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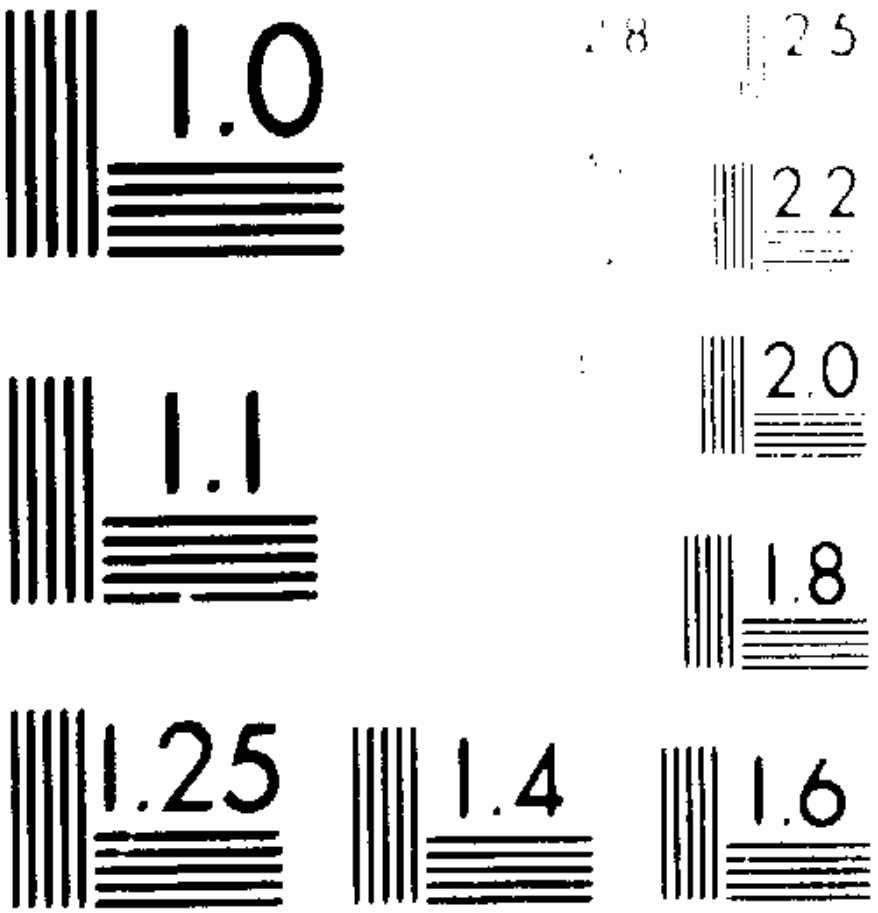
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THE FEASIBILITY OF AN INDUSTRIAL AND TECHNOLOGY PROMOTION FAIR WITHIN THE MANO RIVER UNION (MRU)

12898

SUBMITTED BY

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TO THE

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION (UNIDO)

FOR THE

SECRETARIAT OF THE MANO RIVER UNION

1983

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1. Introduction

1.1 The United Nations Industrial Organization (UNIDO), for and on behalf of the Mano River Union (MRU), commissioned Development Consultants (DC) of Monrovia, Liberia, to assess the feasibility of an industrial and technology promotion trade fair within the MRU. The ultimate objective of the study is to design ways and means to maximize and optimize trade among member states of the Union. The study, and the resulting fair, should therefore create a functional machinery for achieving the objective.

1.2 The promotion of industrial activities and knowhow, whether already existing or with strong potentials for development, in one country ought to enhance those activities in the other member countries, and thereby induce more efficient resource allocation in the sub-region. Towards this end, the terms of reference obligate DC to:

a) Take an inventory of exportable goods manufactured in member countries of the Union. Determine the value and assess quality, if possible, of such goods.

b) Take stock of the technologies used in manufacturing or processing the exportable goods, including indigenous, adopted or adapted appropriate technologies existing in the member countries.

c) Measure the extent to which locally manufactured goods and technologies are traded among the member states of the Union.

d) Determine the potential number and level of participation of existing enterprises in the Fair.

e) Select or define procedures for selecting companies, goods and technologies meeting the requirements for participation in the Fair.

f) Design proposals for organizing the Fair, including:

   i. Location, (exclusively or jointly with an existing Fair), country and city

   ii. The possibility of including external exhibitions of technologies and goods

iii. Structure, timing, and sponsor of the Fair

iv. Estimated cost and related infrastructure for holding the Fair

v. Publicity

g) Project cost and benefits of the Fair

h) Other recommendations.

1.3 This Report is submitted to UNIDO in satisfaction of the requirements stipulated by the terms of reference. Its organization is as follows: Section II summarizes the findings of the investigation and outlines our major recommendations. Section III is a survey of the relevant features of the economies of Mano River Union member states, with a focus on trade prospects in the sub-region. We discuss the nature of economic activities, structures of the economies, resource endowment patterns, institutional arrangements and how they function, etc. For obvious reasons, we emphasize trade, especially in terms of how the countries' industrialization policies appear to reinforce the competitiveness, as opposed to complementarity, of the economies. We highlight shortcomings, towards removing those bottlenecks to trade expansion. In Section IV we discuss trade within the MRU, both as a share of each member state's total trade and its composition. We take an inventory of exportable goods manufactured in the MRU, and estimate what share of each country's total trade is provided by its manufactures traded within the Union. We make a heuristic determination of such goods' quality, given the absence of quality control arrangements and facilities within the Union.

1.4 In Section V we inventory technology in the sub-region. Following an overall survey of the sub-region's indigenous technological characteristics and development patterns, we discuss the situation in each country and its existing capability and potentials. Finally, in Section VI we propose with reservation the creation of a permanent institution to stage an industrial and technology promotion fair in the sub-region every two years. In doing this, we determine the potential number and level of participation of existing enterprises in the first fair; we also propose procedures for selecting companies, goods and technologies meeting proposed criteria for participation in the fair. In this section we also propose the site of the first fair, its costs and benefits, and the sequence and modalities for its organization.

1.5 The coverage of member countries in this Report is neither uniform nor comparable. The basic reason for this shortcoming is the limited quality data available. In all cases, numbers are to be regarded as gauges or indicators of direction; their quality, comparability, and consistency are questionable.

1.6 Development Consultants wish to express their appreciation to the governments of the member states for their cooperation during our field research; we also wish to thank the Secretariat of the Mano River Union and the Freetown Office of UNIDO for thier assistance.

2. Summary and Recommendations

2.1 Trade prospects within the Mano River Union depend crucially on prior changes in the economic structures and institutions of member states. Unfavorable events in the past decade appear to have reinforced themselves, deteriorating further intra-union trade prospects, with adverse effects on balance of payments. Identical structures of demand, characterised by high private consumption and low investment, have impacted negative resource balances and diminishing contribution to the GDP of the service sector. Decline in volumes and values of exports did not help. Also, virtually identical resource endowment patterns adversely affect efforts at creating the complementarity required for trade. In fact, the economies are competitive, hence trade potentials among them remain unrealized.

2.2 The manufacturing sector of MRU states offers little prospects. Having adopted a strategy based on import substitution facilitated by imported raw materials, management and capital, the foreign exchange outflow and negative balance of payments accelerates. Value-added is negligible in the manufacturing sector.

2.3 Technical, administrative and financial bottlenecks, among others, restrain intra-union trade. Removal of these bottlenecks could improve trade among them.

2.4 The level of income remains low; in fact, during the last three years at least, real per capita income has declined in all member states. As income has fallen, so probably has its skewity widened. In short, generally low income level reinforced by immensely inequitable income distribution mitigates against intra-union trade.

2.5 Trade within the Union is perhaps dominated by unofficial and unrecorded activities because of ethnic groupings and histories shared by the three countries, incentives for high profits provided by discrepancies between market and black market exchange rates, domestic shortages, etc. Recorded trade, on the other hand, is smaller and shows, if analyzed, only magnitudes and direction. That analysis indicates that Liberia is a net exporter to Guinea and a net importer from Sierra Leone; the data are insufficient and unreliable to support a conclusion as to the direction of trade between Guinea and Sierra Leone. That either country's trade with the other is less than 1% of her total trade.

Similarly, the trade between Guinea and other members of the Union is less than 1% of her total trade; Guinea appears a net importer from the Union. Sierra Leone appears a net exporter in the Union and greater than 1% of her trade is with Union members. However, the structure of trade is gradually changing in the Union, with industrial products manufactured in the Union increasing in significance. This is particularly true between Sierra Leone and Guinea and between Liberia and Guinea. Guinea exports agricultural commodities to the Union. Differences in monetary policies and exchange controls contribute to the paucity of information, encourage black markets and produce poor quality records. This problem needs to be addressed.

2.6 Inventory of industries and technology shows interesting development. There are about 300 manufacturing establishments in the Union, most of them import substituting firms owned by non-Union citizens. The basic policies that created these industries make member countries competitive rather than complementary. Sierra Leone and Liberia maintain a wider range of industries concentrated in the coastal capital cities, which facilitate raw materials import and maintain easy access to urban markets. Centrally planned and mixed economy of Guinea offers a wider geographical dispersion of industries; however, the determination of prices of their inputs and products is not subject to market forces. In any case, most industries in the Union operate at less than 50% of installed capacity, due largely to shortage of raw materials, spare parts, limited markets, and lack of foreign exchange. Many of them could export to member countries in a researched market. Bottlenecks created by policy, lack of infrastructures and attitudes must first be broken down. This must include national and regional assistance to industries using indigenous technology, but caught in the vicious cycle of subsistence production; the takeoff to sustained growth and development, from subsistence to an organized market economy is the basis for public policy support.

2.7 An industrial and technology promotion fair is a forum for the exchange of information on who is producing and selling what and where. It could focus the objectives, implications and requirements for industrial development, especially for those involved with public policy. The selection criteria for participating in the fair ought to be weighed heavily in favour of the desired impact. About 150 firms may participate in the fair, 25 of whom might come from outside the Union. The prospective participants would cut across ten activities, including food, shelter and clothing. They should also show the transitional impact from traditional to modern industries and the related economies of scale.

2.8 The feasibility of an industrial and technology promotion fair ought to be established in terms of the likely timely flow of fair benefits: this factor might be assessed in relation to physical conditions which facilitate trade -- road network, rails, shipping, communication, etc. Political considerations, such as the likelihood of effective regional cooperation, as opposed to competitive national efforts, would also affect project feasibility. Given currently competitive national economic structures, and in view of certain recent diplomatic developments in the Union, considerable resources might first have to be invested before the benefits of a fair can be presumed. Time and other resources in considerable quantity therefore may be pre-requisites for a successful fair. We are not in the position to estimate the size of such resources, nor can we suggest the modality and timing of its mobilization and expenditure.

2.9 The efficacy of a forum that may facilitate the exchange of information must be weighed judiciously. Convening a gathering designed to achieve multiple purposes without adequate preparatory work might impede reasonable efforts towards effective regional cooperation. The crucial issues can then be seen in terms of the timing of such an event, subsequent to prioritizing the desirable sequence of preparatory activities.

2.10 This is not to recommend an activity that might be uneconomic and injurious to the long-run prospects for regional cooperation; to expend substantial resources on an event which might result in frustration of monumental proportions would be ill-advised.

2.11 While concluding that the staging of a fair should be given timely consideration, it ought to be emphasized that timing is crucial. A fair should be held only after considerable resources have been expended on removing inhibiting factors. Several such factors are identified throughout this report.

2.12 Concern for product quality might be within the comparative context of goods produced by subsistence methods; the likely inavailability of most modern goods to rural residents -- primarily because of low disposable income -- must be factored into quality assessment considerations, while remaining cognizant of the lure of increased profits from exploitation of institutional limitations, such as exsit with respect to food and drugs inspection. The relevance of technology and of production methods must also be judged in a broader context: if imported technology is rejected, can local resources invent one that can provide needed goods? Would it be economic to allocate scarce resources to invention and/or adaption, given the abysmal low level of training and poverty conditions?

2.13 In view of the problem identified in this report, the date for the first fair might usefully be decided only after efforts at removal of institutional and attitudinal hurdles have become demonstrable. The process might usefully begin with implementation of the recommendations in this report regarding quality control and standards, for example. Following such efforts, and after satisfactory establishment of the proper political and diplomatic atmosphere, including a machinery for effective coordination of national industrial policies tuned to replacement of competitive with complementary economic structures, the organization of the first fair might start.

2.14 The first fair may be held in Freetown, Sierra Leone, the seat of the Mano River Union Secretariat and regional UNIDO operation, sponsors of the project. Thereafter the fair should be rotated every two years among member states. The momentum of the impact of the fair is reinforced by the character of its organization proposed at three levels with strong local components.

2.15 The estimated cost of the fair is a function of economic factors, including the number of participants, the venue and the level of subsidy desired. We propose a total cost of $543,680, of which $176,150 could be spent for preparatory and organizational work in the first year. The balance $367,330 could be expended in subsequent period to build infrastructures and finance the cost of hosting the fair and evaluation activities.

2.16 The benefits of the fair are of both short-range and long-range dimensions. We believe that in the short-run increase in trade among member states could not be achieved unless certain steps are taken to remove certain institutional restraints to intra-union trade. The immediate benefit is to focus those bottlenecks at the fair. In the longer-run, the benefits could extend as far as the allocation of industries according to resource endowment and comparative advantage of member states, thus creating the opportunity for complementarity, advancing trade as compared with competition which restrain trade among the member countries of the Union.

3. Trade Prospects in the Mano River Union

3.1 The latest available data estimate per capita gross national product in the MRU states as follows:

	US$	GNP Growth (%) (1970-79)
Guinea	280	0.3
Liberia	500	1.6
Sierra Leone	250	0.4
Sub-Sahara Africa	411	1.6

3.2 During the 1970s, not many changes occurred in the structure of the MRU eocnomies. The historical and current features of these economies remain the same. Employing at least three quarters of residents, agriculture's share in total output is 41% (Guinea), 35% (Liberia) and 36% (Sierra Leone). Farming practices and implements are traditional, with consequent low productivity per unit of input. In fact, the average annual growth rate of agricultural production per capita declined in the three countries between 1964-71 and 1971-79. In Guinea, the decline was by 2.7%; in Liberia, by 0.6%, and in Sierra Leone, 0.8%.

3.3 Merchandise trade, in volume terms, also suffered during the last decade. Sierra Leone's volume of exports declined by 6.5%, 1970-79 over 1960-70. Her imports volume declined by only 3% during the period, deteriorating her balance of payments. In Liberia, during the same period, the growth in exports and imports volume was identical, 2.3%. The balance of payments deteriorated as a result of slow volume growth to counterbalance negative income terms of trade. We have no comparable data for Guinea.

3.4 The level of economic activities in the three countries remained dominated by trade in primary products. These were iron ore, rubber and timber (Liberia); diamonds, ruptile and iron ore (Sierra Leone), and bauxite (Guinea). In Sierra Leone and Liberia, this means a critical exposure to cyclical swings in industrial countries; during the last several years, and continuing today, the world-wide recession has severely hit these countries. Thus an already low per capita income in these countries declined during the last five years; income distribution probably already highly skewed, also worsened. In Guinea, where national policies have sought self-reliance, exposure to cyclical swings have been less, in that lower trade volume, especially imports, does not appear to result from trade imbalance. In other words, national policy in Guinea has sought to limit imports, and therefore its present low level does not seem to have resulted from economic but political considerations.

3.5 The structure of demand in the MRU states was virtually identical, with high private consumption (62% in Liberia; 70% in Guinea and 78% in Sierra Leone); correspondingly, gross domestic investment was low (15% in Sierra Leone and Guinea; 27% in Liberia). All three countries show negative resource balance during the past decade.

3.6 According to the available data, the services sector's contribution to GNP is significant: 33% in Guinea; 39% in Liberia, and 41% in Sierra Leone. However, that sector's statistical importance is explained by government expenditures; a careful analysis of the balance of payments of the MRU countries confirms that the public sector contributes very little to foreign exchange earnings.

3.7 The industrial or manufacturing sector contributed 26% of the 1979 GNP of Guinea and Liberia, and 23% of Sierra Leone's. We do not have sufficient, comparable data available which would enable us to analyze what happened to this sector during the last decade. However, it is clear from the data that not unlike other developing areas, MRU trade is concentrated, with respect both to commodity and direction: raw materials exported to western industrial countries.

3.8 The share of the manufacturing sector in output of a MRU state is likely dominated by a single firm (oil refining in Liberia, for example). Also, the manufacturing sector is often a euphemism for repackaging and assembly, for most firms' output seek to substitute imported goods. The firms, however, import virtually all their inputs. As much as 80% (Sierra Leone) or more of whose inputs are imported, and value-added is negligible.

3.9 Not unlike new customs unions in other developing regions, the MRU's trade growth potentials are materially affected by the virtual identity of the structure of member economies, with national policies which tend to reinforce the competitiveness of the economies, rather than enhance their complementarity. Economic structures in the economies can best be discussed in terms of the national resource endowment and of national policies. With respect to natural resources endowment patterns, all MRU states are similarly endowed. Each member country has varying amounts of iron ore, forests, gold and diamond deposits. To the extent that mining activities have been undertaken, the minerals have been exported unprocessed to an industrialized country. This observation is also true of heavy minerals such as ruptile (Sierra Leone). Guinea's major reserves of bauxite are mined for export in its raw state. Her limestone, useful in the making of clinker, is not used by Liberia and Sierra Leone in their cement factories; they make cement from imported clinker. Clinker constitutes over 90% of the bulk of cement.

3.10 In Liberia and Sierra Leone, economic development has sought to produce raw materials for transformation in industrial countries. Guinea, on the other hand, beginning with Toure's "non" to de Gaulle in 1958, and continuing for the next twenty years, concentrated on "developing the mentality" of the people. That policy forced a self-sufficiency on the Guineans that did not appear compatible with orthodox trade. All categories of trade were affected, so that Guinea's reliance on the rest of the world was reduced.

3.11 The first issue to be noted from this survey is that the economies are competitive, not complementary. In other words, consumption patterns in the three countries are similar, the goods consumed are similar, and their production methods are also similar. This suggests the need for especial investigation into determination of the areas that have or potentially have complementarities. On the basis of such investigation, proposals of policy nature aimed at policies suitable to creating the relevant policy framework and institutions for exploiting sources of complementarity could be forged.

3.12 The inability of firms in the MRU to export their outputs to other countries in the Union, or outside of it, has at least four causes. For purposes of presentation, these are identified as technical, commercial, financial and institutional.

3.13 Technical bottlenecks are manifested in the scarcity of skilled manpower, absence of quality control machinery and high production cost. As a result of these factors, in Liberia, for example, most industrial outfits, whether of Liberian or non-Liberian ownership, are closely held and managed by a family member, without delegation of responsibilities. Neither the work force nor supervisory personnel is trained; supervisors often are not clothed with sufficient authority. Supervisors are also not immuned from reprisals by relatives of indisciplined workers, especially when such relatives are higher in the pecking order. Factories do not expose their workers to training opportunities. Work flow processes are not defined, and workers often lack rudimentary familiarity with production processes and machines. Scarce technical personnel make repair cost high, if services can be obtained. Useful lives of machines are short, for want of repair service. Our survey of opinions of Union manufacturers established that the low level of technology and obsolete machineries used do not allow production at competitive cost. In Chart III-1, we present a topical summary of important aspects of these bottlenecks.

Summary

Chart III-1 Needs and Characteristics of the Operational Environment

Technical

- skilled manpower not available
- basic repairs too costly and unreliable
- quality control - no apparatus; no personnel
- reliable raw material supply for small market difficult
  - non-use of local raw materials because no incentives
  - reliability of supply of domestic raw materials low
  - unit cost too high
  - knowledge of alternative sources for imported raw materials limited
- transportation
  - underdeveloped local transport network
  - more costly between MRU capitals - sea, road or air - than any MRU capital and Europe/USA or Asia
  - availability not reliable
- spares for all types of machinery too costly; not available when needed
- basic repairs - too costly; facilities not available
- manpower
  - virtually all managerial functions handled by one person; supervisiors poorly trained
  - supervisors constrained by extended family system (fear of reprisal by relatives of subordinates punished, even if justifiably - personalized decision making)
- low functional literacy
- work force insufficiently adapted; low productivity
- work force not motivated; perceives employer/employee relationship as zero sum game
- production cost
  - high cost of energy
  - high labor cost relative to productivity
  - low level of technology
  - obsolete equipment

- lack of organization in production process
- high manufacturing cost
    - high cost of procurement of raw materials
    - high cost of waste (insufficiency of process)

- project documentation and preparation difficulties

Financial

- no insurance against expropriation/inconvertibility
- continually reduced liquidity; foreign exchange very scarce
- subsidy or insurance (pre- and post-shipment) not available
- no export finance guarantee scheme
- export credit financing unavailable
- absence of banking services outside capital cities
- cash transactions predominant
- ill-health of banking system
- credit information unavailable; credit facilities not available
- inadequate financial records of enterprises
- accounting and other services too expensive
- high cost of money; most sales cash
- limited financial market/market activities
- utilities too costly; not reliable
- project management capability low; too costly when provided by CPA firms
- produce pricing expedient (short-term) but neither rational/economic

Administrative

- time consuming immigration formalities
- too many government agencies handling investment application
- insufficient private sector data
- transportation too costly, availability not reliable
- investment promotion too general; project profiles not available
- perceived ambivalent/hostile attitude to business
- government, donors don't "buy national government" first - goods and services
- tax structure discourages certain activities/honesty; emphasis on revenue generation
- cost of services - electricity, telex, telephone too high; services sporadic; records forever inaccurate
- manner of public sector administration perceived not fair
- public sector decision sprung on affected sector - no prior discussion or consultation

- absence of storage facilities/distribution network
- non-symmetry of ministerial actions
- skilled manpower unavailable
- high absenteeism (frequent payday sickness)
- lack of coordination of investment procedures
- unreasonable delay in processing investment applications; records regularly lost

- no reliable monitoring services
- non-systematic investment guidelines/criteria for accord of incentives
- official attitude not suggestive of competition for investment dollar
- lack of appreciation for need of investor to make reasonable profit
- lack of systematic procedure in contract awards, etc.
- customs officers not aware of developments, e.g., Mano River Union protocols on goods of local origin not respected; difficulties of allowing drawbacks
- incentives not designed to achieve stipulated objectives
- lack of uniformity of treatment for business entities
- presumption that passage of law identical with its implementation; therefore, no follow-up
- existing industries not aided; their problems not appreciated
- investors/industrialists already in country not used as goodwi' ambassadors; often abused
- projects not documented; high cost of engaging professional services
- expectations (demand) for gratuities; difficulties of registration; forms "lost" by receiving agencies
- no legal sanction to force use of accountants, because weak tax administration
- receipting/processing procedures for documents by agencies not regulated
- spares not available, due to limited supply of foreign exchange

Commercial

- one man operation
- products/services not advertised
- no sources of commercial information
- no market nor product surveys; ignorance about other markets
- market too small
- no extension/support services
- cost of governmental services not related to cost of production; e.g., forms

3.14 It is suggested that the Secretariat undertake a study specifically of Union manufacturing cost, including the cost of electricity, labour, waste, inventory of raw material and rated marginal labour product or wages, depreciation and cost of spare parts of machinery and equipment. This study should determine what can be done to reduce these costs so that Union industrial output can become competitive within the Union, against imported goods from non-Union countries. The practical importance of some of the bottlenecks is discussed below.

3.15 To induce consumers in the Union to consider purchasing goods of union origin as compared to imports, quality control is important. Quality control and standardization are perhaps the weakest links among the chains of industrial production activities in the three countries. These arrangements must be comparable between the countries in the Union.

3.16 Liberia's Bureau of Standards has identified some 30 standards, mainly copied from the industrialized countries, for certain types of commodities, but the implementation of these standards is problematic since, in fact, there are no laboratories for testing and controlling quality. UNIDO undertook a project for the identification and preparation of a Standardization Project (Geneedy, 1973), which has not been implemented. In Sierra Leone, as in Liberia, standards are dictated by what producers feel disposed to do. Except for some filling stations and butcheries, even calibration of scales is virtually non-existent. Needless to say, more stringent requirements must be met if foreign markets are to be penetrated.

3.17 The Mano River Union Secretariat has recognized the importance of the need for quality control standards and specifications for goods and services produced in the Union. A section has been created in its Division of Economic Affairs to deal with this problem. The Standardization and Metrication Section of the MRU has drafted a National Standard policy and forwarded same to member states for study and adoption. In addition, the Union drafted for review of member states, A Union Metrication Act. At the time of this writing, Guinea and Liberia had submitted names of committee members to work out the details.

3.18 The promotion of intra-Union trade cannot ignore the importance attending establishment of quality control and standardization. This is the cardinal element of Union competitiveness, especially against non-Union trade, but also for intra-Union trade. Therefore, UNIDO and the Secretariat might be advised to take immediate steps to remove this serious bottleneck to Union Trade.

Some immediate steps recommended are:

1) The assignment of a quality control expert to the Secretariat of the Union to spearhead the efforts of the Secretariat in this direction; the expert's terms of reference might include:

   a) Follow up actions for the adoption of the standardization policy and the Metrication Act by member states;
   b) Ensure that member countries strengthen their standardization institutions and facilities, including establishment and staffing of modern quality control laboratories;
   c) Ensure that the implementation machinery for standardization and metrication laws has been established and functional in member countries;
   d) Propose appropriate training institutions for and related cost of training quality control personnel of member states;
   e) The timeframe of the expert should be about 24 man-months.

3.19 Inadequate infrastructure (roads, railroads, shipping lines, etc.) for transport, low level of organization of transport facilities contribute to high transportation cost between Union member states. In fact, the stock of infrastructural facilities such as roads and railroads is low.

Table 3.1

Ground Transport Infrastructure Among Union States (1982)

	Total	Guinea	Liberia	S. Leone
Road (km of hard surface)	4,500	1,300	1,900	1,300
Railways				
km of normal gage	2,500	2,000	500	50*

Source: IDU-MRU Survey, Annex 2.01

*Inactive at the time of the IDU Survey

3.20 The road network is not much developed. Cost of transporting a ton of goods over roads passable only during the dry season is uncompetitive. For the purposes of intra-Union trade, railroad transport is not significant since there is no rail link between member countries. Besides, railroads in Liberia are privately owned, and might not be available for general freight transport.

3.21 Air transport facilities may contribute significantly to trade among member states of the Union. There are three international airports in the Union; that at Roberts International is built and equipped to accommodate even the largest bulk cargo and passenger carriers. The IATA freight rates to West Africa is one of the highest in the world. The national airlines don't have the capabilities to haul freight. Intra-Union freight rates therefore are the IATA rates, impacting the high freight charges on goods traded among member states by air. Freight cost of airlifted inputs would also make outputs uncompetitive. Besides, flights between Union airports are irregular.

3.22 The interior parts of the three countries, with two-thirds of their populations, are landlocked. Goods produced and shipped by sea from the seaport of one country are more accessible to the interior of the other. That is, most Guineans would find it easier to obtain goods from Monrovia than from Conakry. Therefore, sea transport of most bulk commodities bound for Sierra Leone, Liberia and Guinea's interiors is not as efficient as land transport. Sea transport rates are also high. In fact, they are higher than rates between European or Asian Ports.

3.23 No MRU country has a working exports promotion program. There are no brochures advertising products, design, quality, specification or after sales service. Also, prospection or survey of the market for exportable products within the Union has not been done. Only a limited number of industries within the Union has ever surveyed the markets for their products across borders; the size of the market, the structure of product demand, bottlenecks, seasonality of demand, and competitors are not known by most producers. The fishing industry, soap and biscuit producers in Sierra Leone may be the only exceptions.

3.24 To enhance trade among member countries the following steps ought to be taken by the Secretariat of the Union:

a) Conduct market studies for the followings:

1) Biscuits
2) Corrugated galvanized iron sheets
3) Aluminium roofing sheets
4) Textiles
5) Paints
6) Wheelbarrows
7) Alcoholic beverages
8) Batteries
9) Fish

b) Establish an information center in the Secretariat similar to that of the ACP countries located in Abidjan, Ivory Coast.

c) Establish an Export Promotion Service for manufacturers in the Union, designing and printing brochures, developing and disseminating market information.

3.25 Financial bottlenecks to Union trade are manifested in four dimensions:

a) Exchange control
b) Export financing
c) Financial incentives
d) Export credit insurance

3.26 The three Union member states have different currencies, two of which are non-convertible. Sierra Leone has a two tier exchange system: 2.4 Leones to US$1 for importers and 1.4 for exporters. The two rates are equally important not only for Union consumers but for a producer who imports raw materials and exports finished products.

3.27 In Sierra Leone, the problem of raw material import for manufacturing industries are compounded by unavailability of foreign exchange. Importers have to determine their raw materials need for the year and apply to the Ministry of Trade and Industry for import licenses. The application is forwarded to the Bank of Sierra Leone where bidding is required for the limited foreign exchange available. The importer may not receive the full amount of foreign exchange necessary for purchase of raw materials and spares required for his production for the period. Often there are delays.

3.28 In Guinea, the situation was until now even more difficult. All importations for industrial purposes were centralized through a government-owned company, IMPORTEX, which held a number of holding companies including OCOFI, which controlled manufacturing companies. The Ministry of Small and Medium Scale Industry, on the other hand, controlled the activities of private industries. The Government has recently abolished most of the holding companies, reducing the chain of hierarchy and bureaucratic details which constrained commercial transactions. Industries now deal directly with either the Ministry of Industry or the Ministry of Small and Medium Scale Industries.

3.29 Trade prospects within the Union are hindered by the bottlenecks outlined above; trade expansion potentials would be enhanced only following their removal. Be that as it may, in the paragraphs below we discuss certain salient characteristics of individual member countries.

Guinea

3.30 Guinea has a mixed economy. In it, only small and medium size enterprises may be privately owned. For firms in this category, however, the state determines the prices of outputs, as well as each firm's access to raw materials. While this process appears an integral part of the allocation of foreign exchange, it seems to extend beyond that practical concern. There seems to be other policy considerations such as retention of the right to influence the composition of goods and services produced in the economy, and the ability to effect changes when required. Some of the privately owned enterprises were established before Guinea's independence in 1958, while others have been created recently, especially since the liberalization of economic policies. These firms employ about 7,340 persons and contributed 10% of the 1978 gross domestic product; their share in GDP increased to 25% in 1980.

3.31 The nationalized firms of Guinea tend to have higher installed capacities than privately owned firms operating in the same industry in Sierra Leone or Liberia. For an example, SOPROCIMENT has a 250,000 tons capacity, as compared with CEMENCO (Liberia), with 125,000 tons capacity. Perhaps this is explained by the fact that these industries have exclusive markets, and are more highly protected than their counterparts in the other Union countries. Also, the larger population of Guinea is a relevant factor. Guinea seems to have fewer industrial firms than the other MRU members.

3.32 Eleven of the thirty-nine firms owned by the Government of Guinea were designated by the Ministry of Industry for interview. The Ministry of Small and Medium Scale Industries, in addition, identified eighteen privately owned manufacturing firms, eight of which were designated by the Ministry to be interviewed. One of the eight, Torre-faction (Guinea), important for its local raw materials usage, was contacted but did not timely respond to our questionnaire. On the basis of our interviews, the Guinean manufacturing sector may be described as follows:

a) Eighteen companies, including eleven Government and seven privately owned, produce about 70 different types and ranges of products.

b) Apart from tea and milo cigarettes, raw materials required for the production of Guinean manufactured products are imported.

c) Most products substitute imported finished products.

d) Some small and medium scale manufacturing firms seem to produce a wide range and type of products.

e) Six of the 18 companies already have export experiences, especially with Morroco, Libya, Senegal, Guinea-Bissau and Mali. Four of the six companies are in the food and beverage sector, one in chemicals and the other in the construction material industry.

f) Twelve of the 18 firms have never exported. Most of them, however, appear to have strong capacity that would permit exportation, especially to the Union market.

3.33 Installed capacity utilization in all 18 industries was under 50%, due primarily to lack of raw materials and spare parts. For the same reasons, some companies did not produce in 1982 while one company installed in 1980 has not started production. The lack of raw materials and spare parts is a serious bottleneck to Guinean ability to produce and export competitively. In all the companies visited, more spare parts and raw materials would improve capacity utilization.

3.34 Procedures for pricing Guinean products with export potentials was difficult to determine. In the case of nationalized firms, the producer is different from the seller. Our attempt to discuss pricing, methods of financing exports and effecting payments for imports failed. However, we noted that some of these products are found on international markets.

3.35 Five of the 18 Guinean companies have years of experience exporting to Sierra Leone and other African countries; no export was indicated for Liberia, however. Guinean aluminium products appear to have the widest distribution in West Africa. Cigarettes made in Guinea also maintain unofficial but established markets outside of Guinea.

3.36 The wider the market for Guinean products, the smaller unutilized capacity. Aluminium products which enjoy wider distribution has a 25% unutilized capacity, as compared with 87% and 66%, respectively, for filter cigarettes and matches. On the other hand, underutilized capacity did not appear to exist for a joint venture enterprise like SALGIDIA, because of the captive market it maintains with the outside partner.

3.37 Milo cigarettes seem to present a special case of underutilized capacity. The low domestic price (20 Syli per pack or ninety U.S. cents at the official exchange rate but fourteen U.S. cents at the unofficial rate) must be noted. But since the product is consumed domestically, and assuming that Guineans don't have access to foreign exchange, the real cost to them has little, if anything, to do with the U.S. dollar price. But the lesson it teaches is that it could become acceptable on international markets, especially if its purchase was through unofficial channels.

3.38 It must be mentioned also that part of the problem of capacity under-utilization in the firms mentioned is caused by the revitalization of some of them. Production dropped to 13% of capacity for filter cigarettes following installation of new machineries, as an example. Capacity underutilization may be found even when there are standing orders from domestic and external markets for the product. In such cases, lack of raw materials and spare parts provides the explanation.

3.39 There is one company with export experience but catering mainly to the European market. USINE JUS DE FRUIT KANKAN produces high quality fruit juices - mangoes, pineapples, oranges, and bananas for export to Europe. Because of obsolence and the lack of spare parts, however, the company has had to rehabilitate its machinery and equipment. Therefore it has been forced to reduce the level of output in recent years.

Sierra Leone

3.40 Industry in Sierra Leone may be divided into two broad categories, namely, the formal or modern sector and the informal or traditional sector. For practical purposes, the modern sector was defined until recently as comprising establishments employing not fewer than 11 persons, with a capital investment not lower than Le 50,000 and an annual turnover of Le 100,000 or more. This definition was modified so that today, the modern sector is "an industrial establishment engaged in the production of consumer or capital goods or services using fixed assets to the value of Le 100,000 or employing 20 or more workers where industrial machinery and plant are run by motive power". This encompasses all types of industrial establishments, public and private.

3.41 The available data suggest that the industrial sector of the Sierra Leone economy makes significant contribution to the economy, between 5% and 10% during the period 1970 to 1979. The severity of foreign exchange constraints probably reduced this share below 5% during the last few years.

3.42 Since the 1970s, four large-scale industrial concerns have dominated the manufacturing sector in Sierra Leone. By 1982 the four activities ranked by gross output were tobacco, contributing 44.4% of industrial output; beverages, 12.2%; confectionery, 2.9%; and soap and detergents, 2.5%. These four activities contributed 62.8% of manufacturing industries' share of GDP. In the late 1970s, several new manufacturing establishments sprang up, thus changing the composition; however, the general picture of a few concerns dominating the scene remains unaltered.

3.43 In 1979, manufacturing firms employed 11.2% of monetary sector employment in Sierra Leone. Out of an estimated 7,596 employed in industrial sector, excluding the mines, 33 major firms employing over six persons employed only 4,380 people, or 57.7%. There is an apparent neglect of small scale industries, including production activities of artisans such as blacksmiths, carpenters, masons, shoe-makers, tailors, gara cloth producers.

3.44 The large scale industries import almost all their inputs. Being the result of import substitution strategy adopted soon after independence, the firms are merely assembly plants importing raw materials and components and fitting or refilling or repackaging them together locally, with minimum value added.

3.45 Until recently, few Sierra Leoneans owned manufacturing firms. Even today, over 75% of such firms are owned by foreign individuals or merchant companies. As to the state-owned firms the picture is not significantly different. The industrial sector is not integrated into the rest of the economy. The exceptions are few agro-based industries that obtain some high proportion of their raw materials from local sources. Structurally, therefore, each sector of the economy is linked to external markets separately.

3.46 Another characteristic of the industrial sector of Sierra Leone is its agglomeration. In the Gerater Freetown area, with just around 10% of the population, are concentrated over 85% of the country's industrial establishments. This pattern is a result of the historical evolution of the sector as a whole. Because the major industries are import-dependent, they tend to be located nearer the ports. Because their products are intended for urban residents, and because the ports and the cities are at one and the same, such firms have spatial concentration. These locational influences on large scale industries also affect the locational choice of smaller enterprises, which produce simple consumer goods. Naturally, bakers, tailors, shoe-makers, carpenters, etc. establish their production base in the urban centers, being attracted to the market.

3.47 Public sector enterprises as a group tend to use a larger proportion of domestic raw materials - wood, palm products and rice. The relevant public sector enterprises are the Forest Industries Corporation (FIC) and the Sierra Leone Produce Marketing Baord (SLPMB). The FIC is the largest furniture, logging and sawmill operation in Sierra Leone; its production facilities are located at Kenema, some 350 km from Freetown. The SLPMB, basically a marketing board, has diversified its operations by setting up some nine Palm Oil and four Rice mills across Sierra Leone; it plans to establish an edible oil refinery. Note must however, be taken of the Bennimix Baby Food Plant at Bo, operated as a department of the Ministry of Social Welfare, the Sierra Leone Clay and Bricks Industries, Daru Palm Oil Mills Ltd., Mattru Gambia Palm Oil Mills, Ltd. and Wellington Distillery

3.48 The private sector enterprises have the following characteristics: (i) concentrated around Freetown; (ii) import 80% or more of inputs and 100% of machinery and equipment; (iii) use technologies originating from the developed countries; (iv) have minimal or no quality control facilities; (v) employ production processes that have minimal value-added; (vi) are generally owned by non-Sierra Leoneans, and (vii) operate significantly below rated capacity. These firms were engaged in the following activities.

3.49 At the end of 1982, according to the Registrar of companies, seven firms were engaged in (or have registered to engage in) meat and poultry production. "Meat production" merely means slaughtering of animals for immediate domestic consumption. Coffee grinding for local consumption is undertaken by J. Jabbour and Sons. The company has not explored foreign markets as yet.

3.50 Seven brewing and distilling companies make that industry one of the largest in the country. The distilleries appear to have good export potentials. One of them, James International, markets its products in Sierra Leone, Guinea and Liberia under brand names like Sassman Bullet, Sassman Trigger, etc. The Biscuit and Confectionery industry in Sierra Leone has risen to prominence during the past years. It is second to the alcoholic and beverage industry in the country in terms of annual gross turnover. The National Confectionery Limited (NATCO), a subsidiary of an Indian multinational company, T. Choitram and Sons, is substantially engaged in the export business. Its products have dominated both the Sierra Leonean and Liberian markets.

3.51 The Aureol Tobacco Company produces several brands of cigarettes; some of its products, especially snag tobacco and finished cigarettes, are sold in Liberia and Guinea. The ATC is an affiliate of British-American Tobacco; BAT also operates in Liberia as the Monrovia Tobacco Company.

3.52 An industry that has a fairly impressive potential to export is Gara textiles (tie-dye) production. However,it remains in the hands of small, family-sized producers, with no significant breakthroughs in mass production. There is a need to modernize the production process in order to reduce unit cost, improve quality, and increase reliability of supply.

3.53 The plastic, rubber and allied products industry is dominated by the Bata Shoe Company, Plasti Manufacturing Afro Plast Ltd., West African Shoes and Rubber Industry and Plastic Footwear Industry, Ltd. These produce rubber and plastic shoes and sandals from plastic granules injected into blow-moulds. Products such as foam mattress and pillows are produced from imported inputs for local consumption. Plastic bottles used locally, mainly by the beverage industry, are also produced. A sizable volume of plastic and polythene shopping bags are also produced by an extrusion plant. These products appear suitable for external markets within the subregion, but the factories producing them have substantial unutilized capacities, and no exports are being realized. Opportunities for export of some of these products exist; for example, to Liberia, which imports all its shopping bags (paper and plastic) from America.

3.54 The edible oil industry in Sierra Leone has quite a substantial volume of investment pumped into it. Spearheading such investor is the SLPMB which has established nine oil mills across the country. There are five other officially registered private oil mills, with capacities ranging between 2,000 tons to 10,000 tons per year. Unfortunately, many of these mills, even those of the SLPMB, suffer from problems ranging from technical to administrative and finance. There is no doubt that a proper management of this industry could see the development of many agro-industries using vegetable oils as their raw materials, which possibly could find markets outside Sierra Leone.

3.55 In most of the enterprises surveyed, installed capacities are underutilized; on the average, only about 50% of capacity is utilized.

3.56 In the traditional sector, industrial establishments use simple tools and depend primarily on local raw materials, and rely on labour. The volume of production in this sector is relatively small, because indigenous technology, the main characteristic of the sector, limits production capability.

3.57 If productivity by this sector could be improved, its output might find acceptance in other countries, even outside the subregion. The products of this sector which appear to have export potentials are:

Dried and smoked fish
Rafia, straw, bamboo and palm branch products
Gara prints and cloth
Shoes made of animal hides and skins
Jewelry
Blacksmith products, especially agricultural tools
Ivory and carved wood products
Tailored and hand sewn clothings
Bakery products

3.58 Repair and service workshops are of the same nature in all the MRU states. Some are well established with modern equipment and management and others spring up on the sidewalk or in some corners along the streets. However, in Sierra Leone, two automobile repair garages - John Michael and Raymond Garages - have branched off from mere repair and servicing of automobile to actual construction of vehicle bodies, storage tanks, silos, dustbins, wheeled trailers and refuse carriages. The establishments have tremendous potentials for supplying the demands for several metal products for agricultural households and industry in the entire region.

Liberia

3.59 In 1981, 950 modern sector enterprises were registered in Liberia. The characteristics of these establishments are as follows.

3.60 The concession sector dominates the economy by any measure. Capital invested per employee by firms in the sector is higher than national product per head; technology employed is more advanced in terms of machinery used in production and operating process; senior management positions are held by expatriates. The sector's share in GDP was 28% in 1980; it contributed one-sixth of total public sector revenues; about 15% of Liberians are employed by this sector, equivalent to one-fourth of those employed in the modern sector. It contributes 60% of the value-added in the economy. Improving but still very low is the share of each dollar generated by this sector and retained in Liberia. The average was 32 cents in 1980, compared with 22 cents in 1975. In terms of exports, the sector's role in the economy is very significant. In 1980, it contributed 78% of total exports, fetched net foreign exchange earnings equal to 53.3% of total sector output. Value-added

in this sector as a share of total domestic value-added was 46.6% in 1980. The sector is composed mainly of iron ore, rubber and timber companies that are affiliates of multinational companies. The sector produces primary commodities similar to those produced by Sierra Leone and Guinea; the raw materials are exported unprocessed to industrialized countries.

3.61 There is a foreign-owned non-concession private sector which is engaged primarily in wholesale and retail trading and some import substitution manufacturing. These trading establishments are dominated by Lebanese (565 firms) and Indian (160 firms); about four-fifths of these concerns were established only since 1971. More than two-thirds are single proprietorships. This factor perhaps explains the short-term horizon of their approach to investment decision.

3.62 Another important characteristic of this group is that about 65% are in petty trading. As such, the net economic benefits of this sector to the economy is negligible. Even as manufacturing firms, their value-added is also negligible and consists mainly of assembly or import substitution industries. Export potentials are therefore not exploited; product standards and quality control are also not considered as a corporate responsibility and as a drive for transnational operational objectives. It is clear that these businesses have preference for short-term benefits, hence easier access to credits from financial institutions that are themselves foreign-owned.

3.63 The other tripod of the Liberian business profile is the Liberian-owned private sector. There were 920 of these firms in 1981, 83.5% of which was sole proprietorships, 12.4% corporations and the remaining 4%, partnerships. They are mainly in retail trade, or in service field like medicine, law and construction. This sector is shy of sophisticated management and corporate structure. Other Liberian firms of less sophisticated organization and management structure include some printing houses, rubber farms and logging companies, but their basic operational and organizational characteristics still resemble those of petty trading.

3.64 There were 186 manufacturing firms registered in 1981; 94% of these was established after 1971, and the rest in the 1960s. Half of these firms employ not more than five persons and another 20% employ not more than ten persons. About 10% of them employ more than forty persons. As regards form of organization, there are about 58% corporations and about 38% single proprietorships.

3.65 For export purposes, many Liberian establishments do not have the capacity nor the wherewithal to be included. Therefore, our field investigation for ascertaining the actual potentials for exports to the MRU countries have been limited to 42.

3.66 Forty two firms have been identified as having potentials to produce goods in quantity and quality acceptable for domestic consumption. With minor exceptions, these firms are involved in assemblage and packaging of products for the substitution of imports of certain commodities into the Liberian market. Eight of the 42 establishments already export 12 products, including cement, confectioneries, roofing sheets, welding rods, nails, aluminium windows, insecticides, explosives, and plywood.

3.67 All of the Liberian establishments which now export to Union countries subscribe to international standards and specification. Cement products meet the ASTM C-150 standards while roofing sheets and welding products meet the AWS and DIN standards. British and Uniliver standards are maintained for nails and aluminium window products respectively. Corrugated zinc sheets and zinc buckets are produced under the JIS standards. Sierra Leone is the principal Union member importer of these products.

3.68 The remaining 38 firms which now do not export have capacities and expressed desires to export to Union countries, provided they are paid in hard currencies.

3.69 Unutilized capacities in Liberian industries range from 20-100%. Some of the industries visited only need to double their shifts in order to make additional products for export. Others can supply external markets from inventory from a single shift. Capacity underutilization has been accentuated by competition from imports. This is the case for industries like LIRAMCO (Canvas shoes) which closed down due to lack of market and high competition from imported rubber sole sandals.

3.70 Capacity to supply is not the only criterion for enhancing Liberian exports to Union countries. The products must meet standards and specifications instituted and monitored by Government. Apart from the 12 products exported by Liberian firms under international standards mentioned earlier, most of the 42

firms investi ated produced under company standards and specifications, uncontrolled and not monitored by the Government of Liberia. A Division of Standards and Meteology established in 1972 in the Ministry of Commerce, Industry and Transportation does not have the staff nor facilities to enforce the laws on the books for standardization and specification. Current administrative requirements for standards and specifications are limited to mere inspection of goods and compilation of samples. Goods produced are not tested for quality control nor measured according to standards. There are no Government-owned quality control laboratories for testing nor measuring products. Except for gasoline filling stations, measuring instruments are not calibrated by Government.

3.71 Some firms, however, maintain standards and specification for reputation and quality requirements set by their parents/affiliates, or by patent or brand names. For example, Chesebrough Ponds require Liberian General Industries to produce Vaseline at quality equivalent to Chesebrough Ponds products any where in the world. Coca-cola factory will produce coca-cola of international standard required by the franchise and patent.

3.72 Some company qualities are geared towards local taste. Club beer quality is an acceptable exportable quality but the company refuses to export this good quality product to any other country in the Union.

4. Trade within the MRU

4.1 An attempt to analyze Mano River Union trade data can only suggest order of magnitude and direction; the unmeasured, but presumably large size of unrecorded trade suggests that there is more exchange of goods than recorded. In addition, the quality of the data leaves much to be desired. The unrecording of intra-Union trade reflects several aspects of member countries' characteristics. To begin with, political boundaries split ethnic groups on either side of a political boundary, so that often members of a family are found on both sides of a border. Monitoring trade and economic relationships between such groups across long borders lacking natural divides such as mountains, thus far is outside the capability -- even if the will were there -- of the governments. Secondly, unrecorded trade provides a hefty incentive: using black market exchange rates, such trades provide unusually high profits. The risks are at the same time minimized by the preceding consideration. Thirdly, trade in a particular product might mean domestic scarcity of that commodity: given difficulties with importing spares and raw materials leading to undercapacity utilization, sale of a commodity across the border means its unavailability on the domestic market. Fourthly, there are considerable difficulties with the data themselves. These relate to consistency, comparability, reliability, etc. These problems reflect those administrative and institutional difficulties which were discussed in Section III, and include lack of uniformity of methods used in the countries. In the discussion below, the reader is urged to remain aware of these factors.

4.2 Intra-Union trade is hampered by the inconvertibility of the currencies of two of the three countries; in those countries, official exchange rates appear not to reflect market conditions. Consequently, black markets in them limit the attractiveness of transactions handled through official channels.

4.3 The structure of recorded merchandise trade of the MRU states in 1978 is presented in Table 4.1. Note that for Guinea and Liberia, the share of minerals and metals in export is high; in fact, for Guinea, minerals and exports contributed 98% of exports, while for Liberia, its share was 63%. Sierra Leone, on the other hand, has a different export structure; minerals and metals accounted for only 8% of merchandise exports; food and beverages, however, contributed47% of exports. The indication that manufactures contributed 44% of Sierra Leone's exports does not seem to fit a visual impression of the economy. While there are no comparable data for Guinea's imports, Liberia and Sierra Leone have a very similar import structure.

Table 4.1

A. Percentage Share of Merchandise Exports

	Fuels		Minerals & Metals		Food & Beverages		Other Primary Products		Manufactures	
	1962	1978	'62	'78	'62	'78	'62	'78	'62	'78
Guinea	0	0	70	98	29	2	0	0	..	0
Liberia	..	0	..	63	..	6	..	29	..	2
Sierra Leone	..	0	..	8	..	47	..	1	..	44

B. Percentage Share of Merchandise Imports

	Food		Fuels		Other Primary Commodities		Machinery & Transp. Equiptmt.		Other Manufactures	
	1962	1978	'62	'78	'62	'78	'62	'78	'62	'78
Guinea	..	..	..	..	..	..	..	..	..	..
Liberia	16	17	4	18	7	1	34	32	39	32
Sierra Leone	23	21	12	12	5	1	15	24	45	42

Source: The World Bank, Accelerated Development in Sub-Saharan Africa, An Agenda for Action, Washington, D.C., 1982.

4.4 Given this overview of the structure of merchandise trade of the sub-region, we now proceed to describe and analyze trade within the Union. The data to be presented lack uniformity. For example, published Liberian trade data do not agree with Sierra Leone's. Thus, official Sierra Leonean sources may show Sierra Leone exports to Liberia in 1981 that are materially different from official Liberian imports from Sierra Leone during that same year. In the case of Guinea, on the other hand, not many pieces of relevant data were even available to the consultants. In order to overcome the difficulties, we used official Liberian sources for the purposes of estimating the value of recorded trade within the Union. Note must be taken of the fact that records of trade between Sierra Leone and Guinea presented the most serious difficulty for documentation. To overcome that and other related difficulties, we have also presented in this Section tables of trade statistics as reported by the three countries.

Guinea

4.5 Guinea's trade with Union members is not as well documented as trade between Sierra Leone and Liberia, for example. In Table 4.2, Guinea's imports from the MRU states in 1981 and 1982 are given in Syllis. Note that Guinea imported more goods from Sierra Leone than from Liberia; the largest product groups are food, beverages and tobacco; machine and parts, and petroleum products. She imported the same category of goods from both countries, except that there were no petroleum imported from Liberia.

4.6 A trade pattern observable in the Union appears to give incentives to black market activities and to barter because, as noted before, only the dollar is a convertible currency, but the leone and syllis are not. Besides, the syllis is still perceived a weaker currency than the leone, even though both are not convertible. In this environment, Liberia's trade with either Guinea or Sierra Leone is subject to a strong incentive to be unrecorded: the Guinean or Sierra Leonean importer must find the dollar with which to purchase the Liberian goods. Since the difference

Table 4.2

Guinean Imports from MRU Countries, 1981 and 1982 (in Syllis)

Group of Products	1981		1982	
	Sierra Leone	Liberia	Sierra Leone	Liberia
Food, Beverages and Tobacco	1,741,090	413,762	2,111,609	690,800
Construction & Sanitary Materials	84,907	283,842	66,160	213,464
Agricultural Products	741,850	3,000	3,000	-
Textiles	577,653	553,991	1,293,240	220,400
Machine and Parts	3,076,158	292,800	1,526,600	463,300
Transport Materials & Parts & Tyres	183,300	508,340	401,300	336,387
Petroleum Products and Others	16,634,956	-	-	-
Others Nowhere else Classified	305,011	4,030,108	543,650	523,293
	23,344,925	6,085,843	5,945,559	2,447,644
% of Total Trade	0.35	0.09	0.08	0.03

Source: Bureau of Customs, Ministry of Finance, People's Revolutionary Republic of Guinea

between official and black market exchange rates is substantial, there is an incentive to unrecorded trade. When Liberia imports from either country, her residents readily accept the dollar in payment. Moreover, when Sierra Leone exports to Guinea, because the exporter does not accept the syllis, he has an incentive to barter and in the case of manufactures, low trade volumes result. The situation would be analogous when Liberia exports to Guinea (or Guinea imports from Liberia).

4.7 Table 4.3 indicates total Guinean trade. It is to be noted that estimated 1982 exports were below the 1980 level. In all years, Guinea apparently maintained a positive trade balance. But not much effort is spent in analysing these data, as their firmness is questionable.

4.8 Table 4.4 shows the products Guinea now exports, and the destinations. The table also presents a vivid picture of the extent of underutilized capacity in Guinean industry.

4.9 Because of the relative hardness of the leone, when Sierra Leone exports to Guinea, the trade is likely to be unrecorded; in other words, there is incentive to barter for such goods whose production does not require imported inputs which must be paid for with hard currency; in other cases, the effect of the situation is low trade volume, when manufactures are considered. Similarly, when Sierra Leone imports from Guinea, the exporter prefers to be paid in the relatively harder leone, and the trade probably would be unrecorded.

4.10 The currency situation has also created other undesirable patterns. Goods transhipped through Liberia, which in 1981 was valued at $8 million, probably re-entered Liberia. It seems the means to earning foreign exchange for Guinea, thereby improving the supply to Guinea of hard currency.

Table 4.3

Value of Guinean Trade 1977 - 1982 (in million syllis)

Year	Exports	Imports	Total Trade
1977	5,786	2,582	8,368
1978	6,567	2,411	8,978
1979	7,383	4,568	11,951
1980	8,852	3,877	12,729
1981*	7,250	5,000	12,250
1982*	7,227	7,000	14,272

*Calculated from ratios given by the Bureau of Customs, Ministry of Finance.

Source: LDC/CP/23 UN -- "Conference des Nationals Sur les pays les Moins Avances Runions de Consultation Par Pays LDC/CP 23.

Table 4.4

Major Guinean Exports of Manufactures

Tradeable Products	Producer	Annual Capacity	Production 1982	Destination
Non-Filter Cigarettes	ENTA	24,000,000 Pks	25,000,000 Pks	Guinea-Bissau
Filter		15,000,000 "	1,930,000 "	
Matches		60,000,000 Bxs	20,000,000 Bxs.	
Tea	Usine de the' Macenta	150 tons	NA	Morroco
Pineapple Juices and Slices	Salguidia	30,000 "	NA	Libya
Paints	Sipeco	2,500 "	1,200 tons	S. Leone, Guinea-Bissau
Aluminium Sheets	Soguifab	7,000 "	5,000 "	Senegal, S. Leone
" Utensils	"			Guinea-Bissau
" Glass Windows				Mali
" Glass Doors				

NA = Not available

4.11 The difference in trade as per official records between Liberia/Guinea and Sierra Leone/Guinea probably reflects the higher volume of Guinea's unrecorded exports to Liberia, recognizing the fact that the dollar is a convertible currency, which the leone is not. On the other hand, the proximity of Sierra Leone to the population centers of Guinea and the relatively advanced transport infrastructure between Guinea and Sierra Leone may explain the difference in unrecorded imports into Guinea from Sierra Leone being higher than recorded imports into Guinea from Liberia. This latter reason probably explains why Guinea is a net importer in the Union while Sierra Leone is a net exporter.

Table 4.5

Sierra Leone: Recorded Exports 1977 - 1981, Value (In US$000)

	1977	1978	1979	1980	1981
Total Exports	116.878	148.443	181.613	170.426	144.447
Exports to Liberia	1.553	2.006	2.115	1.153	1.823
Exports to Guinea	NA	NA	0.224	0.270	0.284
Exports to Liberia as % of Total	1.3	1.3	1.1	0.6	1.2
Exports to Guinea as % of Total	NA	NA	0.1	0.0	0.1

Source: Foreign Trade Section, Ministry of Planning & Economic Affairs, Monrovia, Liberia and Bank of Sierra Leone.

Currency Conversion: Le 1.20¢ = U.S.$1

Table 4.6

Sierra Leone: Recorded Imports 1977 - 1981, Value (In US$000)

	1977	1978	1979	1980	1981
Total Imports	171.857	242.403	278.267	372.897	290.461*
Of which:					
Liberia	0.476	1.127	0.972	1.245	0.887
Guinea**	-	-	-	-	-
Import from Liberia as % of Total	0.2	0.4	0.3	0.3	0.3
Import from Guinea as % of Total	-	-	-	-	-

Source: Bank of Sierra Leone and Central Statistical Office, Freetown, S. Leone.

*Preliminary estimate

**Data for Guinea not available. It appears, however, that imports from Guinea as percentage of total trade of Sierra Leone is lower than Sierra Leonean imports from Liberia.

Table 4.7

Goods Produced in Sierra Leone and Exported to Other MRU Countries

Product	Unit of Measurement	Capacity Installed	Capacity In Use	Share Exported	Destination	Technology
Sassman Gin	0.25 litres	91,200 litres	30%	50-60%	Liberia/Guinea	-
Biscuits				NA	Liberia	-
Confectionery	Metric Tons		75%			
Cigarettes	Million Sticks Per Month	160 mil.sticks	45%	NA	Liberia	-
Cut Tobacco	Cu.Ft.	5,000,000	50%	50%	Guinea	Italian
Oxygen	Cu.Et.	2,300,000	50%	-	Liberia	Rivoria
Acetylene	Lbs.	1,386,000	25%	-	Gambia	S.P.A.
Carbondioxide						
Panadol	Units of Tabs.	80,000,000	90%	NA	Guinea	British
Cafenol	" "					German
Padrax	Sachets	Tablets				BP/VSP
Aralen	Units of Tabs.					
Andrews Liver Salt						
Children's Cafenol	" "					
Plastics	0.25-5litres	1,200 litres daily			Guinea	German
Laundry Soap					Liberia	
Toilet Soap	Tons	1,500	40%	10%	Liberia	British
Soap Powder						British
Suitcases	Centimetres	NA	25%	50%	Liberia	German
Handbags					Gambia	English
Travelling Bags						
Plastic Footwear	Pairs	1,500,000	33%	50%	Liberia	British
Trailers					Guinea	British
Trucks						Belgian
Tanks						German
Grain Silos					Guinea	British
Safes				20%		French
Cash Boxes						
Metal Cupboards						
Gate Security System						
Mattresses	3'6"	NA	60%	30%	Guinea,Mali,	British

Table 4.8

Value of Liberian Trade with MRU States, 1977 - 1981 ($000)

	1977	1978	1979	1980	1981
1. Trade with Sierra Leone	2,028	3,133	3,088	2,398	2,710
2. Trade with Guinea	878	1,498	3,309	5,573	2,135
3. Total Union Trade	2,906	4,631	6,397	7,971	4,845
4. Total Trade	910,900	967,000	1,043,100	1,134,300	1,006,600
5. % Union Trade of Total Trade	0.3	0.5	0.6	0.7	0.5

Source: Computed by D.C.

Table 4.9

Recorded Trade of Liberia with MRU States, 1977 - 1981 (in US$000)

	1977	1978	1979	1980	1981
Exports					
Total Exports to the World	447.400	486,400	536.600	600.400	529.200
Exports to S. Leone	0.476	1.127	0.972	1.245	0.887
Exports to Guinea	0.395	0.911	2.990	5.397	1.871
Exports to S/L as % of Total	0.11	0.22	0.18	0.2	0.2
Exports to Guinea as % Total	0.08	0.18	0.55	0.9	0.3
Exports to MRU as a % of Total Exports	0.19	0.40	0.73	1.10	0.50
Imports					
Liberia's Recorded Imports 1977 - 1981 (in US$000)					
From the World	463,500	480.900	506.500	533.800	477.400
From Sierra Leone	1.553	2.006	2.115	1.153	1.823
From Guinea	0.483	0.587	0.319	0.175	0.264
From S. Leone as % of Total Imports	0.3	0.4	0.4	0.2	0.4
From Guinea as % of Total Imports	0.1	0.1	-	-	-
MRU Imports as % of Total Imports	0.4	0.5	0.4	0.2	0.4

Source: Ministry of Planning & Economic Affairs, Monrovia, Liberia, Foreign Trade Section

Table 4.10

Some Liberian Products Sold Within the MRU, 1982

Tradeable Products	Metric Tons Annual Capacity	Metric Tons 1982 Production	Destination Within the Union	Quality and Standards
1. Portland Cement	125,000 MT	71,000 MT	Sierra Leone	ASTM C-150
2. Candies (Confectionery)	500 MT	388 MT	Guinea	GERMAN
3. Roofing Sheets	300,000 FT	300,000 FT	Sierra Leone	AWS
4. Welding Rods	100 MT	100 MT	Sierra Leone	DIN
5. Marble Torrazo Tiles	25,428 M^2	25,428 M^2	Sierra Leone	BRITISH
6. Nails	32,686 LBS	32,686 LBS	Sierra Leone	BRITISH
7. Aluminium Windows	NA	1,794 FT	Sierra Leone	UNILIVER
8. Corrugated Zinc Sheets	8,000 MT	4,201 MT	Sierra Leone	JIS
9. Zinc Bucket				
28 CM	NA	1,244 DOZ	Sierra Leone	JIS
30 CM	NA	1,382 "		JIS
34 CM	NA	2,434 "		
10. Zinc Tubs 50 CM		1,472		
11. Plywood	9,600 M^3		Sierra Leone	
12. Explosives (ANFO)	NA	NA	Guinea	CANADIAN
13. Used Clothing	96,000 100 BALES		Guinea	
14. Flour	18,000 MT	8,200	Sierra Leone	AMERICAN

Sources: DC Field Survey

Sierra Leone

4.12 According to official Sierra Leone sources, Sierra Leone's 1981 exports to Union countries were lower than in 1978. In Table 4.6, we show Sierra Leone's recorded imports from Union countries. In Table 4.7 are listed goods manufactured in Sierra Leone and exported to other Union countries. It is to be noted that most of these are manufactures.

Liberia

4.13 In the rest of the section, using Liberian official data, we present and analyze the composition, value and direction of Liberia's trade within the Union. Table 4.8 confirms that Liberia's trade with Sierra Leone and Guinea, at 0.7% of total Liberian trade in 1980, was the highest value recorded during the five years, 1977 to 1981. In Table 4.9, in 1980, Liberia's recorded exports to the MRU reached 1.10% of total exports, but note that her imports from the MRU countries amounted to a paltry 0.2% of total imports. In value terms, Liberia's recorded trade with Union member states grew from $2.9 million in 1977 to $8.0 million in 1980, almost fourfold (See Table 4.9). The level of recorded Liberian trade declined in 1981 by nearly 50% from the 1980 level.

4.14 As seen in Table 4.10, goods produced in Liberia and sold within the Union in 1982 were mostly manufactures.

4.15 The value of Liberia's recorded trade with Guinea showed a dramatic increase during the five-year period, 1977-1981. From under one million dollars in 1977, trade with Guinea reached almost $6 million in 1980, but dropped to $2 million in 1981. Liberia's balance of trade with Guinea was favorable. Except in 1977, balance was positive for all years. Liberia is a net exporter to Guinea.

4.16 As regards the structure of trade with Guinea, the value of Liberian manufactured goods exported to Guinea over the period 1977 to 1981 was significant, 77% and 61% of exports to Guinea in 1977 and 1979; it declined to 17% in 1980 and stabilized at 25% in 1980 and 1981. Liberian exports to Guinea are dominated by explosives and wheat flour; the range of Liberian manufactured products exported to Guinea widened from two in 1977 to six items in 1980 and 1981.

4.17 Liberia's trade with Sierra Leone rose from $2.02 million in 1977 to $3.1 million in 1979, but declined to almost the 1977 level in 1980. However, the balance of trade over that period shows an interesting pattern. Only in 1980 did Liberia maintain a favorable trade balance with Sierra Leone. In other words, Liberia is a net importer from Sierra Leone.

4.18 Regarding the structure of trade with Sierra Leone, we observed that over the five-year period, not more than a dozen commodities, comprising mainly food items and live animals, constituted imports. A greater diversification of imports appeared in 1981 (about 20 items were imported).

4.19 Value of industrial products imported from Sierra Leone registered an increasing significance as a proportion of total imports of MRU origin. Interestingly, the goods imported from Sierra Leone, e.g., confectioneries, were also being produced in Liberia. The share of such goods increased from 7% in 1977 to 28% in 1981. This implies a rapid displacement (substitution) of Liberian manufactured goods of local origin by similar goods produced in Sierra Leone.

4.20 Liberian manufactured goods exported to Sierra Leone consisted of not more than four items before 1981. Palm oil and plywood products constituted the major items of Liberian export. Some refined petroleum products were added in 1981.

4.21 Value of manufactured goods exported to Sierra Leone by Liberia were a significant proportion of MRU exports in 1977 and 1978. Due perhaps to the April 14 and April 12 events of 1979 and 1980, respectively, Liberia lost the momentum in penetrating that market. The situation showed an improvement in 1981 when the value of Liberian manufactured goods was more than four-fifths of total exports to Sierra Leone.

Table 4.12

Liberian Manufactured Goods Exported to Guinea 1977 - 1981 (in $000)

Type of Goods	1977	1978	1979	1980	1981
Used Clothing	-	2	-	23	39
Explosives	291	326	521	750	350
Matches	-	36	-		-
Flour of Wheat	-	196	-	257	28
Sugar	-	-	-	167	20
Sugar Confectionery	-	-	-	88	23
Tobacco	13	-	-	-	-
Total	304	560	521	1,353	460
% of Exports to Guinea	77	61	17	25	25

Source: Ministry of Planning & Economic Affairs, Foreign Trade Section.

Table 4.13

Liberian Imports from Sierra Leone Similar to Goods Manufactured in Liberia 1977 - 1981 (in $000)

Type of Goods	1977	1978	1979	1980	1981
Biscuits	15	10	34	-	48
Sugar	59	43	-	-	16
Sugar Confectionery	18	-	-	-	-
Tobacco Manufacturing	-	11	14	110	-
Cigarettes	-	-	17	-	-
Motor Spirit	-	-	-	-	428
Kerosene	-	-	-	-	17
Aviation Spirit	-	40	23	-	-
Gas Oil	-	-	230	-	-
Propone & Butane	-	18	-	-	-
Washing Soap	-	-	-	86	12
Rubber Bondles	22	-	-	-	-
Chemical Elements	-	-	12	-	-
Total	114	122	330	196	521
As % of MRU Imports	7	6	15	17	28

Source: Ministry of Planning & Economic Affairs, Foreign Trade Section.

5. Inventory of Technology in the MRU

Technology Defined

5.1 For the purposes of this discussion, technology refers to the totality of the means employed to produce or transform objects for human sustenance and comfort. That is, by technology is meant the mechanism by which inputs are combined in a defined process to produce an output per unit of time. In this sense, technology may be embodied in a machine, and the employment of such machinery in a production process is then a use of technology.

5.2 Technologies appropriate to the Mano River Union, in view of prevailing conditions, refer to technologies developed to process local raw materials, with local raw materials in mind, or the adaptation of general technologies to local conditions, including market size, since economies of scale are a relevant consideration for appropriate technology. The use of technology capable of processing non-local raw materials or semi-processed goods has limited relative impact (i.e. value-added), and for obvious economic reasons is to receive less incentive.

Indigenous Technologies in the MRU

5.3 The technology traditionally employed by residents of MRU states in activities that meet basic requirements for human subsistence -- i.e. provision of food, shelter and clothing -- are virtually identical. We observed little, if any, differences among indigenous technologies applied in Sierra Leone, Guinea and Liberia to food production and preparation, in building and construction of dwellings, and in manufacturing clothing and personal wears. The following paragraphs are therefore intended to cover the three countries.

Food and Beverage Technology

5.4 The production of food and beverages material use traditional methods, implements and tools in processing, preparing and preserving food for consumption. The technology is similar in all Union countries. For example, fish preservation and processing, including salting, drying, smoking and cooking is done over an open hearth with firewood or charcoal as source of energy, in all three countries. The preparation of gari and fufu from cassava showed no differences in method, implements and process: cassava roots peeled, grated, pounded or fermented.

5.5 In surveying technology employed in the traditional beverage industry, we observed that palm wine, the sap from the palm tree, is the largest single marketable, traditional beverage common to the three countries, after canejuice. Traveling in

Table 5.1

Summary of Industrial Technology Survey

Mano River Union, March, 1983

I		II	III	IV	V
Product Group Classification		Guinea	Liberia	Sierra Leone	Total
Food, Beverage and Tobacco	01	6	7	8	21
Repairs & Service Workshops	02	-	2	-	2
Chemical Products & Mfg. Ind.	03	6	12	9	27
Building Materials	04	1	5	4	10
Plastic Rubber, Leather, etc.	05	-	2	-	2
Paper & Paper Products	06	1	3	1	5
Wood & Furniture Mfg.	07	1	4	6	11
Light Engineering & Metal	08	2	6	6	14
Textile & Related Products	09	1	-	-	2
Miscellaneous Ind.	10	1	1	2	3
Total		18	42	36	97
Technology - Indigenous		0	0	1	1
Adapted in the Union British		1	12	22	35
German		6	6	14	26
American		2	10	5	17
French		6	0	2	8
Others		10	12	12	34
Exports in progress (In Percent)	Yes	33.3	17	33	24
	No	67.7	79	64	69.9
Percent Exportable (Average)		32	40	40	37.3
Destination other ECOWAS North Africa		- 2	1	5	
Guinea		-	2	5	
Liberia		0	-	7	
Sierra Leone		2	7	-	
Trade Fair Participation	Yes	94.4%	83%	69%	
	No	0.6%	14%	17%	
	Indifferent	5.0%	3%	14%	
Av. capacity in use		48%	NA	50%	

Liberia, Sierra Leone and Guinea, one finds this beverage in small quantities marketed by households rather than in regular commercial houses in large quantities. Because of the lack of advanced technology in production and preservation, the beverage cannot be kept beyond a day's supply. The wine is produced from a felled palm tree, but it may also be produced from a standing tree. In either case, the tree must die.

5.6 The process involves boring a hole through the cabbage, using a sharp implement. The sap is then allowed to drip into a receiving unit, and later collected in a container through a tube. The tube often is a straight portion of a hollow vine. In the case of a standing tree, there is need to construct a scaffold, with the positions of the tubes and related implements changed regularly.

5.7 The technology eventually destroys the tree; it also does not ensure reliability of yield, nor acceptable hygenic conditions. Preservation of the sap, including quality control of alcoholic content, is crucial. There is no traditional technology developed yet to attack these problems.

5.8 Gin distilled from sugarcane juice is an alcoholic beverage common to the three countries. Perhaps because imported grinders and utensils, including bottles, are used, none of the countries now use wholly indigenous technology in producing cane juice. In the mixed technology, the cane is grinded on a simple machine or by an electric driven motor. Distillation then follows in large brass kettles, vaporized and condensed by a cooking system. The resulting liquid, 50% proof of alcoholic content, is collected in containers and distributed to smaller market outlets. Quality control, for consistency of alcoholic content, is a problem.

5.9 The technology of rice cultivation, storage, milling and distribution is virtually the same in the MRU. It is age-old, including shifting cultivation, manual throwing of seedings, etc. Yield is low, post harvest destruction high, etc. Traditional rice production technology in the MRU countries begins with manual land clearing and preparation, utilizing implements such as cutlasses, axes and hoes for slashing, felling, packing, burning, and scratching. After a few months of weeding, watching and trapping birds, harvesting of rice is done with yet smaller sized cutting knives; the rice is then stacked up in kitchen tops for air drying or smoking. Thus far, using imported technology, rice milling has been modernized and mechanized to a certain extent. Japanese rice milling technology is predominant in the Union.

Textile/Clothing Technology

5.10 Textile consumption per capita for the 11 million residents in the MRU is about ten yards per annum. This quantity seems to represent a rapid growth in demand, thus outstripping the capacity of traditional production methods. Consequently, imports

from non-Union countries, mainly Asia, have increased. Thus, the only indigenous technology that has survived in the textile industry is limited to manual production of special products, such as special prints, design, and make for occasional or ceremonial uses. In north-western Liberia, south-eastern Guinea and eastern Sierra Leone, there is spinning and weaving of special textile materials. A hand loom is used, and the cotton is hand-combed. The technology in the textile industry is age-old, labor intensive with low productivity.

Manufacturing Technology

5.11 Indigenous manufacturing technology found in the MRU sub-region was observed in the following areas:

a) metal working
b) goldsmithing
c) wood working
d) bamboo and rafia goods
e) ceramic and clay

5.12 The MRU countries have well developed traditional craftsmanship and artisanship in metal working activities, including the manufacturing of form implements, adornments and household utensils. Gold and silversmiths make jewelries that have well established markets, including markets outside the sub-region.

5.13 Wood carvings, masks, wooden doors, wood furnitures, canoes, wooden dishes and spoons are among the many products produced by using indigenous wood working technology. This technology has provided a well-structured line of profession for many persons in the Union because of the appeal of their products to the international market. However, reliability of supply is not assured. A collective Union production and marketing effort for wood carvings and handicrafts could enhance trade in goods produced by this indigenous technology.

5.14 In bamboo and rafia manufacturing manually, items such as handbags, waste disposal baskets, ceiling and panneling, lamp shades, curtains, storage containers, etc. are produced and sold. These products also have become accepted on international markets, but less costly Asian products are more competitive.

5.15 The ceramic and clay technology offers an opportunity for Union artisans. Traditional water coolers, mugs, pots and flower vases are produced by a process relying on hand moulding. On the whole, it appears that the technology is phasing out in the Union, due perhaps to its low productivity. Plastic products are the major competitors.

5.16 The technology that is applied to the building industry in the Union should receive some attention. Houses in the Union are built with sticks, dubbed with mud, and thatched.

The demand has always exceeded the supply. Growth in mass production technologies have not advanced as the pace of growth in demand.

5.17 Indigenous technology is uniform across member states, and imported technology reflects the history of the countries. In fact, the sources of imported technology appear to resemble the origins of imports. This is because the patterns of industrial development reflect an industrialization policy that facilitated creation of import substituting industries. In the following paragraphs, we discuss the sources of technologies imported into individual member countries.

Guinea

5.18 Whether or not intended, the principal effect of the Guinean Government's policy during the first twenty years of independence has been to make Guinea technologically less dependent and more self-reliant than her MRU counterparts. Guineans appear to be more creative in designing machines and spare parts of imported machines. In fact, marketable indigenous technologies available in the Union seem to have been developed by Guineans. Tailors of Monrovia and Freetown often are Guinean nationals. Small scale wood working industries, including carvings, masks and curios are often owned by Guineans residing in Freetown or Monrovia. Metal working artisans, goldsmiths and silversmiths found across the Union substantially include Guineans.

5.19 The Guinean experience in industrial development, however, is similar to that of the other MRU states; strong influence of the colonial past lingers. For example, SOBRAGUI (beverages), SIPECO (paints) are firms which were nationalized after independence. All the machinery and equipment found in these firms are French, using the MARSEILLE TYPE technology.

5.20 Apart from inherited technology, Guinea has an observable cultural affinity with the French even after independence outside the French community. This tendency is reflected in the dominance of French technology among firms in Guinea. SIGAG established 1962; Ets. K. Ziadan and Company, 1969; IGAT, nationalized in 1975; and ENTA (1964), use the Marsielle type technology. In all, six of the 18 companies surveyed utilize French technology embodied in the Marsielle machines.

5.21 Some of the international standards used in Guinean industry are as given in the table below. Note, however, that like other MRU member states, quality control such as a rigid program of inspection is not in place in Guinea.

Table 5.2

Standards Used in Guinean Export Oriented Industries

Standards	Products	Firms
American	Nimba Filter Cigarettes	ENTA
Italian Chinese	Tea	Usine De Macenta
Swiss	Juices	Salguidia
Afnor	Paint	Sipeco
Alcoa (American)	Aluminium Sheets	Soguifab

5.22 It appears that German technology also has made a strong inroad into Guinean industries. Although the same number of companies (6) utilizing French technology was found using German technology, those companies utilizing German technology were established later in the post-independence era. SOPROCIMEN (1982), USINE a paunaux de Seredou (1980), SOGUIFAB (1966) ENTA's rehabilitated machines (1982), are examples of the late entry of German technology into Guinean industries.

5.23 American technology has not made much impact in Guinea. Only two companies, the ALCOA standard aluminium products and the American Tobacco Standard Nimba Filter Cigarettes, were found using American technology. As noted, these two operations have large economies of scale, typical of American manufacturing outfits.

5.24 Technologies were imported from other countries, including China, Italy, Switzerland, Belgium, and Sweden. The technology of the mother of the Industrial Revolution, Britain, has been somewhat ignored in Guinea. We also noted no Russian technology in Guinean industry.

5.25 To sum up, an undefined colonial affinity and cultural identity with the French stimulated Guinean technology. German technology has made a significant inroad. Although there was contact with Russian and Chinese technologies, these latter sources appear to have left no significant impact. In any case, western technology dominates the industrial process of Guinea.

Sierra Leone

5.26 Our survey discovered that Sierra Leonean firms import all their machinery, equipment, spare parts, standards, production and management techniques. It was observed that out of nearly 60 firms contacted during the survey, only one, a local distillery, used indigenous technology in the formal sector. Twenty-two use British originated technology, 14 use German, 5 use American, 2 use French and 12 use other types.

5.27 The dominance of British technology in the manufacturing sector is traceable to the fact that Sierra Leone is a former British colony. Among other things, British legacy of technology has survived till now. British affiliated companies not only supply raw materials but also machines, spare parts and services required for maintenance of tastes and consumption patterns which pre-date independence. However, the advent of German technology became significant after independence while American technology has been characterized by large scale operations such as the cement factory producing 120,000 tons per annum. South-east Asian technology, dominated by Japanese is making a very significant impact. Because perhaps of language difficulties, French technology is lagging in Sierra Leone.

Liberia

5.28 Industrial development in Liberia has sought to replicate the industrialization experience of industrial countries. These countries are the earlier and major trading partners, and influenced taste and preferences of Liberians for industrial goods. Marketing efforts by them seek to perpetuate these tastes and preferences, a factor which may have influenced the choice and type of manufacturing processes. These have tended to substitute rather than displace industrial goods from the West by similar goods manufactured locally. Thus, imported technologies in the Liberian economy are dominated by British, Americans, Germans and other Europeans.

5.29 Forty-two manufacturing companies with export potentials show a biased technological development towards traditional exporters of industrial goods. Only 8% of these technologies came from Japan, Korea and other Asian countries. Britain has been a leading exporter of technology to Liberia (29%), followed by USA (22%), and Germany (20%). All other European countries, including Switzerland, Spain and Italy, supplied 24% of technology used in Liberia.

5.30 It must be noted, however, that industries with higher capacity output tend to use American technology. These include the cement industry (125,000 tons per year), soft drinks (Coca-cola with 2,000,000 cases per year), roofing sheets (300,000 feet/year), etc. British technology, on the other hand, is used in firms with lower economies of scale and are dominated by assemblage and forming types of activities. These include nails, cardboard boxes, furniture and detergents.

5.31 It may also be noted that industries using Asian technologies are newcomers whose products compete with those of the West. Theirs are perhaps of greater relevance than their Western counterparts, given that they have lower fuel consumption, are more labour intensive than British or American technologies.

Table 5.3

Sources of Manufacturing Technology in 42 Manufacturing Companies in Liberia, 1982

Technology Uses	Number of Companies	Percent of Total Companies	Types of Products
American Tec .	9	22	Cement, Soft drinks, roofing sheets, bleaches, steel calverts, flour, etc.
British	12	29	Nails, cardboard boxes, detergents, furniture, battery, cosmetics, insecticides
German	8	20	Candles, matches, broom, brushes, plywood, PVC pipes, footwear.
Other European countries	10	24	Liquor (Dutch), foam rubber (Danish), paint (Spanish), beer (Swiss), plastic wares, muffler (Italian).
Asians	3	8	Zinc sheets and buckets, footwear, nails
Total	42	100	

Source: Field Work

Table 5.4

Guinean Companies, Classification, Date of Establishment and Sources of Technology Used

Name of Company	SIC Code	Date Est.	Nationalized	Technology
Ets. Zaidan et Compaigne	01	1974		N.A.
ENTA		1964		French, German, Chinese, Swedish
Sobragui		1957	1970	Swiss, Italian
Usine Jus de Fruit Kankan		1967		Italian
Saignidia			1976	French, Italian
Usine The' Macenta		1968		Chinese
SIPECO	03	1953	1971	French
Fawaz Frerer Industrie		-		French, Italian
Savonnerie Fatala		1930		French
SICAG		1962		-
Ets. K. Zaidan & Compaigne		1969		-
IGAT			1975	French
Sorrociment	04	1982		German
Usine à Pameaux de Serredan	06	1980		German, Belgian
Ets. K. Zaidan et Compaigne	07	1970		-
Centre Pilote	08	1975		European
Soguifab		1966		American, German
Ets. Ali Mazeh & Cie	09	1947		French, English, German & American

5.32 A brief assessment of the appropriateness of the technologies used in the region is in order. The assessment recalls that for this report, an appropriate technology was the ability to utilize domestic raw materials, as opposed to imported inputs, in the production process. The implied view is that higher domestic value-added means greater allocative efficiency, and hence is likely to better promote development. Greater domestic resource usage would mean, ipso facto, equitable income indistribution patterns and better access to opportunity for all. As the economic cost of reliance on imported inputs has burdened the economies, appropriate technology, in this context, also must take into account market size.

5.33 An appropriate technology so defined, however, may be obsolete. This may happen when the technology is incapable of satisfying demand. In the Mano River Union, the survey showed that virtually all traditional technologies, exhibiting low productivity, cannot produce sufficient output for the market. In fact, the inavailability of modern production and storage equipment that is the hallmark of those technologies, prevents traditional food and beverage technology, for example, from satisfying domestic demand.

5.34 In context, the production of electricity using gas turbines in a country like Liberia with abundant water and wood resources but lacking oil, is inappropriate. So is the use of sunlight to produce energy (solar system); even though there is year-round sunshine in Liberia, the relatively large capital cost per unit output of energy, given capital scarcity, makes solar energy converters an inappropriate technology.

5.35 The manufacturing technologies surveyed in the Union, in this sense, are either obsolete or inappropriate. The technologies of external origin that are being used in the Union produce goods at a high average cost (i.e., capacity underutilization); the ex-plant price of the goods produced plus indirect taxes plus markups exceeds the price of imports plus duties plus markups. This economic inefficiency is undesirable. Accordingly most local products of manufacturing concerns enjoy uneconomic effective protection.

6. The Industrial and Technology Promotion Fair

6.1 Not unlike other developing states, members of the MRU, except perhaps Guinea, adopted a development strategy that is biased towards industrialization. This observation is confirmed by the decline in per capita agricultural output, during the last decade when over 75% of residents remain employed in agriculture. But the strategy adopted by Liberia and Sierra Leone has only created enclaves, lacking the potentials to create forward or backward linkages. A review of MRU states' industrial development programs shows the similarity of form, nature, ownership of industrial firms and the sectoral distribution of industrial activities. As of now, these countries' efforts at industrialization has made them create import substitution industries with undue dependence on imported inputs which, given worsening terms of trade, results in unutilized capacities, and more imports. Consequently, they find that their strategy has accelerated the deterioration of their balance of payments. The need for harmonization of policies and the consolidation of efforts towards the creation of viable industrial policies and strategies for optimal resource allocation among the three countries is obvious.

6.2 Towards this end, exchange of information at any level among any relevant groups may help achieve the desired industrial development goals and objectives. For this reason, a forum for the exhibition of industrial goods produced in member countries, together with the technology used to produce those goods and services would certainly be welcome. However, the efficacy of a forum that may facilitate the exchange of information must be weighed judiciously. Convening a gathering designed to achieve multiple purposes without adequate preparatory work might impede reasonable efforts towards effective regional cooperation. The crucial issues can then be seen in terms of the timing of an event, subsequent to prioritizing the desirable sequence of preparatory activities.

6.3 As already discussed above in the sections on trade and trade prospects in the Mano River Union, a proposal to stage a fair might better be assessed in the context of existing institutional arrangements. DC believes that the usefulness of a fair at this time is weighted primarily in favor of its educational values. For example, efforts at sales during the fair might more graphically demonstrate the need for quality control arrangements. Buyers would need to be persuaded that sizes, weights, etc., would be uniform and consistent, from order to order, and from item to item. Sellers would have to know that the currency of payment can be converted into that which is legal tender in the country of production. Buyers and sellers would have to assure

each other about foreign exchange availability, thereby confirming that spares and inputs would be timely ordered, for without these, orders might not be filled on time. Transport cost, and its reliable availability would also be investigated. Perhaps exhibitors would learn more about export financing schemes, and demand them.

6.4 This is not to recommend an activity that might be uneconomic and injurious to the long-run prospects for regional cooperation; to expend significant resources on an event which might result in frustration of monumental proportions would be ill-advised.

Benefits of the Fair

6.5 Several likely benefits of the fair are outlined in this section of the report. Evaluation of these benefits must recognize the administrative and institutional hurdles without whose removal the fair would not in fact yield the benefits identified.

6.6 Probably the most important benefit likely to accrue to residents and governments of the member countries is the focus such an event would have on existing institutional limitations. The fair should expose participants to the hampering effects of these limitations in a way studies cannot do; various shortcomings of the institutional arrangements and the policy framework within which those existing arrangements were devised would themselves be exhibited. As a result, participants and their governments would become aware of the nature, importance and extent of adequate regulatory functions in industry and trade, and the need to examine those. Provided conscious efforts and considerable resources had first been expended on removal of institutional and attitudinal bottlenecks, the fair might energize member governments into efforts that might focus on:

a) standards and metrication
b) quality control personnel and facilities including establishment and manning of laboratories
c) research and development - of processes; of techniques, etc.
d) development of relevant incentives regimes, including incentives to induce more domestic resource use
e) development of uniform commercial codes
f) food and drug inspection and standards
g) training of skilled personnel, technicians and middle level managers
h) insurance schemes, to reduce pre- and post-shipment risks; reduce non-convertibility or currency fluctuation exposures
i) export financing including customs arrangements, such as ready handling procedures for drawbacks or duties on imported raw materials used in production

j) organization of transport and communications facilities, towards insuring competitive cost and reliability

k) ready availability of quality data -- on consumption patterns; on income distribution; on household expenditures patterns, etc.

6.7 It is hoped that a fair would have or create a momentum of its own, so that the marginal impact of a successful breakthrough anywhere would become self-sustaining.

6.8 The second category of potential benefits is knowledge. "To know and to be known", is the response a Guinean manufacturer gave when asked to suggest the benefits he expected from the fair. The exchange of knowledge about the state of the production art, marketing possibilities of goods and services would likely create an incentive to put that knowledge to practical use. Assuming free factor mobility and an enlarged market, the fair would educate participants about prospects beyond national boundaries. Cattle ranchers in Kankan, Guinea should be induced to think about consumers in Buchanan, Liberia. A gari consumer in Port Loko, Sierra Leone should have a choice among the various products of MOLDACO in Monrovia.

6.9 A third possible category of benefits is increased trade, which could lead to higher levels of economic activities in member countries. The increase in utilized capacity could mean greater economic efficiency in resource use. The size of this benefit is difficult to measure, in view of the constraints to trade already identified; it is a function of the speed with which those constraints are removed. In other words, if bottlenecks are speedily removed, expanded trade follows immediately. Note, however, that for the purposes of identifying categories of potential benefits, we implicitly assume that the level and distribution of income in the countries would "be taken care of".

6.10 We might perhaps digress and comment on the reality of the assumption. The economic structures described earlier in this report seem not to support the self-correcting assumption. The level of economic activities in Mano River Union states is subject to cyclical fluctuations in industrialized countries, declining terms of trade, structural imbalances, administrative bottlenecks, etc. The dependence of these economies on trade in raw materials is overwhelming. Income is very low; income distribution is highly skewed, and therefore for trade expansion within the Union to occur, there must be significant improvement in both the level and distribution of income. Current national or regional policies seem not designed to solve any of these problems.

6.11 Be that as it may, we indicate below by how much trade could be expanded as a result of the fair. This effort at "guessing" the likely expansion in trade due to the fair is based on the prevalence of underutilized capacity in installed industrial capacity.

6.12 Thirty-three percent of the 18 Guinean companies interviewed now export within the Union. Given adequate information about market opportunities within the Union, the reduction of impediments, provision of spares of foreign exchange, they could export an additional 3.7 of their output within the Union. That is, an increase in utilized capacity may be translated into increased export. At the same time, only 7% of the industries interviewed in Liberia now export to countries within the Union. The opportunity to expand production could enable them to place 40% of their output in Union markets.

6.13 Included in the 36 Sierra Leonean companies were 12 which now export within the Union. Similar to Liberia, Sierra Leone could push an average 40% of its industrial output into the Union market. The potential increase in exports from existing industrial capacity is reckoned significant.

6.14 An increase in exports sales has demonstrable economic impacts. Firstly, the increase might strengthen demand for raw materials. Of course this would require reorientation of national or regional industrial policies. This might either worsen the balance of payments situation of member countries, if imported raw materials, or lead to increased domestic resource utilization. As the outflow of foreign exchange for external raw material is unattractive, backward linkage effects on domestic raw materials demand may manifest themselves in the development of a range of production activities spurring enterpreneurships, organization, and capital formation. The development of skills and technology compatible with this level of linkage cannot be overemphasized.

6.15 For example, consider a likely outcome of an increase in trade of cement by 40%. Guinean cement factory with a 250,000 tons capacity is underutilized while consumers in Sierra Leone and Liberia queue for days. An increase in Guinean exports would not only increase efficiency, but may stimulate investment in a limestone project in Guinea. Guinean clinker could substitute imported clinker in Sierra Leonean and Liberian plants, resulting also in foreign exchange savings.

5.16 Possibly, also likely to develop are the sub-region's bauxite and aluminium resources. All aluminium products manufacturing establishments such as roofing sheets (more than 1,500,000 sheets); windows (more than 76,000 pieces), and utensils (about 90,000 pieces) per annum import raw materials into the Union from non-Union sources. An aluminium smelting plant in Guinea could provide the raw materials, more jobs and foreign exchange savings.

5.17 The development of large scale marketing and distribution outlets could result from an increase in trade and production. As noted, consumption habits and patterns in member countries reflect marketing strategies of trading partners. In order to become competitive, the producers must seriously market their goods, including creation of large trading and forwarding firms; warehousing and wholesale distributorships; [illegible] retail chains and outlets and well managed sales promotion and advertising agencies could also result.

[illegible] industrial benefits is expanded employment opportunities. While organization of the fair itself should not create new jobs per se, the activities engendered should create new job opportunities. Rationalization of national policies and institutions would require more skilled personnel. In addition, new institutions may need be established, and existing ones expanded. One group of institutions that would figure prominently may be the financial services. Financial institutions geared towards trade and investment finance would have to be created in order to avoid administrative and other bottlenecks.

5.19 Another likely category of benefits the fair could confer is an attack on attitudes, institutions and their interrelationships. For example, the improved or newly created institutions may concern themselves with needs for compatible fiscal and monetary policies. There ought then also to result trade associations and professional codes of conduct. This would be necessary, for while economic integration broadens the level of legitimate economic activities, it is not free of perceived incentives for unethical and unwholesome business practices.

5.20 Finally, the fair could improve the sub-region's appeal for external assistance. The need to improve and enlarge repair and service facilities for industrial activities in the Union may become glaring as a result of exhibiting various industrial machines made idle by lack of spare parts and after sales services. The constraint of income level and distribution of subsistence production or traditional technology would be highlighted. This could stimulate donors such as UNIDO, United Nations Capital Development Fund, etc., who are already involved in projects

like Centre Pilote, in Guinea; National Workshop in Sierra Leone and Agricultural and Industrial Training Bureau in Liberia, to double their efforts.

6.21 While concluding that the concept of a fair should be given timely consideration, it ought to be emphasized that its timing is crucial. A fair should be held only after considerable resources have been expended on improving factors which create inevitable likelihood to fail and frustrate future regional effrots at cooperation.

6.22 Finally, the fair would have failed if it does not justify a continual activity; it ought to generate public interest required to hold it periodically. The interest at the political level must be sufficiently strong to induce the desire for industrial projects to which member countries may be committed, regardless of political belief or ideology. It must also affect ordinary citizens, businessmen, and industrialists to the extent that political boundaries among member states become meaningless.

6.23 Concern for product quality might be within the comparative context of goods produced by subsistence methods; the likely inavailability of most modern goods to rural residents -- primarily because of low disposable income -- must be factored into quality assessment considerations, while remaining cognizant of the lure of increased profits from exploitation of institutional limitations, such as exist with respect to food and drugs inspection. The relevance of technology and of production methods must also be judged in a broader context: if imported technology is rejected, can local resources invent one that can provide needed goods? Would it be economic to allocate scarce resources to invention and/or adaptation, given the abysmal low level training and poverty conditions?

6.24 For the fair to have the desired impact, participants must be limited to those likely to expand knowledge as to who is doing what, where, and what is available from whom. Participants must be those whose firms or ideas have created, or can create within a reasonable period with minimal investment, exportable surplus.

a) The participant is an industrial establishment producing goods or services in a member country of the Mano River Union, and his firm produces quality goods but has an underutilized capacity.

b) The participant has some export experience in one or more African countries and/or should have the potential to produce good quality marketable product for export to at least one member state of the Union.

c) Participant can organize and display products visibly and ostensibly.

d) The ability to follow up sales after the fair, either by increasing production in the very short-run or in the medium-run.

Participants in the Fair

6.25 Table 6.1 shows the distribution of 150 entities suggested to participate in a fair. Sixteen percent are in the food and beverage industry, 17% in chemicals. These industries provide the basis for increased domestic raw material usage in the member countries, provided agriculture receives the appropriate emphasis it deserves.

6.26 The 150 participants proposed should be distributed into the following classes:

a) citizens and residents of Union member countries displaying modern sector goods and technologies; b) citizens and residents of Union member countries exhibiting traditional or indigenous goods and technologies, and c) exhibitors from outside the Union. Eighty-two of the 150 proposed participants are modern industrial establishments using modern technology for producing goods and services. There is then proposed to participate in the fair, twenty indigenous goods/technologies, seven of which are in food and beverages production; three in chemical products, five in wood furnitures, and five in textile products manufacturing.

6.27 Non-Union participants should be carefully chosen, and might be confined to specified specialities, such as:

a) technology or machines for the conversion of wood to energy, e.g., wood gasifier.

b) technology or machines for the conversion of clay or mud to building materials such as bricks, roofing, pipes, cuplings, etc.

c) machines or technology for the production of palm oil or similar products, and for palm oil conversion into energy, and

d) technology and machines for local food processing, etc.

6.28 All non-Union participants should finance the entire cost of participation in the fair. Such participation should be limited to display of industrial processes, machines, equipment or technology. No consumer goods should be allowed for exhibition at the fair. The technology or machines exhibited at the fair must be applicable and appropriate to a developing economy, designed to convert local

raw materials into finished goods at economies of scale consistent with demand in the Mano River Union. Such participants may exhibit technology with a capacity in excess of domestic demand in any of the member countries. It must be appropriate marketable technology. Non-Union participants should be firms or industrialists from countries/organizations which provide financial or technical assistance to the fair. Institutions interested in financing the fair may also recommend some non-Union participants.

5.2 The repair and service workshop industry forms the smallest component, about 2% of the total number of companies surveyed. However, this category is essential to any reliable manufacturing process, as both the machinery must be kept in running order and the products receive after sales service.

Table 6.1

Distribution of Fair Participants, Group and Country

SIC Code	Classification	Total	Guinean	Liberian	S.Leonean
01-	Food, Beverage and Tobacco	24 (7)	9	6	9
02-	Repair, Service and Training Workshops	5	1	2	2
03-	Chemical Products & Manufacturing Ind.	26 (3)	6	11	9
04-	Building Materials	11	2	6	3
05-	Plastic Rubber, Leather and Allied Products	10	1	4	5
06-	Paper & Paper Products, Printing and Publishing	4	1	3	-
07-	Wood and Furniture Manufacturing	10 (5)	3	5	2
08-	Light Engineering and Metal Ind.	6	-	2	4
09-	Textile and related Products	7 (5)	2	1	4
10-	Miscellaneous Industries	7	1	3	3
11-	External Exhibitors	25	-	-	-
	Total Participants	127	26	43	40
	Adjustments	23			
	Grand Total	150			

( ) indicates the total number of indigenous technology identified in the group.

Source: Appendix

Timing of the Fair

6.30 It is proposed that an Industrial and Technology Promotion Fair be held every two years, on a rotating basis, in a member state of the Union. The two-year interval allows participants time to think about their experiences and to prepare for the next fair. At the same time, it is a sufficiently short interval that allows such experiences not to be forgotten before the next fair is held. The two-year period allows the momentum of the fair to be continued and sustained. The host government official in charge of foreign trade would be chairman of the national trade fair committee.

6.31 In view of the problems identified earlier in this report, the date for the first fair might usefully be decided only after efforts at removal of institutional and attitudinal hurdles have become demonstrable. The process might usefully begin with implementation of the recommendations in this report regarding quality control and standards, for example. Following such efforts, and after satisfactory establishment of the proper political and diplomatic atmosphere, including a machinery for effective coordination of national industrial policies tuned to replacement of competitive with complementary economic structures, the organization of the first fair might start. The steps might include:

	Event
1.	Identification of Donors and submission of Project for appraisal and financing
2.	Organization of Fair Secretariat, Fair Council and National Fair Committees
3.	Commissioning of consultants to work with Fair Secretariat
4.	Fair Committee in member states formulate plans and programs, involving the following, with assistance of consultants
	i Further elaboration of criteria for selecting participants and short-listing them
	ii Finalization of dates and time-table of the Fair events
	iii Finalization of cost of Fair participants from each member state, and decision on funding of individual items
5.	Fair Secretariat prepares fair documents, based on National Fair Committee activities and other inputs
6.	Fair Secretariat submits fair documents to Fair Council for consideration; approval and finalization of plans of action of the first fair by the Fair Council.
7.	Implementation of First Bi-annual Industrial and Technolog Promotion Fair.

a) Commissioning of agents and sub-contractors working for the fair

b) Preparation of participants for fair

c) Final consultation and confirmation meeting for launching fair

d) Fair

5. Assessment, meetings and preliminary preparation for next Bi-annual Fair.

Venue of the Fair

6.32 Freetown, Sierra Leone is proposed as the venue of the First Bi-annual Industrial and Technology Promotion Fair. We propose Freetown for the following reasons:

a) The Mano River Union Secretariat under whose auspices the Fair has been arranged is based in Freetown, Sierra Leone.

b) The sub-regional office of the United Nations Industrial Organization (UNIDO), likely a major sponsor of the fair, is based in Freetown, Sierra Leone.

c) Freetown lies midway between the two coastal capital cities of the other two member states, thus offering coastal transport advantages to either member in the mobilization for the fair.

d) Of three potential institutional hosts identified, the National Workshop at Freetown offers the best setting over the other two establishments, Centre Pilote in Conakry and AITB in Monrovia.

6.33 Our survey of opinion of potential participants shows these results:

a) Six of 18 Guinean firms would like to hold the fair in Guinea; five favour Liberia, while one Guinean firm would like to have the fair in Sierra Leone. Six firms were indifferent.

b) Twenty-three of the 42 Liberian firms interviewed would like the fair at home; nine prefer Sierra Leone, while eight prefer Guinea as the venue. Two were indifferent.

c) Out of 36 Sierra Leonean firms, 15 want to stay at home, four prefer Liberia and three want to be in Guinea; 14 were indifferent.

d) Because the U.S. dollar is legal tender in Liberia, great number of firms preferred to hold the fair in Liberia than either in Guinea or Sierra Leone.

Organization of the Fair

6.34 The Industrial and Technology Promotion Fair, to be meaningful, should be a continuing activity of the Mano River Union Secretariat. In other words, the form and character of its organization is important to its success. We propose three organizational levels:

i. Industrial and Technology Promotion Fair Council (ITTFC). Four members Fair Council

ii. Industrial and Technology Promotion Fair (ITTFS). Five members Fair Secretariat

iii. National Industrial and Technology Promotion Fair Committees (NITTFC). Fair Committees

6.35 The ITTFC shall be a permanent policy-making body, comprising the Ministers of Trade and Industry of the member states, and the Secretary-General. The ITTFS shall comprise the directors of industry or foreign trade of the member countries of the Union, and the Director of the Division of Economic Affairs of the MRU Secretariat. The Director shall serve as Secretary to the Fair Council. In addition to the Secretariat and the Council, there shall be established in each member state, a national committee to coordinate and formulate local policies and activities of the fair. Each national committee might enage a UNIDO consultant, at least during the early years, or until a member country has hosted the fair once. The membership of each national committee shall include the official in charge of industrial development and foreign trade in the member state, the executive officer of the chamber of commerce, and a representative of the local Mano River Union Secretariat in the member state.

6.36 These national committees shall meet periodically (bi-monthly) to discuss and formulate fair policies, including goods and technologies to be identified for exhibition and the criteria therefor. The local Union Secretariat shall submit semi-annual reports to the Fair Secretariat for coordination with other member states' policies, and for adoption by the Fair Council.

Estimated Cost of the Fair

6.38 The first fair is projected to cost $336,000, depending on its timing. The estimate was arrived at on the basis of the following assumptions:

a) That the first fair will be held on suitable grounds, and therefore not requiring much capital investment.

b) That consultants and contractors would be engaged to carry out many of the activities, since those activities would be seasonal and recur only every two years. Keeping a pool of civil servants would make those cost recurrent.

c) That each fair participant would not exhibit more than one ton of materials.

d) That infrastructure especially ground space, is allocated at 50 square meters per participant.

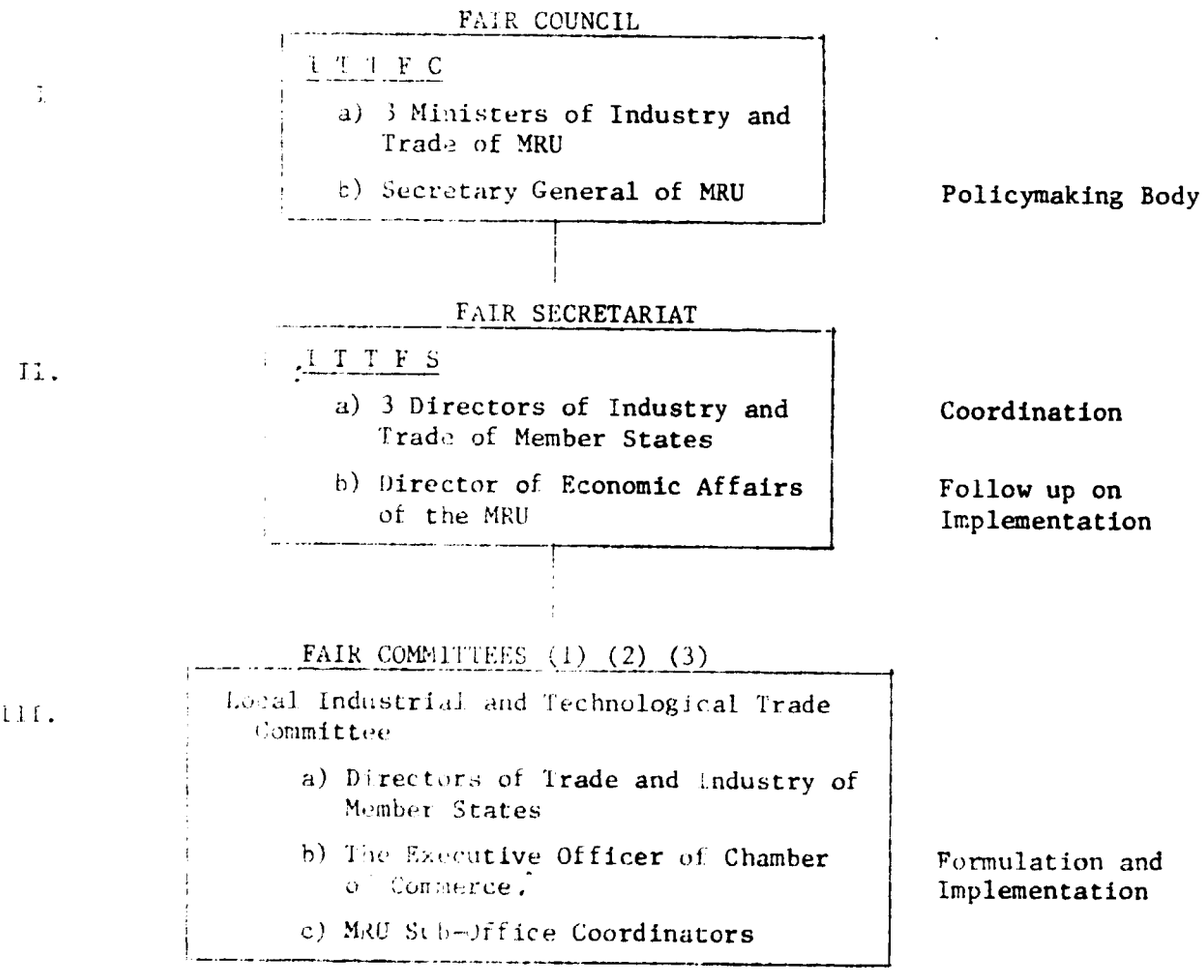
e) That the sponsors would underwrite the cost of each Union participant: these costs include fares and freight cost of articles for exhibition.

6.39 If the sponsors assume responsibilities for subsistence of participants, the cost would rise to $500,000. It might be useful to review the circumstances which might determine which costs the sponsors bear. In such a review, particular attention might be paid to how prospective participants might react if attendance at the first fair should have any cost implications for such participants.

Chart VI-1

.37 Below is the proposed organizational chart reflecting the structure of the organization discussed above.

ORGANIZATIONAL CHART MRU
INDUSTRIAL AND TECHNOLOGY
PROMOTION FAIR



Unit Cost Estimate as of March 1, 1983 (US$)

	Alternatives I	Alternatives II
1. Provision for infrastructures, grounds preparation, etc.		
- Preparation of grounds for the Fair	$ 25,000	$ 25,000
- Utilities - telephone, telex and water	5,000	5,000
2. Promotion - Magazines, billboards, jingles, publications in journals, periodicals, and major newspapers.	10,000	10,000
- Public relations consultants	50,000	50,000
Sub-totals	$90,000	$90,000
3. Provision for sub-contractors for various services required		
a) Transfer of participants to and from airport @ 50 Le/participant (200 in all including fair officials)	7,200	7,200
b) Transfer of participants from hotels to fair and back each day, @ 400 Le 400 Le/week x 2 weeks ÷ 1.4 Le/$1	600	600
c) Freight cost of 30 participants' goods and articles for exhibition from Conakry to Freetown (2.5 Sylis per kilometer regardless of truck size or capacity using 4 (8 tons) trucks for 323 kilometers = 807 Sylis/truck.	200	200
d) Freight cost of 50 participants' goods and articles for exhibition from Monrovia to Freetown @ $.20 per ton/round trip mile, 7 (8 ton) trucks are required @ $1,120 each	8,000	8,000
e) Provision for contingency	10,000	10,000
Sub-totals	26,000	26,000
4. Per diem for each participant for maximum 14 days @ $60 per day for each of 80 participants.	67,200	-
Contingency 10% of per diem	6,700	-
Sub-total	73,900	-
5. Consultancy		
a) Services 72 man-months, @ average $6,000/M/M*	216,000	216,000
b) Travel	6,800	4,000
Sub-total	222,800	220,000
Grant Total	$411,800	$336,000

*includes provision for counterpart training and one expatriate Trade Fair expert for 12 M/M @ $9,000.

APPENDIX I - Assessment for an Industrial and Technology Promotion Fair, (MRU) February & Ma:

A. G U I N E A

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	R Pa ci
Entreprise Nationale de Tobacs et Allumettes (ENTA)	Cigarettes	Packets of 20		13	F,G & C	Americans	
	Matches	Boxes	20000000	33	Swedish	Swedish	
Societe de Brasserie de Guinea (SOBRAGUI)	Beer	Hectoliter	60000)	30	Swiss		
	Soft drinks	"	20000)		Italian	SIE	
	Malt liquor	"	NA				
	Ice	Kilo	NA				
Usine de The de Macenta	Black Tea	Tons	150)	NA	Chinese	Chinese	
	Green Tea	Tons	)				
Usine de Jus de Fruits de Kankan(UJFK)	Fruit Juices	Tons	13400	NA	Italian	Own	
Societe Arabe-Lybie Guineenne d'Industrie de Ananas (SALBUIDIA)	Pineapple Slices and Juices	Tons	30000		Italian	Swiss	
Ets Zaidan et Compaigne	Juices	Cartons	2000000	20	NA	SEC/SOCAN	
Fawaz Frefer Ind.	Laundry soap		5300	66	French	Marsielle	
	Powder soap	Tons	1800	66	"	"	
	Toilet soap		720	83	"	"	
Souannerie Fa Tala	Laundry soap	Tons	2000	0	French	French	
	Nails						

APPENDIX I - Assessment for an Industrial and Technology Promotion Fair, (MRU) February & March, 1983

A. GUINEA

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
Entreprise Nationale de Tobacs et Allumettes (ENTA)	Cigarettes	Packets of 20		13	F,G & C	Americans	Yes	I	66	G,B,
	Matches	Boxes	20000000	33	Swedish	Swedish			66	-c
Societe de Brasserie de Guinea (SOBRAGUI)	Beer	Hectoliter	60000)	30	Swiss					
	Soft drinks	"	20000)		Italian	SIE	Yes	L	25	-
	Malt liquor	"	NA							
	Ice	Kilo	NA							
Usine de The de Macenta	Black Tea	Tons	150)	NA	Chinese	Chinese	Yes	L	20	Moroc
	Green Tea	Tons	)							
Usine de Jus de Fruits de Kankan(UJFK)	Fruit Juices	Tons	13400	NA	Italian	Own	Yes	S & L	40	Europ
Societe Arabe-Lybie Guineenne d'Industrie de Ananas (SALBUIDIA)	Pineapple Slices and Juices	Tons	30000		Italian	Swiss	Yes	L & S	NA	Liby
Ets Zaidan et Compaigne	Juices	Cartons	2000000	20	NA	SEC/SOCAN	Yes	G	25	NA
Fawaz Frefer Ind.	Laundry soap		5300	66	French	Marsielle	Yes	G	50	NA
	Powder soap	Tons	1800	66	"	"			50	NA
	Toilet soap		720	83	"	"			50	NA
Souannerie Fa Tala	Laundry soap	Tons	2000	0	French	French	Yes	L	0	-
	Nails									

SECTION 1

X I - Assessment for an Industrial and Technology Promotion Fair, (MRU) February & March, 1983

A

	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
tionale de mettes	Cigarettes	Packets of 20		13	F,G & C	Americans	Yes	I	66	G,B,G,A	-Filter and locally grown
	Matches	Boxes	20000000	33	Swedish	Swedish			66	-o-	Gmelina wood is used.
sserie de UI)	Beer	Hectoliter	60000)	30	Swiss						
	Soft drinks	"	20000)		Italian	SIE	Yes	L	25	-	-No export experience. Shortage of bottles and raw materials.
	Malt liquor	"	NA								
	Ice	Kilo	NA								
Macenta	Black Tea	Tons	150)	NA	Chinese	Chinese	Yes	L	20	Morocco	- Raw material of 100% local origin.
	Green Tea	Tons	)								
an(UJFK)	Fruit Juices	Tons	13400	NA	Italian	Own	Yes	S & L	40	Europe	- Banana, mango, orange & pine apple.
ybie dustrie BUIDIA)	Pineapple Slices and Juices	Tons	30000		Italian	Swiss	Yes	L & S	NA	Libya	-Joint venture with captive market.
ompaigne	Juices	Cartons	2000000	20	NA	SEC/SOCAN	Yes	G	25	NA	Private Co. producing two types of juices. Lack packing materials.
d.	Laundry soap		5300	66	French	Marsielle	Yes	G	50	NA	-Lacks raw materials.
	Powder soap	Tons	1800	66	"	"			50	NA	
	Toilet soap		720	83	"	"			50	NA	
ala	Laundry soap	Tons	2000	0	French	French	Yes	L	0	-	-Not producing due to lack of raw materials.
	Nails										

SECTION 2

GUINEA (cont'd)

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
SIGAG	Laundry soap	Tons	5000	9	French	Marsielle	Yes	I	35	NA
Industrie Guineenne de Articles de Toilets (IGAT)	Toothpaste	Tubes	2000000	10	French	French	Yes	G	50	-
	Perfumes	Liters	2000000	60	French	French			"	
Ets. K. Zaidan & Co.	Suitcases	Pieces	107000	56	French	Lux/huber	Yes	G	25	-
Societe Ind. de Peinture de Conakry (SIPECO)	Paints	Kilograms	2500000	48	French	Afnor	Yes	L	50	G.Bissau
Societe de Production de Ciment (SOPROCEMENT)	Cement	50 Kg.gabs	2500000	100	Germans	Marsielle	Yes	G	-	-
Usine a Panneaux de Seredou (UPS)	Particle Boards	Tons	3000	25	German Belgium	Verkor (Belgium)	Yes	L	40	
Ets. K. Zaidan et Compaigne	Plasticwares	Tons	600	50	NA	Hoscht	Yes	G	30	-
Societe Guineenne de Fabrication (SOFUIFAB)	Alum. Sheet	Tons	7000	75	American	Alcoa	Yes	S	2	G.Bissau
	Alum. Utensils	"								Senegal
	Alum. Windows	"								Mali
	Alum.Glass doors	"								
Centre Pilote	Spare Parts		NA				Yes	G	-	
	Maintenance	NA	NA							
	Training	Persons	30	50	Various	NA				-

SECTION 1

Ets Ali Mazeh et	Textiles	Meters	300000	50	Various	Marsielle	Yes	L	NA	-

Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair Participation	Site	%Exportable	Destination	Comments
Laundry soap	Tons	5000	9	French	Marsielle	Yes	I	35	NA	-Lack raw materials
Toothpaste	Tubes	2000000	10	French	French	Yes	G	50	-	-Slowed down production due to lack of raw materials.
Perfumes	Liters	2000000	60	French	French			"		
Suitcases	Pieces	107000	56	French	Lux/huber	Yes	G	25	-	-Lack of raw materials.
Paints	Kilograms	2500000	48	French	Afnor	Yes	L	50	G.Bissau	-14 different brands, low production due to lack of raw materials
Cement	50 Kg.gabs	2500000	100	Germans	Marsielle	Yes	G	-	-	-Production started March, 1983 with imported clinker
Particle Boards	Tons	3000	25	German Belgium	Verkor (Belgium)	Yes	L	40		-No export experience.
Plasticwares	Tons	600	50	NA	Hoscht	Yes	G	30	-	" " "
Alum. Sheet	Tons	7000	75	American	Alcoa	Yes	S	2	G.Bissau	-Most export experience and high quality products.
Alum. Utensils	"								Senegal	
Alum. Windows	"								Mali	
Alum.Glass doors	"									
Spare Parts		NA				Yes	G	-		-Technical and financial assistance from UNIDO to provide long term maintenance spares for local industries
Maintenance	NA	NA								
Training	Persons	30	50	Various	NA				-	
Textiles	Meters	300000	50	Various	Marsielle	Yes	L	NA	-	-No export

SECTION 2

B. SIERRA LEONE

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
Sierra Leone Produce Marketing Board Rice Mill	Milled Rice	Tons	9000	0	British	British	No	NA	NA	NA
Salt Mfg. Co.(S.L.) Ltd.	Salt	32lb.bags	1500000	60	NA	NA	No	NA	NA	NA
Pig and Poultry Plant	Pigs processed Chickens	Each Each	13000 260000	05 30	American	American	No	NA	NA	NA
James International	Sassman Gin Star Beer	Gallons Cartons	20000 200000	30	Dutch	Dutch	Yes	L	50–60	Liberia
Sierra Leone Brewery	Heineken Beer		1500000	66	Dutch	Dutch	No	-	-	-
National Confectionary Ltd.	Biscuits Confectionaries	Tons Tons	900 1200	75	British German Italian,etc.	British German	Yes	L	NA	Liberia
Aureol Tobacco	Cigarettes Cut Tobacco	Sticks Kilo-grams	160000000	45	European	Br.Tobacco American	Yes	L	NA	NA
Wellington Distilleries Ltd.	Rum) Brandy) Whisky) Afrikoko) Liquor)	Cases	60000	NA	English					
					German	G.L.	No	-	-	-
Venus Perfumery & Cosmetic	Perfumes Powder	NA	NA	NA	British	British	Yes	S		
S.L. Oxygen Factory	Oxygen Acetylene Carbondioxide	Cubic Feet Cubic Feet Pounds	500000 2300000 386000	50) 50) 25)	Italian	RIVIRIA SPA	Yes	S	25 50	Guinea Liber Banju

	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
uce tice	Milled Rice	Tons	9000	0	British	British	No	NA	NA	NA	Not in production due to lack of spares.
..)	Salt	32lb.bags	1500000	60	NA	NA	No	NA	NA	NA	Production inadequate for domestic requirement
	Pigs processed	Each	13000	05	American	American	No	NA	NA	NA	-
	Chickens	Each	260000	30							No export experience
al	Sassman Gin	Gallons	20000	30	Dutch	Dutch	Yes	L	50-60	Liberia	Very good export experience within the Union.
	Star Beer	Cartons	200000								
ery	Heineken Beer		1500000	66	Dutch	Dutch	No	-	-	-	Export not allowed by Franchise.
	Biscuits	Tons	900	75	British	British	Yes	L	NA	Liberia	Currently exporting through chain supermarkets in Liberia. Monrovia Tobacco is a sister company in Liberia.
	Confectionaries	Tons	1200		German Italian,etc.	German					
	Cigarettes	Sticks	160000000	45	European	Br.Tobacco	Yes	L	NA	NA	-
	Cut Tobacco	Kilograms				American					
i-	Rum) Brandy) Whisky) Afrikoko) Liquor)	Cases	60000	NA	English						
					German	G.L.	No	-	-	-	Satisfied with domestic market.
	Perfumes Powder	NA	NA	NA	British	British	[illegible]				
ry	Oxygen	Cubic Feet	500000	50)					25	Guinea	Very organized and experienced in exports.
	Acetylene	Cubic Feet	2300000	50)	Italian	RIVIRIA SPA	Yes	S	50	Liberia Banjul	
	Carbondioxide	Pounds	386000	25)							

SECTION 2

SIERRA LEONE (cont'd)

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
Sierra Leone Cosmetics	Perfumes	Liters	NA	NA	British	British	Yes	S	NA	
	Cosmetics	Liters	NA	NA	British	British				
Sterling Products International	Panadal	Tablets	80000000	90	British	B.P.	Yes	S	NA	Guinea
	Cafenol	Tablets			German	V.S.P.				
	Padrax	Sachets								
	Aralen	Tablets								
	Children's Cafenol	Tablets								
	Andrews Liver Salts	Sachets								
Whitex Industries, Ltd.	Plastics	1/4-5 liters	360000	100	German	German	Yes	G or L	NA	NA
	Synthetic Starch	NA	"	"						
	Candles	NA	"	"						
	Decreasing Compound	NA	"	"						
	Bleaching Detergents	NA	"	"						
Sierra Paint Ltd.	Various types Paint	Liters	1500000	40	British German	British	Yes	L	NA	NA
CHENRAI Chemicals	Laundry Soap									
	Toilet Soap	Tons	1500	40	British	British	Yes	L	10	Liberia
	Soap Powder									
A. J. Seward	Cosmetics	Gross	400000	55	British	Imperial	Yes	S	33	NA
Saroulla Metal Works	Steel Doors									
	" Windows	Tons	120	NA	German	German	Yes	S	NA	NA
Sierra Cement Mfg. Co.	Cement	Tons	120000	20	French	French	Yes	L	30	NA
ABU	Roads	Miles	NA	NA	British	American	No	NA	-	
	Bridges									
	Houses									

Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
Perfumes	Liters	NA	NA	British	British	Yes	S	NA		
Cosmetics	Liters	NA	NA	British	British					
Panadal Cafenol Padrax Aralen Children's Cafenol Andrews Liver Salts	Tablets Tablets Sachets Tablets Tablets Sachets	80000000	90	British German	B.P. V.S.P.	Yes	S	NA	Guinea	A competitor being established in Guinea
Plastics	1/4-5 liters	360000	100	German	German	Yes	G or L	NA	NA	
Synthetic Starch	NA	"	"							
Candles	NA	"	"							
Decreasing Compound	NA	"	"							
Bleaching Detergents	NA	"	"							
Various types Paint	Liters	1500000	40	British German	British	Yes	L	NA	NA	
Laundry Soap Toilet Soap Soap Powder	Tons	1500	40	British	British	Yes	L	10	Liberia	Well developed export experience.
Cosmetics	Gross	400000	55	British	Imperial	Yes	S	33	NA	
Steel Doors " Windows	Tons	120	NA	German	German	Yes	S	NA	NA	
Cement	Tons	120000	20	French	French	Yes	L	30	NA	Quality compares with PortlandCement.
Roads Bridges Houses	Miles	NA	NA	British	American	No	NA	-		

SECTION 2

SIERRA LEONE (cont'd)

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
Sierra Leone Nail Manufacturing Co.	All types of nails	112-lb. Cases	9000	45	German Italian	B.W.G.	Yes	S	NA	NA
Metalware Mfg. Co.	Buckets	Dozens	950	85	European	B.W.G.	Yes	S	NA	NA
	Trunks	Sets	600	85	European	"	Yes	S	NA	NA
John Michael Motors	Water Tanks	Gallons	20000)	NA	British	B.S.U.	Yes	S	NA	NA
	Steel Trucks	Tons	50000)							
	Tippers	Tons	30000)							
	Buses	Number	4)							
	Steel Windows Doors & Frames	Number	300)							
National Workshop	Training	NA	NA	NA	British		Yes	S	NA	NA
Osmon Thomas & Sons	Matress	Number	24000	60	British		Yes	S	30	Guinea Mali
Sierra Explosives Ltd.	Shot Gun Cartrages	Coss(500 sticks)	150000	100	Belgium		Yes	I	NA	NA
Sierra Bricks & Ceremics	Clay bricks	Number	75000000		British	British	I	NA	NA	NA

SECTION 1

Modern Metal Furnitures	Office Furn. Edu.Furnitures	Units	45000	33	British	British	Yes	S	NA	NA
Sierra Leone Suitcase Works Ltd.	Suitcases Hand Bags Travelling Bags	Number	NA	25	German English	NA	Yes	L	50	Banju
G. Skankerdas & Sons	Plastics	Kilo	NA	NA	German Italian French	NA	Yes	S	NA	NA

nt'd)

Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
All types of nails	112-lb. Cases	9000	45	German Italian	B.W.G.	Yes	S	NA	NA	
Buckets	Dozens	950	85	European	B.W.G.	Yes	S	NA	NA	
Trunks	Sets	600	85	European	"	Yes	S	NA	NA	
Water Tanks	Gallons	20000)	NA	British	B.S.U.	Yes	S	NA	NA	
Steel Trucks	Tons	50000)								
Tippers	Tons	30000)								
Buses	Number	4)								
Steel Windows Doors & Frames	Number	300)								
Training	NA	NA	NA	British		Yes	S	NA	NA	Applicants for UNIDO Assistance for expansion
Matress	Number	24000	60	British		Yes	S	30	Guinea Mali	Export experience.
Shot Gun Cartrages	Coss(500 sticks)	150000	100	Belgium		Yes	I	NA	NA	
Clay bricks	Number	75000000		British	British	I	NA	NA	NA	Can only cater to domestic market. Technology can be exported.
Office Furn. Edu.Furnitures	Units	45000	33	British	British	Yes	S	NA	NA	
Suitcases Hand Bags Travelling Bags	Number	NA	25	German English	NA	Yes	L	50	Banjul	
Plastics	Kilo	NA	NA	German Italian French	NA	Yes	S	NA	NA	

SECTION 2

SIERRA LEONE (cont'd)

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Participation	Site	%Exportable	Fair Destination
Afro Plast Mfg. Co.	Plastic Footwears	Pairs	150000	33	British	British	Yes	I	500	Liberia Guinea
Jacksons Tech. Enterprise	Retread Tyres	Number	15000	16	German	NA	Yes	I	NA	NA
Baydoun & Abess Plastic Industry	Plastic Footwear	Pairs	NA	NA	Swedish	Swedish	Yes	L	NA	NA
	EVA rubber sheets									
Foam Mfg. Co.	Sheets Pillows Mattresses Cushions	Metric Tons	NA	30	British German	Imperial	Yes	S	80	NA
Lupelain Bros. Ltd.	Trailers	Tons	40	NA)	German		Yes	L	20	Guinea
	Trucks		22.	)	Belgium					
	Tanks		15	)	British					
	Grain Silos		3	)	French					
	Safes		12	)						
	Cash Boxes		33	)						
	Cupboards		12	)						
	Crates		20	)						
	Security									

SECTION 1

Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Participation	Site	%Exportable	Fair Destination	Comments
Plastic Footwears	Pairs	150000	33	British	British	Yes	I	500	Liberia Guinea	
Retread Tyres	Number	15000	16	German	NA	Yes	I	NA	NA	
Plastic Footwear	Pairs	NA	NA	Swedish	Swedish	Yes	L	NA	NA	
EVA rubber sheets										
Sheets Pillows Mattresses Cushions	Metric Tons	NA	30	British German	Imperial	Yes	S	80	NA	
Trailers	Tons	40	NA)	German		Yes	L	20	Guinea	Improved road network may enhance the opportunity of this project.
Trucks		22	)	Belgium						
Tanks		15	)	British						
Grain Silos		3	)	French						
Safes		12	)							
Cash Boxes		33	)							
Cupboards		12	)							
Crates		20	)							
Security										

SECTION 2

C. LIBERIA

Company	Products	Unit of Measurement	Annual Capacity* Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination
Liberia Industries, Inc United States Trading Co.	Confectioneries Soft Drinks	Bottles	2000000	100	German American	German Coca-cola	Yes No	L L	NA NA	NA NA
I.C.C.	Gin Schnapps	Cartons of 48 Btls.	30000	60	Dutch	Dutch	Yes	L	20	
Intra	Rum) Gin) Port Wine)	Cartons)	13000	100	NA	NA	No	-	No	
Monrovia Brewery	Beer Stout	Liters "	10000000	80	Swiss English	Swiss Imperial	No	-	No	
Mitchell and Sons	Gin	NA	NA	NA	NA	NA	No	-	No	
Monrovia Tobacco Co.	Cigarettes Shag Tobacco	Million Sticks	25000000	50	British American	American	No	-	No	
Liberia Muffler Co.	Mufflers	Pieces	2000	90	Italian	NA	Yes	L	30	NA
Salhami Muffler	Mufflers	Pieces	500	50	NA	NA	Yes	L	NA	NA
Parker Industries	Paint	US Gallons	100000	85	American German	A.S.A.	Yes	L	50	Gui

SECTION 1

Petro Chemical Industries	Insecticides	Cartons(24 Tins)	50000	30	British	British	Yes	L	20	Lib.
MANCO	Bleach	Gallons					Yes	L	NA	NA
	Insecticides	Dozens								
	Candles	Cartons(30x8)								
Skwakram	Candles	Cartons (30x8)								
Limaco	Matches	Cartons (144 bxs.)					Yes	G		
ERA	Paint	Gallons	20000 100000	60	German Spanish	Liberian EEC	Yes Yes	L L	20 50	NA NA
Liberia Battery Mfg. Co.	Automotive Battery	Pieces	20000	40	British	British	Yes	L	30	

Products	Unit of Measurement	Annual Capacity* Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
Confectioneries										
Soft Drinks	Bottles	2000000	100	German American	German Coca-cola	Yes No	L L	NA NA	NA NA	Franchise cannot export to neighbors.
Gin Schnapps	Cartons of 48 Btls.	30000	60	Dutch	Dutch	Yes	L	20		
Rum) Gin) Port Wine)	Cartons)	13000	100	NA	NA	No	-	No		Capacity limited to local market.
Beer Stout	Liters "	10000000	80	Swiss English	Swiss Imperial	No	-	No		Cannot compete-doing well in local market.
Gin	NA	NA	NA	NA	NA	No	-	No		Finding it difficulties to sustain share of market.
Cigarettes	Million Sticks	25000000	50	British	American	No	-	No		Local demand not satisfied.
Shag Tobacco				American						
Mufflers	Pieces	2000	90	Italian	NA	Yes	L	30	NA	
Mufflers	Pieces	500	50	NA	NA	Yes	L	NA	NA	
Paint	US Gallons	100000	85	American German	A.S.A.	Yes	L	50	Gui	Relatively young. Affected by Coup of 1980. Competition from a new factory.
Insecticides	Cartons(24 Tins)	50000	30	British	British	Yes	L	20	Lib.	
Bleach	Gallons					Yes	L	NA	NA	
Insecticides	Dozens									
Candles	Cartons(30x8)									
Candles	Cartons (30x8)									
Matches	Cartons (144 bxs.)	20000	60	German	Liberian	Yes	L	20	NA	
Paint	Gallons	100000		Spanish	EEC	Yes	L	50	NA	
Automotive Batterv	Pieces	20000	40	British	British	Yes	L	30		Newly established factory Tough competition from imports.

SECTION 2

L I B E R I A (cont'd)

Company	Products	Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Participation	Site	%Exportable	Fai Destination
Lib. Gen. Industries	Cosmetics	Dozens	80000	60	British	British	Yes	S	50	
Liberia Glue	Glue	Tons	500	50	American	Company	Yes	L	25	Nigeria
Mesurado Group of Companies	Detergents	Tons	1500	60	British	Uniliver	Yes	L	NA	S.Leone NA
	Toilet Soap	Tons	100	42	"	"		G	50	NA
	Laundry Soap	Tons	1500	60	"	"	Yes	L	40	NA
Liberia Cement Corp.	Cement	Bags of 50 Kilo	1500000	90	American	ASTMG 150	Yes	S	50	NA
Monrovia Const. Co.	Marble, Terrazo Tiles,	Sq. Meters	50000	50	British	British	Yes	S	28	NA
	Nails	Cartons	50000	60	"	"	Yes	S		
Younis Brothers	Alum.Windows	Pieces	10000	74	American	Company	No	-	-	-
	Terrazo Tiles		10000	60		Company	No	-	-	-
Mesurado Group of Companies	Alum. Windows	Pieces	2500	65	American	Company	Yes	L	NA	S.Leone
Vaang-Ahn Enterprises	Toilet Tissues	Boxes	144000	60	NA	NA	Yes	G	60	NA
	Paper Napkins		848	60						
	Paper Towels		180000	60						
UNIPAC	Cardboard Bxs	Units	1500000	60	British	British	Yes	L	30	NA
LIPCO	Furniture	Pieces	5775	60	British	British	Yes	L	30	NA
Monrovia Ind. Co.	Furniture	Pieces	NA	75	"	"	Yes	L	25	NA
C.F.Wihelm Jantzen	Furniture	Pieces	4500	NA	German	German	Yes	L	NA	NA
LIPFOCO	Foam Mattresses	Pieces	7000		European	Danish	Yes	L	NA	NA
	Foam Sheets	Pieces	10000	NA	-	-	-	-	-	-
Metaloplastica	Plasticwares	Pieces	20900	NA	European	EEC	No	-	-	-
Modern Footwear	Footwear	NA	NA	NA	Korean	Korean	-	NA	NA	NA
Liberia Polyvinyl	PVC Pipes	Pieces	4000	50	German	DIN	Yes	I	50	NA
Mezbau	Alum.Roofing	Sheets	300000	100	American	AWS	Yes	S	100	NA
Liberia Steel Products Corp.	Steel Calverts	Tons	500	20	American	American	Yes	G	60	NA
	Steel Roofing		100	40						

SECTION 1

Products	Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Fair: Participation	Site	%Exportable	Destination	Comments
Cosmetics	Dozens	80000	60	British	British	Yes	S	50		
Glue	Tons	500	50	American	Company	Yes	L	25	Nigeria	
									S.Leone	
Detergents	Tons	1500	60	British	Uniliver	Yes	L	NA	NA	
Toilet Soap	Tons	100	42	"	"		G	50	NA	
Laundry Soap	Tons	1500	60	"	"	Yes	L	40	NA	
Cement	Bags of 50 Kilo	1500000	90	American	ASTMG 150	Yes	S	50	NA	Capacity utilization too high to allow for exports.
Marble, Terrazo Tiles,	Sq. Meters	50000	50	British	British	Yes	S	28	NA	Metting stiff
Nails	Cartons	50000	60	"	"	Yes	S			competition.
Alum.Windows	Pieces	10000	74	American	Company	No	-	-	-	
Terrazo Tiles		10000	60		Company	No	-	-	-	
Alum. Windows	Pieces	2500	65	American	Company	Yes	L	NA	S.Leone	Similar operation in Guinea.
Toilet Tissues	Boxes	144000	60	NA	NA	Yes	G	60	NA	
Paper Napkins		848	60							
Paper Towels		180000	60							
Cardboard Bxs	Units	1500000	60	British	British	Yes	L	30	NA	A similar operation in S. Leone
Furniture	Pieces	5775	60	British	British	Yes	L	30	NA	
Furniture	Pieces	NA	75	"	"	Yes	L	25	NA	
Furniture	Pieces	4500	NA	German	German	Yes	L	NA	NA	
Foam Mattresses	Pieces	7000		European	Danish	Yes	L	NA	NA	
Foam Sheets	Pieces	10000	NA	-	-	-	-	-	-	
Plasticwares	Pieces	20900	NA	European	EEC	No	-	-	-	
Footwear	NA	NA	NA	Korean	Korean	-	NA	NA	NA	
PVC Pipes	Pieces	4000	50	German	DIN	Yes	I	50	NA	
Alum.Roofing	Sheets	300000	100	American	AWS	Yes	S	100	NA	A competing industry in Guinea and S. Leone
Steel Calverts	Tons	500	20	American	American	Yes	G	60	NA	Products very
Steel Roofing		100	40							

SECTION 2

L I B E R I A (cont'd)

Company	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Participation	Site	%Exportable	Des tic
LUNIA Nail	Nails	Cartons of (56lbs)	6000	70	Korean	Korean	Yes	L	30	NA
Metallum (Lib)Ltd.	Zinc Sheets	Metric Tons	4200	NA	Japanese	JIS	Yes	L	NA	NA
	" Buckets	Dozens	5060	NA	Belgium					
	" Tubs	Dozens	1472	NA	"					
Liberia Metal Co.	Furniture	NA	NA	NA	American	JIS	Yes	I	NA	NA
Tow Trailers	Wheelbarrows	Units	3000000	60	American	American	Yes	L	40	NA

Symbols: L = Liberia
G = Guinea
S = Sierra Leone
NA = Not available
" = Repeated entries
I = Indifferent

* Most capacity output determined from 1982 production % exportable potential.

SECTION 1

A (cont'd)

	Products	Unit of Measurement	Annual Capacity Installed	% in Use	Technology	Standards	Reaction to the Participation	Site	%Exportable	Fair Destination	Comments
	Nails	Cartons of (56lbs)	6000	70	Korean	Korean	Yes	L	30	NA	
b)Ltd.	Zinc Sheets	Metric Tons	4200	NA	Japanese	JIS	Yes	L	NA	NA	
	" Buckets	Dozens	5060	NA	Belgium						
	" Tubs	Dozens	1472	NA	"						
l Co.	Furniture	NA	NA	NA	American	JIS	Yes	I	NA	NA	*
s	Wheelbarrows	Units	3000000	60	American	American	Yes	L	40	NA	

bols: L = Liberia
G = Guinea
S = Sierra Leone
NA = Not available
" = Repeated entries
I = Indifferent

* Most capacity output determined from 1982 production % exportable potential.

SECTION 2

APPENDIX II - Participants recommended for the First Industrial and Technology Promotion Fair

Sector and Participating Company	Location	Principal Products
01-Food, Beverage & Tobacco		
1. Liberia Industries, Inc.	L	Candies
2. National Confectionery	SL	Confectioneries
3. James International	SL	Sassman Gin, Star Beer
4. I.C.C.	L	Gold Medal Cin, H. Schnapps
5. INTRA	L	Rum, Gin, Port Wine
6. ENTRA	G	Nimba Filter Cigarettes/Milo non-Filter
7. SOBRAGUI	G	Matches, Rice, Beer, Malt, Soft Drinks
8. Usine de The' Macenta	G	Green Tea, Black Tea
9. Usine Jus de Fruit Kankan	G	Orange Juice, Pineapple Juice, Mango Juice, Banana Juice
10. Salguidia	G	Pineapple Slices, Pineapple Juice
11. Ets. Zaidan & Et. Compaigne	G	Fruit Juices
12. MOLDACO	L	Fufu, Gari, Palm Sauce, Rice Meal, Cassava Flour
13. Mitchell & Sons	L	Gin
14. Aureol Tobacco	SL	Cigarettes, Cut Tobacco
15. Wellington Distilleries	SL	Rum, Brandy, Whisky, Afikoko, Liquor
16. Pig and Poultry Processing Plant	SL	Pigs, Chickens
17. S.L.P.M.B. Rice Mill (KISSEY)	SL	Milled Rice
18. 2 Indigenous Technology	L	Various food processing
19. 3 Indigenous "	G	" " "
20. 2 Indigenous "	SL	Local " "
21. Bennimise	SL	Baby food

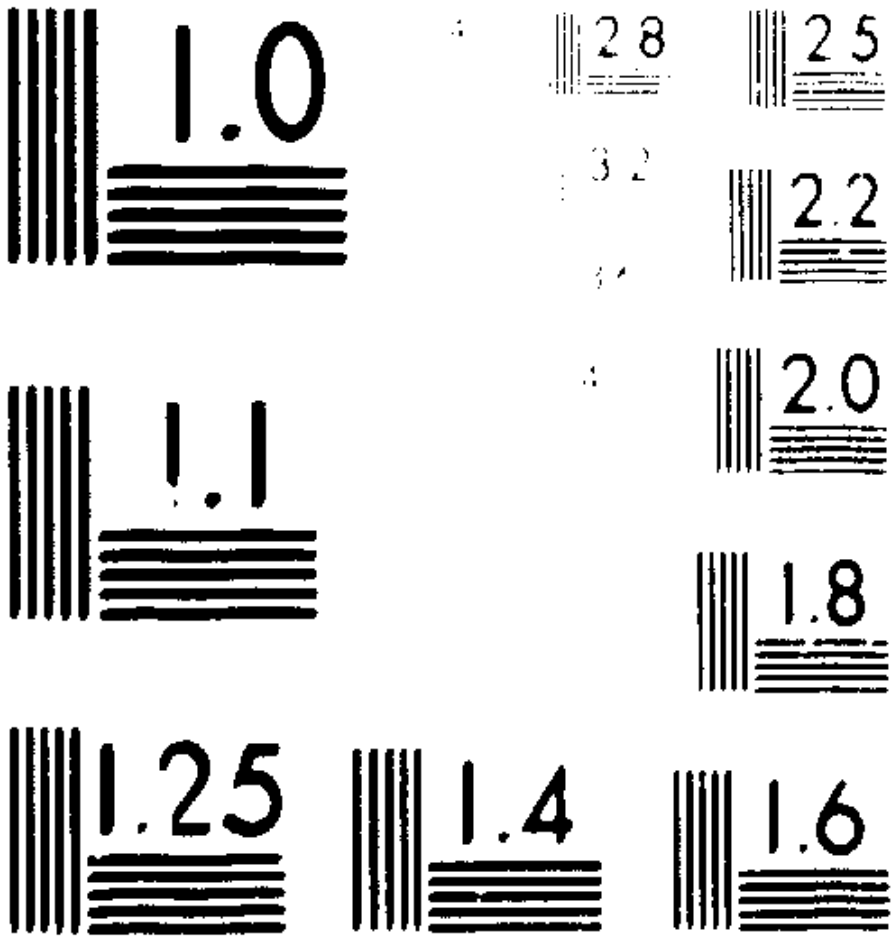
Symbols: L = Republic of Liberia
G = Popular Revolutionary Republic of Guinea
SL= Republic of Sierra Leone

Sector and Participating Company	Location	Principal Products
02-Repair & Service Workshops		
22. Liberia Muffler Co.	L	Muffler
23. Raymond Garage	SL	Steel, Garage, Containers
24. National Workshop	SL	Training, Repair & Agricultural Implements
25. Centre Pilote	G	Training, Repairs & Spare Parts
26. Vocational Training Center	L	Training, Repairs

Sector and Participating Company	Location	Principals Products
03-Chemical Products, Manufacturing Industries		
27. Venus Perfumery & Cosmetics	SL	Perfumes, Powder
28. Sierra Cosmetics	SL	Perfumes, Cosmetics
29. Liberia General Industries	L	Cosmetics
30. IGAT	G	Perfumes, Toothpaste
31. Fawaz Frerer Industries	G	Laundry Soap, Powder, Toilet
32. Savonnerie Fa Tala	G	Laundry Soap, Nails
33. SIGAG	G	Laundry Soap, Toilet Soap
34. Mesurado Detergent	L	Powder Soap
35. Mesurado Toilet Soap	L	Toilet Soap
36. Mesurado Laundry Soap	L	Laundry Soap
37. Parker Paint Industries	L	Paints
38. ERA Paint	L	Paints
39. SIPECO	G	Paints
40. Sierra Paint	SL	Paints
41. Shewakram	L	Candles
42. MANCO	L	Bleach, Insecticides, Candles
43. Liberia Battery Manufacturing Co.	L	Automotive Battery
44. Petro Chemicals	L	Insecticides
45. Sterling Products	SL	Panadol, Cafenol, Padrox, Aralen, Children's Cafenol, Andrews Liber Salts
46. Chanrai Chemicals	SL	Toilet Soap
47. A. J. Seward	SL	Cosmetics
48. Whitex Industries	SL	Plastics, Synthetic Starch, Candles, Decreasing Compound, Bleaching Detergent
49. S. L. Oxygen Factory	SL	Oxygen, Acetylene, Carbondioxide
Indigenous Industries:		
50.	1 Sierra Leonean	Any kind
51.	1 Liberian	Any type
52.	1 Guinean	Any type

Sector and Participating Company	Location	Principals Products
04-Building Material Industries		
53. Liberia Cement Corporation	L	Cement
54. SOPROCEMENT	G	Cement
55. Sierra Cement Manufacturing Co.	SL	Cement
56 Younis Brothers Window Factory	L	Aluminium Window
57. Mesurado Windows	L	Aluminium Window
58. Soguifab	G	Aluminium Windows, Aluminium Glass Doors, Aluminium Sheets, Aluminium Roofing Sheets
59. Younis Brothers Tile Factory	L	Tiles
60. Monrovia Construction Co.	L	Marble & Terrazo Tiles, Nails
61. MEZBAU	L	Aluminium Roofing Sheets
62. Saroulla Metal Works	SL	Steel Doors and Windows
63. Sierra Bricks Ceramics	SL	Clay Bricks

Sector and Participating Company	Location	Principal Products
05-Plastic Rubber Leather & Allied Products		
64. LIPFOCO	L	Foam Rubber Mattress and Sheets
65. Baydoun & Abess Plastic Ind.	SL	Rubber Sheets and Pillows
66. Foam Manufacturing Co.	SL	Mattress and Cushion
67. Afro Plast Manufacturing Co.	SL	Plastic Footwears
68. G. Skankerdes & Sons	SL	Plastics
69. S. L. Suitcases Works, Ltd.	SL	Suitcases, Bags, Travelling Bags, etc.
70. Ets. K. Zardan & Compaigne	G	Plastic Wares, 10 different products
71. Metaloplastica	L	Plastic Wares
72. Modern Footwear	L	-
73. Liberia Polyvinyl	L	Plastic Pipes



Sector and Participating Company	Location	Principal Products
06-Paper, Paper Products Printing and Publishing		
74. Vaang-Ahn Enterprises	L	Toilet Tissue, Paper Napkins, Paper Towels
75. UNIPAC	L	Cardboard Boxes
76. K. Zaidan et Cie	G	Cardboards
77. Central Printing, Inc.	L	Printing Services

Sector and Participating Company	Location	Principal Products
07-Wood and Furniture Manufacturing		
78. LIPCO	L	Furnitures
79. MIC	L	Furnitures
80. C. F. Wilhelm Jantzen	L	Furnitures
81. Usine a Panneaux de Seredou	G	Particle Board
82. Modern Metal Furnitures Co.	SL	Office, Household & Educational Furnitures
83. Rattan Furniture Manufacturer	L	Furnitures
84. Rattan Furniture Manufacturer	G	Furnitures and Household Materials
85. Rattan Furniture Manufacturer	SL	Furnitures
86. Wood Indigenous Style	L	Carvings, Curios, etc.
87. Wood Furniture Manufacturer Indigenous Style	G	Masks, Carvings, etc.

Sector and Participating Company	Location	Principals Products
08- Light Engineering and Metal Industries		
87. Liberia Steel Products Corp.	L	Steel Culverts
88. Metallum Liberia, Ltd.	L	Zinc Sheets, Buckets, Tubs
89. Tow Trailers	L	Wheelbarrows
90. Kupelian Bros. Ltd.	SL	Trailers, Trucks, Tanks, Grain Silos, Safes, Cash Boxes, Cupboards, Gate Security
91. S. L. Nail Manufacturing	SL	All types of Nails, Buckets
92. Metalware Manufacturing	SL	Trucks
93. John Michael Motors	SL	Water Tanks, Steel Trucks, Tippers, Steel Windows and Doors

Sector and Participating Company	Location	Principals Products
09-Textile Industries & Products		
94. Ets. Ali Mazeh et Cie	G	13 different textile products
95. Sierra Leone Knitting Mill	SL	Underwears, Towels and Knit Wears
96. 1 Tailor	G	
97. 1 Tailor	SL	
98. 2 Gara Manufacturers	SL	
99. 1 Country Cloth Producer	L	

Sector and Participating Company	Location	Principal Products
10-Miscellaneous Industries		
100. Liberia Brooms Manufacturing Co.	L	Brooms, Brushes
101. Osman Thomas	SL	Mattresses
102. Sierra Explosives	SL	Shot Gun Shells
103. Exchem	L	Explosives
104. Fishing Net Manufacturing Co.	L	
105. Fishing Net Manufacturing Co.	G	
106. Fishing Net Manufacturing Co.	SL