seventies and one industry owned by a public corporation was re-opened in 1973.

The country has been committed in this way to an import substitution strategy which yielded not very satisfactory results in terms of growth

This is the main reason why a complete revision of the growth strategy appears to be under way, an expression of which is the current Five Year Development Plan 1974/75 - 1978/79.

Taking into account also the recent growth of the agricultural sector, the Government has decided that priority will be given in the future to :

- (a) Agro-based industries and others based on natural resources;
- (b) Labour intensive industries;
- (c) Industries, which aid to expand exports and develop traditional agricultural activities.

The Plan envisages a number of industrial projects (Appendix 2) for which the importation technology in reasonable terms and its proper absorption by the local production system appear necessary.

Neither an agency nor a body specifically in charge of the technological analysis of proposed projects exists so far. In cases in which financing from the National Development Bank is requested, this institute analyses and evaluates the projects. When development certificates were requested (see Appendix 1), the Ministry of Trade and Industry was responsible for the appraisal of the projects and for granting or refusing to grant the certificate.

1.2 Existing Situation concerning Industrial Technology

As it was said, few new projects were undertaken in this decade. Interviews with government officials and with private sector executive showed however that all of them are interested in starting again a process of intensive industrialisation. Both sectors expressed their

interest in getting technical assistance at all stages but especially during the analysis of the feasibility and adequacy of the different technological alternatives which are likely to exist for every proposed project. Information about these alternatives appeared to be one of the important needs and the setting up of an efficient system to convey this type of information into the country appeared desirable.

From the standpoint of the National Development Bank, for instance, this type of information would be of great help in order to make a primary judgement about the correctness of the techniques proposed with respect to their labour intensivity and adequacy to local raw materials. Since no dividing line can be drawn "a priori" among projects, it is necessary to know which actual technical alternatives exist on the market in order to be able to enter the following step of economic appraisal of the projects.

In general, projects presented to the Government as well as to financing agencies have the shape of "packages" which are guaranteed in their performance only if they are kept as such. Generally speaking, capacity frequently exists at the local level for a technical "unpackaging" of the project, which would allow to start a process of partial local subcontracting.

Foreign technical expertise and information of the type and quality usually provided by UNIDO, could contribute to break bottlenecks which have constrained industrial development in Sierra Leone if they act as catalysts of local capacities which have built up over a very long time. *)

Frequently, in the interviews with government officials held by the mission, the need was expressed for a body which would assess the suitability of projects to the industrial development purposes of the country and would at the same time invite the necessary technical expertise from within or outside Sierra Leone.

*) Fourah Bay College is more than 150 years old and the technical level of the Njala University is also remarkable.

Concerning the possible areas in which projects could be undertaken, they have been defined in the current Five Years Plan and there is a widespread conviction that even if the proposed projects are not undertaken within the period of the Plan, they fairly well describe the pathway along which the future industrial development of Sierra Leone can continue.

Just for indicative purposes a list of the projects included in the Five Years Development Plan accompanies this report (Appendix 2) as well as a list of the sectors by means of which the National Development Bank gave examples of its fields of interest (Appendix 3).

Concerning technology trade itself, very little experience has been made in the past in Sierra Leone. The field in which more efforts have been made, is in the elaboration of mining contracts for which foreign assistance would be welcomed if available.

Regarding more specifically payments for technology, it is impossible to determine a separate figure, firstly because there is no agency involved specifically in reviewing this type of payments and secondly because the payments are not identified in a way that would allow to determine how much money leaves the country under this concept.

An important element is being introduced now by UNDP and UNIDO. An agreement for the establishment of an Industrial Development Programming and Project Evaluation Unit has been made with the Government. The starting of the activities of this Unit appears as the first necessary condition for the undertaking of any effort in the field of technology transfer.

On the other hand, a high-level scientific and technological group is to be found at the Fourah Bay College and at the Njala University. This mission considers that an important means of improving the technical quality of the decisions concerning new projects would have to rely quite heavily on the active participation of members of these two institutions.

Members of the faculty of the first of them have expressed their willingness to participate concretely in any serious effort aimed at

introducing more scientific criteria in the selection and evaluation of projects on the part of the Government and interest in the elevation of the technological standards by means of adding foreign inputs of knowledge to the local effort, whenever necessary.

The contribution of the University can be given along two lines :

- 1) Developing a means to assemble in the country information on technologies which have been introduced or are either likely to be introduced or desirable for the productive system of Sierra Leone.
- 2) Drawing up recommendations of models which would be useful to assess the suitability of technologies to be used in Sierra Leone. This suitability could be measured with respect to all relevant variables including social measurable variables affecting the feasibility of projects, such as availability of spare-parts and technical expertise at the local level. These models would aim at trying to define precisely the relevance, the adequacy and the proper dimensions which projects should have in order to suit the local conditions.

Another necessary condition for the setting up of a mechanism to strengthen the flow of technology to Sierra Leone, is the participation of the private sector. As soon as the mechanism will be established and the Government will start defining its industrial priorities - it was repeatedly said - the private sector will actively co-operate with all the means within its reach.

At last the analysis had to be made of where any mechanism to be proposed would fit in the institutional structure. Although projects are elaborated and executed by various ministries, the Ministry of Development and Economic Planning would appear as the most adequate location due to its scope of activities. Notwithstanding this, the Ministry of Trade and Industry is viewed - at this stage - as more suitable to house a mechanism of this nature after the Industrial Development Programming and Project Evaluation Unit starts operating. This point has been raised as well by both Government officials and persons from the private sector.

The way of extending the work of such a mechanism to encompass the activities of other agencies, as the inclusion in it of representatives of two "cross section" agencies: the Ministry of Development and Economic Planning and the Law Officers Department, the latter's duty being the control over the legal aspects of all Government activities.

A mechanism acting at an inter-ministerial level would hardly be operative at this stage and it is much more realistic to establish it now at the Ministry of Trade and Industry with close linkages with other Government agencies, with the academic community and with the private sector.

RECOMMENDATIONS

(a) That a Transfer of Technology and Foreign Investment Unit be set up within the Ministry of Trade and Industry in charge of co-ordinating all the activities in these two fields. This Unit should be composed of two bodies :

- (1) the Transfer of Technology and Foreign Investment Board
- (2) the Transfer of Technology and Foreign Investment Office

The Board would include officers from :

- the Ministry of Trade and Industry (Chairman)
- the National Development Bank
- the Law Officers Department
- the Ministry of Development and Economic Planning

and it should invite - whenever necessary - the participation of the Fourah Bay College and of the Njala University. Its activity would evolve at the policy level.

The Office would include a lawyer, an engineer and an economist, all three of them specialized in the subject and capable of fulfilling the following duties :

- (1) Define Government measures, criteria and guidelines for the promotion, selection and evaluation of foreign investment and technology acquisition proposals.
- (2) Analyze the policies on these subjects of other developing

countries and establish international links for policy and for information purposes.

- (3) Co-ordinate and smooth the administrative treatment of foreign investment and technology acquisition proposals.
- (4) Establish the appropriate training mechanisms to provide both Government and private company officers: (a) the capability of reaching adequate sources of information and (b) a high-level of negotiation efficiency.

(b) That all industrial projects, at any stage of analysis be submitted to the Transfer of Technology Office for preliminary technical-alternative evaluation, a task in which UNIDO can actively co-operate on a permanent basis. This activity would be advisory to other agencies and to public and private companies.

(c) That the Office be the permanent secretariat of the Transfer of Technology and Foreign Investment Board performing the technical analysis of formal presentations and proposing the adequate measures conducive to the implementation of its duties as listed under (a).

(d) The co-operation of the National Federation of Employers and of the Chamber of Mines with both bodies of the Transfer of Technology and Foreign Investment Unit should be seriously considered as a means of bringing the drive and experience of the private sector into this highly sensitive field of Governmental activity. It could - at the same time - be a way of keeping the private sector permanently informed about the policy in this field.

(e) A training seminar - which could have regional character - is strongly recommended. The main subjects to be covered at this stage are :

- i) Channels of Technology Transfer
- ii) Contracting practices
- iii) Applicability of anti-trust legislation
- iv) Industrial property institutions and practices
- v) Sources of technical information and their utilization
- vi) Foreign investment policies and legislation

Closing the seminar a policy panel discussion can be organized with some of the participants and experts. The conclusions of this discussion could serve as a starting point for the implementation of some of these recommendations.

(f) UNIDO published information on transfer of technology practices and legislation should be made directly available on a permanent basis to all the agencies mentioned under (a).

(g) That the Unit be established in close co-ordination with the Industrial Development Programming and Project Evaluation Unit and as soon as possible in order for the Transfer of Technology and Foreign Investment Unit to co-operate timely with the effort that is already being undertaken by the Government of Sierra Leone, UNDP and UNIDO.

ANNEX I

The Development Act 1960

A small brochure issued in connection with the 1966 Exhibition "Made in Sierra Leone" describes the Development Act as such :

"In order to attract investment, more particularly foreign investment, which will bring with it foreign skill, the Government thought it necessary to provide certain inducement, through the medium of the Development Act 1960.

The Act provides for the granting of ^a Development Certificate to companies which are, or will be engaged in a line of production that is important to the development of Sierra Leone's economy.

Upon receiving a Development Certificate a Company becomes a Development Company. A Development Certificate can be issued to a company or enterprise which intends to produce a "development product". The possession of a Development Certificate entitles a firm to a tax holiday period which varies from two to five years depending on the degree of risk in the industry concerned and the size of the capital investment. The tax holiday period commences from production day. Within the tax holding period, the Development Company enjoys dutyfree importation of machinery and other capital goods for constructing and equipping of the development factory.

In addition to the above concession, a Development Company is granted free or relaxed import duties on the raw materials it requires. Furthermore, a Development Company is generally afforded protection either by the increase of customs duty on similar imported goods or by transferring such goods from open general licences to specific licences.

The Minister of Trade and Industry is responsible for the exercise of statutory powers under Development Act".

ANNEX II

Main features of the industrial development programme

The main features of the industrial development programme are outlined as follows :

- (1) Fuller utilization, expansion and/or modernization of existing capacities which will contribute considerably to meeting the increased domestic demand for manufactured commodities resulting from growth of population and rise in incomes during the Plan period. Increase in output of existing enterprises is emphasized because most of them are presently operating below capacity. Significant expansion of output is envisaged for six enterprises, while in the case of the seventh, the ex-railway workshop, a programme of re-organization and re-equipment is envisaged to enable it to function as a unit producing simple tools and spare-parts and components for equipment used in manufacturing, mining and agriculture. Manufacture of spares and components of new equipment by the Nation Workshop will reduce the outlays on imports of these products and will contribute to improvement in operational efficiency of the equipment by reducing the delays in supplies. The key element in achieving fuller utilization of existing capacities will be an increase in productivity. A programme of industrial extension and training will be formulated, particularly in the field of "on-the-job" training methods. Productivity-improving methods and systems should also be applied particularly through the aid of specialized United Nations Agencies, such as UNIDO. A Productivity Centre developed as a branch of the future National Industrial Development Corporation will be the key element for the implementation of the programme.
- (2) Fuller use of import-substitution possibilities: The import-substituting industries will have to use locally produced raw materials and intermediate goods as much as possible. If not, the net savings of the import-substituting process may be very little or even negative when the import of raw materials, intermediate goods and capital goods is considered.
- (3) Export-orientation: One of the main aims of the industrial development programme will be to generate foreign exchange earnings. In order to fulfil this aim several export-oriented industries utilizing locally-produced raw materials have been incorporated in the Plan. Although a significant increase in the export of manufactured goods is expected to be realized by the end of the Plan period, the full effects of the new export-oriented projects will be achieved after 1978/79.
- (4) Creation of regional development poles: As a result of spontaneous development, industrial activities are heavily concentrated in the Western Area. One of the important features of industrial strategy is, therefore, the creation of several new industrial-development poles. According to the proposed regional development strategy, new industries will not be limited to the Western Area. Whenever possible new industrial establishment will be located in the industrial development pole areas.

- (5) Creation of inter-related industries: Many of the proposed industries use outputs of existing or proposed industries and many produce inputs for others. The linkage effect, however, will materialize fully after the Plan period.

INVEST PROGRAMME

Public Sector

The public sector in manufacturing presently comprises Forest Industries Limited, the Government Printing Department, the industries owned by the Sierra Leone Produce Marketing Board and by the Rice Corporation, and by the railway workshop belonging to the Railway now in the process of being phased out for statistical reasons, the ex-railway workshop to be converted into the National Workshop will be considered as a new industry. The investment programme in these industries includes the following projects :

- (1) Forest Industries Limited: A small investment of about Le 500,000 is envisaged in order to establish in Freetown a furniture assembly plant for the knocked-down furniture produced in Kenema. The precise amount of investment will be determined in the feasibility study which is expected to be prepared by two UNIDO furniture experts in 1974/75.
- (2) Government Printing Department: Facilities of the Government Printing Department will be fully modernized with a total investment of Le 5,2 million. The project envisaged the utilization of the facilities on a commercial basis. Technical assistance will have to be requested from UNIDO in order to prepare marketing studies and in particular to examine export possibilities. Also included in the contract signed with a foreign firm by the Government is the modernization of the Daily Mail, with an additional total investment of Le 2,0 million.
- (3) National Workshop (a metal-engineering job order factory): This is one of the most important projects for the industrial development of Sierra Leone, and it will be based on the utilization of the existing facilities of the railway workshop which is in the process of being phased out. Detailed studies will be conducted during 1974 on the techno-economic feasibility of the project, including marketing aspects as well as possibilities of co-operation with neighbouring countries. A wide range of products will be produced by the workshop such as castings and machine parts for mining and manufacturing and agricultural equipment, for water works, sewerage works, etc.; welded steel pipes and parts as well as other welded equipment for industrial use; simple agricultural tools; steel structures such as steel bridges, steel building structures and industrial structures; tanks for the transportation of liquids or gases; brass fittings and low pressure brass valves; assembled trucks, lorries or buses.

Joint Ventures

Seven new projects are included in the Plan as joint-ventures :

- (1) Cane sugar mill: This is envisaged as an important import substitution industry. Estimated capacity will be around 40,000 long tons of sugar per annum. The project is related to the sugar cane plantation included in the agricultural programme. Total industrial investment is estimated at Le 9.9 million (without the plantation). It is estimated that sugar production will be started by 1977/78 at 75% capacity. Financing will be provided with 75% by a foreign loan. Shares will be issued for the other 25% and sold to the public. The total value of production is estimated at Le 6,5 million. A valuable by-product of the mill will be sugar molasses which will be used in future for the production of ethyl alcohol and liquors, as well as for the production of annual feed and silage. Any surplus of molasses can be exported. Employment in the sugar mill is estimated at 500 workers.

- (2) Fruit cannery: This is one of the most strategic projects from the point of view of foreign exchange. The main products to be canned are pineapples and tomatoes. There will be also some room in the projected capacity for canning other fruits and vegetables. The plant is envisaged as a specialized factory with three main units: (a) a pineapple-canning plant with equipment for washing, peeling and cutting pineapples, besides the all purpose machines for filling and sterilizing cans; (b) a tomato-paste plant and (c) a can factory for the production of blanks/ and empty cans. In the future this unit could also be utilized for the production of blanks for a fish cannery. Experience with similar canneries in other countries indicates that the size of a profitable pineapple-canning operation should be at least of 40,000 tons of fresh fruit input per year, however, it is much more profitable to produce on a larger scale. For this reason a capacity of about 60,000 tons of fresh pineapple input per annum is envisaged. With regard to tomatoes, the processing capacity is estimated at 10,000

tons of tomato paste of 20 % concentration per annum. Total investment is estimated at Le 9.8 million and employment at 500 workers. The total value of sales at 100% utilization of capacity is estimated at Le 13.3 million, but it is assumed that the cannery will begin operation at a much lower capacity. The expenditures for the development of a plantation will be included in the agricultural investment programme as an integrated part of the industrial complex. A certain amount of raw materials is also expected to be provided by outgrowers. Although the factory will be export-oriented, it will also have to supply the domestic market, since the consumption of tomato paste is increasing considerably. It is expected that the factory will start operations during the Plan period.

- (3) Veneer plant and sawmill: This project is important not only because it is export-oriented, but also because it will produce building materials for domestic consumption. Tropical wood existing in Sierra Leone can provide an acceptable percentage of wood suitable for veneer production, the balance being used for the production of dried sawn wood. Veneer and first-class wood will be exported, whereas second-grade wood can be used for domestic consumption. Scrap and saw dust will be used for generating of steam and power. The total capacity is estimated at around 35,000 cubic metres per year of sawn wood and about 2,000 cubic metres of veneer. The enterprise is envisaged as an enlargement of forest industries limited on a joint-venture basis. The fairly large size of the projected capacity makes it necessary to reserve the volume of woods required for the operation of his new joint-venture. The total investment in the plant (without investment required for the exploitation of the forests) is estimated at Le 5,5 million of which only Le 2,7 million will be invested during the Plan.

- 4) Textile mill: Textiles are one of the major imports of Sierra Leone. In 1973 out of total import valued at Le127.5 million, textiles amounted to Le 14 million or almost 11% of total imports. Since the prices of textiles almost doubled during 1973/74, the value of textiles imported is bound to increase to at least Le20.0 million per annum. Total estimated capacity of the spinning, weaving, dyeing and finishing operations is around 6,000 tons of cotton (or other) fibres per annum. Investment for such a large capacity will be around Le 12.1 million, but of this amount, only Le 6.6 million will be invested during the Plan period in the weaving and dyeing sections. Although during the early stages the mill will have to work with imported fibres the net savings in foreign currency will be large enough to justify the project. There is sufficient evidence that cotton can be grown for industrial purposes in Sierra Leone, at least for lower-quality cloth. Extension and promotion of cotton-growing will, therefore, be one of the functions of the project. Employment effects of the new textile mill will be remarkable. Some 1,800 new industrial jobs will be created during the last year of the Plan period when the opening of the weaving and dyeing sections of the textile mill (at 50%) is foreseen.
- 5) Alcohol fermenting plant: Simultaneously, with the development of the cane sugar mill, an alcohol fermenting plant using by-product molasses as raw materials should be established. The alcohol will be exported as stock for the production of liquors or used internally in manufacturing rum or other liquors by the existing Wellington Distillery Ltd. Total investment is estimated at Le3.0 million, of which only Le0.5 million will be invested during the Plan period.
- 6) Cassava pellets factory: An export-oriented project with an estimated investment of Le3.0 million. Only Le0.5 million will be invested during the Plan period. Capacity will be around 20,000 tons of pellets per annum.
- 7) Fish cannery: A large complex for canning fish will be launched during the Plan period, and construction will begin by the end of the period. Envisaged capacity will be 30,000 tons of fresh fish per annum. Investment is estimated at Le13.0 million, but the bulk of this amount will be invested after the Plan period. The project is closely linked to the development of other fisheries projects, requiring additional investment, particularly in relation to port facilities.

5.3 Private sector

The following major investments for enlargement or modernization of existing capacities are expected to be undertaken by the private sector:

- 1) Sierra Leone Brewery Ltd.: Capacity is expected to be enlarged by about 25% with an approximate investment of Le0.4 million;
- 2) Aureol Tobacco Co.Ltd.: It is estimated that about Le1.3 million will be invested in the modernization of the factory; and
- 3) Soft drinks: One of the two existing soft drinks factories is expected to be enlarged with a total investment of about Le0.5 million.

Other companies such as SIVCO, Sierra Leone Knitting Mills Ltd., SLOF and Sierra Paint Ltd. are also planning minor investments.

In addition to the above projects relating to modernization and expansion of existing capacities, it is believed that the following new projects will be implemented by private investors during the Plan period:

- 4) Perfumery, cosmetics and pharmaceuticals: This project is expected to be initiated during the Plan period by a local industrial and trading concern. Investment is estimated at about Le0.3 million. Employment would be around 150 jobs and gross output between Le0.7 and Le1.0 million per annum;
- 5) Clay bricks: This very important project will substitute cement blocks for clay bricks with a large saving in cement imports. Investment is estimated at Le0.3 million and
- 6) Diamond gems: Another industry which may be undertaken by the private sector is the selection, cutting and polishing of diamond gems. Due to the very simple technology involved, to good marketing prospects and also to the interest expressed by the private investors, the establishment of one or two small diamond factories appears fairly probable.

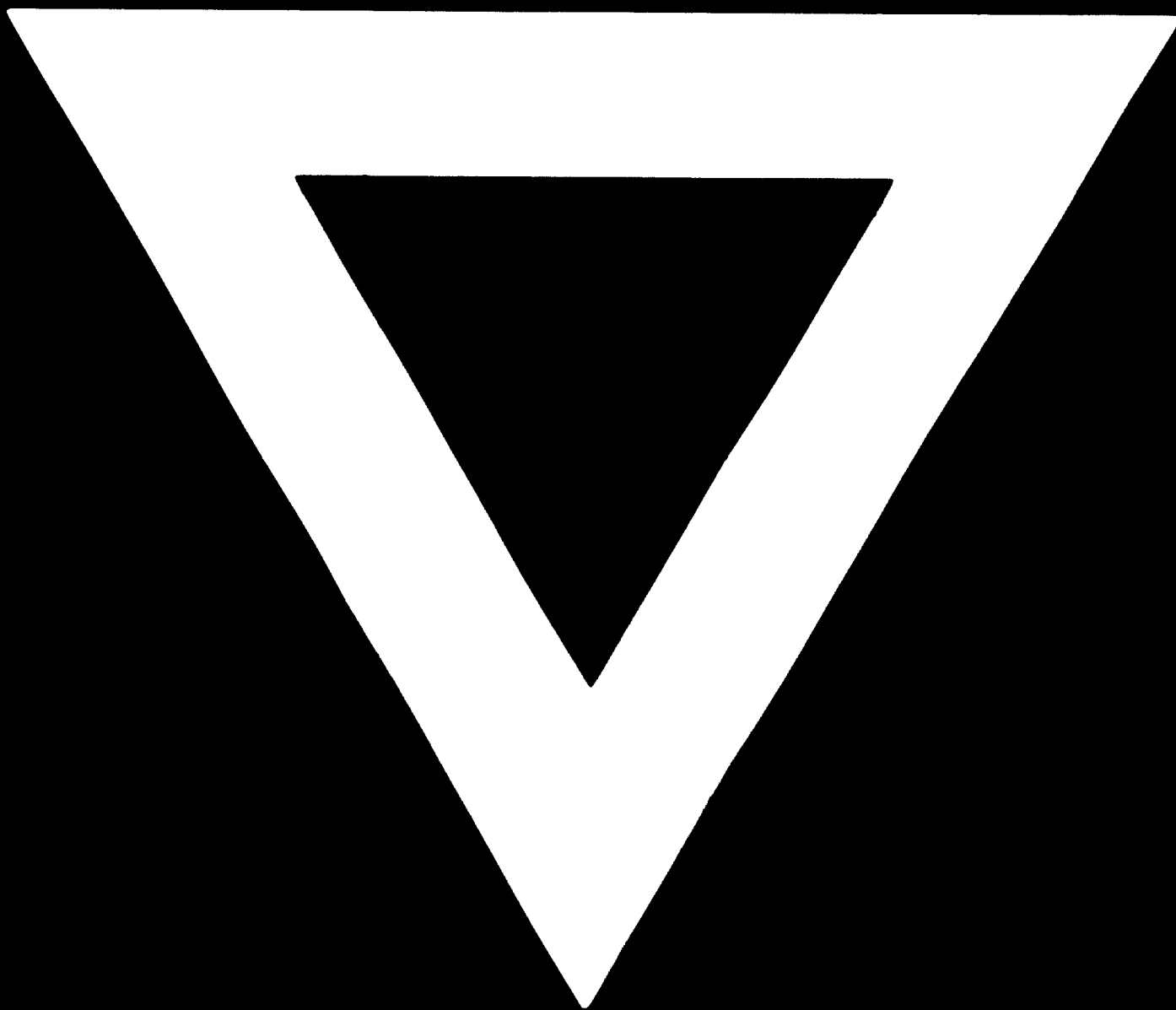
For implementation of the above-mentioned programmes of training, extension, credit and marketing, a Directorate of Small Industries and Handicrafts should be established in the Ministry of Trade and Industry, the existing staff of the Division of Small Industries should be absorbed by the Directorate. In accordance with its responsibilities the Directorate should have an appropriate staff including field officers for extension and other activities in the field. Its Training Division should work in close co-operation with the Ministry of Education, and the Credit and Marketing Divisions in close co-operation with the National Development Bank and the Bank of Sierra Leone.

ANNEX III

Examples of fields in which the National Development Bank is interested in getting assistance regarding alternative technologies and project-evaluation:

- Fruit juice and jam manufacture
- Jute bags manufacture
- Textile printing
- Brush manufacture from piassava
- Baby food production
- Fishing net manufacture

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