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SECONDARY WOOD PROCESSING IN LIBERIA

COTE D'IVOIRE, GHANA AND NIGERIA

Background Paper\*\*

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\*\* The views expressed in this document are those of the author and do not necessarily reflect the views of the Secretariat of UNIDO. This document has not been edited.

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## INTRODUCTION

The following reports do not deal with the forest resource situations nor the primary processing sectors except for mentions in the context of future availability of the raw material for the secondary processing industries.

The Forest Industries Advisory Group for Africa (FIAG) Project RAF/82/006 published very factual papers in 1984 detailing the remaining resource bases and highlighting the pressing need in the four countries for reforestation and afforestation to meet the needs for fuelwood and industrial wood in the 1990's and into the 2000's.

In summary FIAG evaluations show the natural resource situation (excluding plantations) as:

|               |                |                                 |
|---------------|----------------|---------------------------------|
| LIBERIA       | Serious        | Less than 10 years duration     |
| COTE D'IVOIRE | Moderate       | About 30 years duration         |
| GHANA         | Fairly serious | No estimate of duration         |
| NIGERIA       | Very serious   | Virtually no resource remaining |

The FIAG reports were prepared at the time in the mid -1980's of a general economic downturn. Since then economies and the timber industries made some recoveries, however generally at end 1989 the timber industries in the four countries indicated a steady downturn in production, no doubt reflecting the FIAG view of the impending resource shortages.

### Industry

Many past reports speak of run down sawmills, plymills and woodworking facilities. The situations and the problems are very well documented in a large number of papers from various agencies, for example very concisely in UNIDO document ID/WG.373/12 dated 14 July 1982, a paper for the Regional Meeting for Africa in preparation of the First Consultation on the Wood and Wood Products Industry in Vienna, 21-25 June 1982.

It must be stated the problems in 1989 are little changed.

Statistically also, the situation appears to have changed little in the past 7 - 10 years except that Cote d'Ivoire has dramatically reduced log exports from 3 million m3 in 1980 to between 600 - 650,000 in 1988 and 1989. There has been production and export fluctuation and some progress in sawn lumber output and export (Cote d'Ivoire and Ghana) and some improvement in ply and veneer manufacture, but structurally the industry in the four countries has not shown major change and the secondary processing sector, if anything, even less progress.

Meanwhile, over the years the available supply of logs from the natural forest continues to decline and is nowhere being renewed (replanted) at anywhere approaching the volumes needed to sustain existing harvest volumes, of which only a relatively small proportion is for industrial utilisation, with more than 80 per cent being used for fuelwood or just cleared for slash and burn agriculture.

Nigeria has virtually ceased exports of wood and wood products but Liberia, Ghana and Cote d'Ivoire all continue to export round logs, most usually the prime species, the best quality and largest diameters. (See Table 1).

Although there have been many reports, conferences and general agreements that:

- the greatest useage and consequent greatest loss of forest area is due to shifting agriculture and use for fuelwood
- there is urgent need for reforestation and afforestation
- log exports should be stopped
- secondary industries built up

- the four countries have not been able to achieve these goals to the extent of arresting the swift decline in their total forest resource, nor to the extent of making their secondary wood processing industries significantly more important than there were, say 10 years ago.

The secondary sector has had little formal development, generally exhibiting a natural growth related largely to building activities extending into joinery, doors and some furniture.

Generally, secondary processing lacks sophistication in both management and technical aspects. There is insufficient facility and expertise to train woodmachinists, supervisors, middle and senior management, and the matching of product potential to market potential is underdeveloped.

Only Ghana among the four has more formally developed furniture manufacturing.

Shortage of time and the incompatibility of data inhibited collection in each country of comparable statistics therefore strict comparisons are not possible. However, it can be said that Liberia is still importing high quality, high priced furniture (US\$450,807 in 1987) and so is Cote d'Ivoire and probably Nigeria which also imports wood and wood products. Ghana does not import furniture.

The internal lumber markets in each country are well developed, if informally, with small lumberyards usually grouped in specific urban areas. These small business enterprises appeared well organised with good knowledge of species, price differentials for species and sizes and with good quality, well sawn lumber kept under cover.

There is the general opinion that the secondary industries are in two divisions, first those owned/operated by expatriates or foreign based companies, which are said to be in the main reasonably efficient and profitable, and secondly the locally owned and operated enterprises, many of them small which are said to be run down and/or inefficient/unprofitable.

In Liberia and Cote d'Ivoire the importers are usually also the larger local manufactureres (of joinery and furniture) - perhaps something of a conflict of interests.

There are Trade Associations catering for the secondary timber processing sector in each of the four countries.

As the tables show (see also graph 1), there has been some decline in log exports and increased exports of sawn wood from Cote d'Ivoire and Ghana and a small increase in plywood exports from Cote d'Ivoire and some improvement by export of relatively small volumes of veneer, however this rather gradual change has not made sufficient, timely impact on the resource and other problems to reverse the adverse trends. A cursory examination of export price levels indicates that these have not increased in actual terms, much less in real terms over the past 7 - 10 years.

Encouragingly, each of the countries has now to a large extent separated the "forest" from the "industry" and placed firmly the secondary processing sector in the Ministries of Industry, a big step forward from the days when it was considered as an extension of the Forestry Department.

#### Future Development Proposals

There are few projects of any size in the wood industries sector in Liberia, CDI, Ghana and Nigeria at the present time.

The actual problems of industry, jointly and individually are remarkably common in the four countries, and, as mentioned above these are well known and well documented.

The "infrastructure" available for solving the problems and implementing projects differ and are noted in the reports following for each countrty.

However, there is no doubt considerable assistance is needed by all four countries to revive, rehabilitate, expand the secondary processing industries (called tertiary in CDI) in the areas of:

- Technical assistance
- Institution building for implementation
- Training at all levels
- Product development
- Market identification and development

Timber and wood industries are so important in these countries it is surprising that no major projects are in operation and it is necessary to examine the reasons why projects are not forthcoming, and what needs are to be effected in order to speed up the procedures necessary to propose, agree and implement significant projects in the sector.

It is likely that government "inertia" and bureaucratic complications prevent or seriously delay the signing of requests for project initiation.

Why is this? Generally it is said that governments would not find overwhelming difficulty in providing the requisite contributions in kind, by way of land, buildings or infrastructure.

Possibly, therefore departments are concerned in case there is the need to provide key staff and counterparts.

Possibly the department is unclear what will be involved and is therefore reluctant to commit in case unforeseen inputs become attributable.

### Finance and Economics

Project documents spell out clearly the nature and costs of a project, together with government contribution, which is usually in kind through provision of infrastructure and staff counterparts, however documents do not assess or evaluate the impact of projects on the economy of the country.

The same can be said for the numerous reports which are made. Some of these propose quite drastic measures, see FIAG report FIAG/84/19 page 15 para 3 e.g. the complete banning of log exports. While this may be ecologically, environmentally and entirely necessary in order to conserve resource, or other cogent reasons, it is unrealistic from an economic and financial viewpoint to



put forward such a scenario without any mention of the consequent effects on the economy, now and in future. Essential factors of the financial and economic evaluations are not given.

For example, what would be the financial effects caused by loss of several millions of dollars export revenues, the loss of stumpage and other internal taxes, the loss of employment?

How will these immediate shortfall effects be made up, now or in the future?

It is known that projects have to pass through various government departments including those of Economics and Planning, and Finance, and it is certain that even a simple financial impact analysis, together with assessment of sensitivities, would assist departments in understanding the potential impact of projects (and reports) and thus ensure a smoother and faster passage through the bureaucratic procedures so that governments' requests and final signatures of project documents are expedited.

In the world of commerce, a report or project proposal would have a content of at least 50 to 60 per cent financial analysis and forecasts of IRR, with sensitivity analyses of all the major input:output factors, particularly time factors.

It is invidious to assume that an "industry" will cease just because a report states there will be no resource left "sometime in the future".

Indonesia has shown that drastic and dramatic actions can be effected, but this is very costly in lost export earning during such a period of change. Indonesia's swift transition from being the major log exporter in SE Asia to being world force in plywood meant that some \$1 billion p a in log export revenues was initially forfeited, but finally, of course a significance increase in timber based export revenues was accomplished.

As well there was very substantial effect on the industries in other countries, notably Korea and Japan.

Under the strained economic circumstances of many developing countries it would not be an easy decision to e.g. cease log exporting and change to all secondary processing. Indeed in some countries such a transition may not necessarily be beneficial overall.

If projects and reports recommend changes in direction and emphasis, then the financial and economic evaluations must spell out clearly the short term costs and the long term benefits.

A cost/benefit analysis ought properly to be an integral part of reports and project documents.

Good intensions of "added value" all too often turn out to be only added cost, a net outflow instead of a net inflow of funds.

#### Wood Costs

As mentioned, the establishment of plantations in most if not all the African countries under consideration is not nearly keeping pace with the depletion rate of the natural forest.

The natural forest is "free" however plantations cost money to establish and maintain and it would be useful for evaluations to be put forward for:

- The expected cost for industrial use of plantation wood already growing, and future plantings.
- Evaluation of the changes needed in processing facilities for plantation wood
- Evaluation of results of utilising plantation woods on export potentials of log, lumber and secondary products.

#### Cost/Benefit Analysis

Consultations on the wood and wood products industries at preparatory and draft stages ought very seriously to evaluate:

- Climate of governments' opinions on economic change
- Status of enabling legislation
- Economic cost/benefit analyses
- The need for separate statistics for secondary wood processing and products
- Financial and volume forecasts of effects of conserving resource by improvements in utilisation and minimising current high waste factors in

**Forest**

**Primary Processing**

**Secondary Processing**

According to FAO there are some resource rich countries, and evaluation of the eventual possibilities of inter-regional log/lumber export in the long term would be an essential tool in judging how far it is reasonable to develop secondary processing facilities in resource poor countries which might run out of suitable wood inputs before fully recovering the costs of new investments in these industries.

It is recommended that conferences and consultations in-country and external for secondary wood processing matters should include senior invitees from relevant government departments of Economics/Planning/Finance, as appropriate, as well as from Department of Industry (see general conclusions, page 39).

TABLE 1

LIBERIA - COTE D'IVOIRE, GHANA, NIGERIA

Forest Products: Saw and Veneer (non-coniferous)

|               |      | 1,000 m3   |        |            |        |
|---------------|------|------------|--------|------------|--------|
|               |      | LOGS       |        | SAWWOOD    |        |
|               |      | Production | Export | Production | Export |
| Liberia       | 1975 | 464        | 220    | 109        | 23     |
|               | 1985 | 410        | 258    | 69         | 7      |
|               | 1986 | 540        | 370    | 91         | 8      |
|               | 1987 | 810        | 251    | 311        | 5      |
|               | 1988 | -          | 600 E  | -          | -      |
| Cote d'Ivoire | 1975 | 3960       | 2419   | 510        | n/a    |
|               | 1985 | 3315       | 1394   | 753        | 473    |
|               | 1986 | 3020       | 1020   | 765        | 475    |
|               | 1987 | 2588       | 617    | 775        | 460    |
|               | 1988 | -          | 620 E  | -          | -      |
| Ghana         | 1975 | 1332       | 440    | 398        | 165    |
|               | 1985 | 700        | 130    | 280        | 80     |
|               | 1986 | 720        | 177    | 310        | 102    |
|               | 1987 | 720 E      | 319    | 310        | 173    |
| Nigeria       | 1975 | 2195       | 93     | 937        | 13     |
|               | 1985 | 5590       | 60 E   | 2700       | 1      |
|               | 1986 | 5590       | 60 E   | 2700 E     | 1      |
|               | 1987 | 5589       | 60 E   | 2700 E     | 1      |

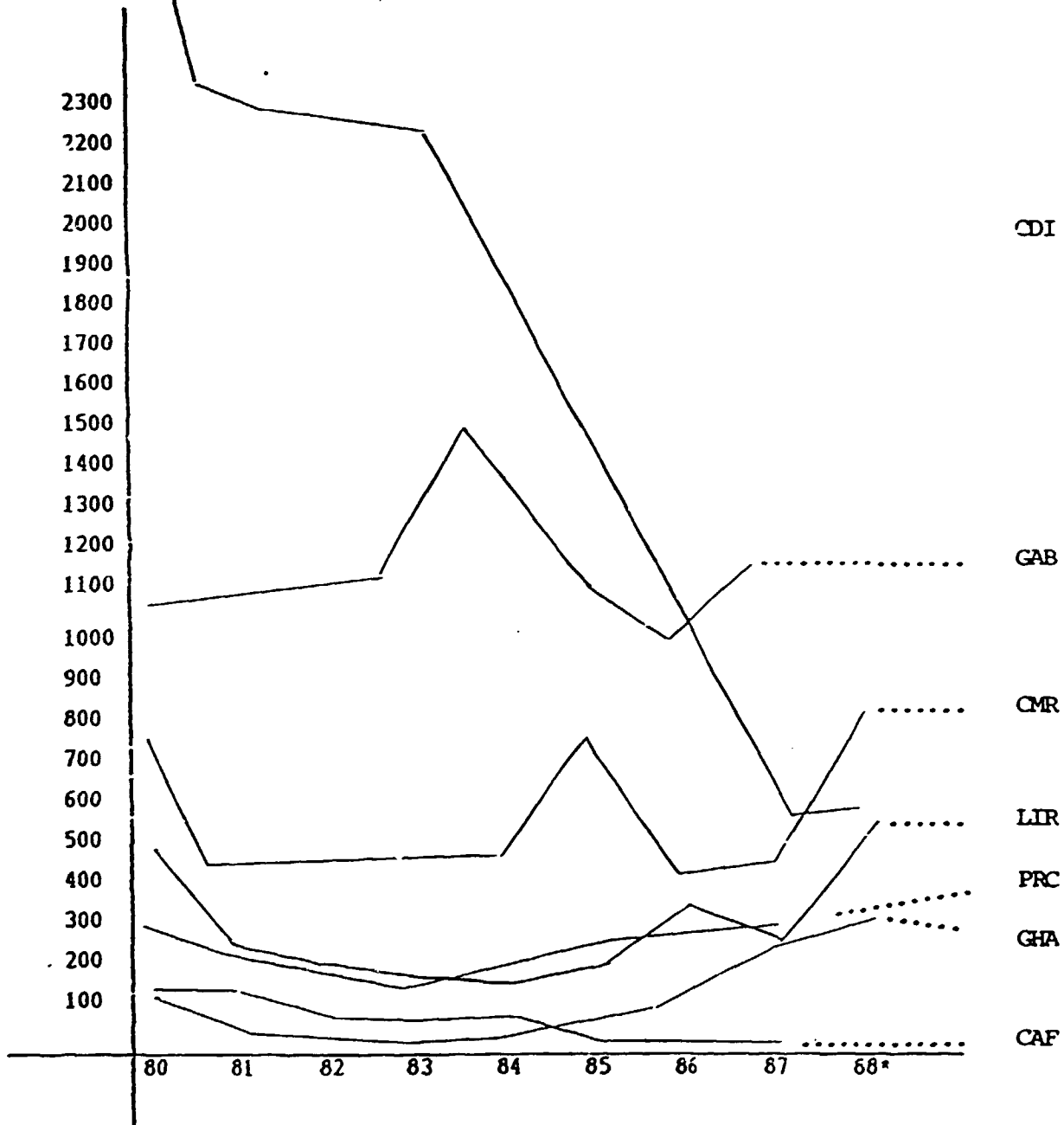
E = Estimate

Source: FAO Vol. 1, 1989

GRAPH 1

### LOG EXPORTS 1980 - 1987

CAMEROUN CENTRAL AFRICAN REPUBLIC COTE D'IVOIRE  
CONGO GABON GHANA LIBERIA



\* 1988 = estimate

LIBERIA

FAO statistics 1988 year book show:

|      | Industrial Roundwood | Harvest Volumes m3 Fuelwood |
|------|----------------------|-----------------------------|
| 1985 | 545,000              | 3,910,000                   |
| 1986 | 679,000              | 4,620,000                   |
| 1987 | 954,000              | 4,686,000                   |

Log exports in 1987 were 429,000 m3.

Sawn lumber exports in 1987 were 8,410 m3.

The Forestry Development Agency (FDA) gives figures for 1989:

Jan - Sept 1989 Log exports 598,000 m3

Jan - Sept 1989 Sawn exports 21,000 m3.

FDA stated that 10 prime species, mostly the Entandrophragma and Khaya species would be banned from log export as from October 1990.

The Sawn Lumber export is mainly Niangon (Tarrieta utilis/densiflora) and steps are being taken to restrict further depletion of this species by allowing only trees of over 60 cm diameter to be felled.

FDA policy of banning the 10 species log export has the intention of encouraging investors to put up saw-ply-veneer mills to process these well known timbers and thus induce more interest in exporting lesser known species in log form.

If these proposed restrictions are implemented, export revenues would be expected to fall, however it appears the degree of political and economic acceptability of a dramatic fall in hard currency timber revenues is not known.

There is no formal, structured programme of promotion of LKS or other wood utilisation, but FDA advise they do supply brochures and some hand samples or even sample parcels of lumber to enquirers through Liberian overseas

diplomatic missions.

There is said to be 24 sawmills of which only 17 are operative, and 3 ply/veneer mills.

## INDUSTRIES

There are possibly half a dozen larger joinery/furniture manufacturers/importers in Monrovia but probably some hundreds of small locally owned joiners and furniture makers.

Iron ore, rubber and timber constitute 80 per cent of all Liberian Exports. Manufactured exports are only 1.8 per cent of all exports.

The Economic Recovery Programme gives priority to the use of indigenous materials and local skills.

There are various government departments involved in the industrial sector. In secondary processing of timber the National Investment Commission (NIC) is active in organising a programme of assistance to the nascent Liberian Wood and Carpentry Industrial Association (LWCIA) which is the subject of a UNIDO/African Development Foundation (ADF) draft Project DP/LIR/89/xx37 (see Annex 1).

The NIC would channel such programmes through the Ministry of Commerce and Industry, which in turn passes through to the Ministry of Planning and Economic Affairs for approval.

Associated with the Economic Recovery Programme has been the UNIDO Project IR/87/007 "Development of Small and Medium Scale Enterprises".

The intention of LWCIA when operative is to assist the smaller enterprises in a number of ways:

- Technical advice
- Facilitation of loans for new machinery
- Training
- Setting up a Common Service Facility (CSF)

It is said there are about 100 potential members of LWCIA out of some 147 known enterprises, and a small fee would be levied to fund Association activities.

Presently it is not intended to allow the larger, expatriate run companies to join LWCIA because it is said the small business owners are afraid the Association would be "taken over" and run by the larger firms for their own benefit.

From a practical perspective it is not easy to assess how the LWCIA could be a success unless the power and influence of the larger enterprises was deployed to assist the organisation in being strong enough to survive and influence government policies and practices.

There is no doubt that adequate safeguards could be built into the LWCIA constitution to ensure the "Robin Hood Principle" i.e. use the rich to help the poor, without alienating either division.

However, the possible conflict of interest due to the larger, expatriate manufacturers being also the importers of furniture has to be taken into account.

The concept of the Common Service Facility is interesting. It would be intended to set up some joint facilities for e.g. purchase of lumber at advantageous bulk prices, set up drying kilns and some workshop and technical assistance facility for tool sharpening and correct use of machines and methods.

Following a possible UNIDO/ADF project phase the CSF would be expected to be self supporting by LWCIA members paying for use of the facilities.



## TRAINING

Already established is the Liberian Opportunity Industrial Company (LOIC) which is a training centre teaching a number of skills including carpentry to school drop outs.

The Monrovia Vocational Training Centre (MVTC) is a large establishment training high school graduates in technical skills such as electrical installation, building and woodworking for which the annual intake is about 12 trainees. There are some small woodworking machines and other teaching aids and equipment

### 1. SITUATION OF THE SECONDARY WOOD PROCESSING SECTOR

Production statistics are not formally available. The largest number of such enterprises is found in Monrovia.

The so called expatriate operators appear to be quite well equipped to make all kinds of joinery and furniture. Much of the finish is not up to export standard but some copied designs are well executed. These companies are importing furniture, office and domestic, in some variety. Much of this is very expensive, at least double or triple European retail prices. It is said some exports of furniture will be made in the future.

Others involved in joinery for industrial buildings and houses are in fact construction companies.

The small Liberian enterprises are generally at a very unsophisticated workshop level. Some have no machinery at all. As with the larger workshops, all of them make to order, though beds, cupboards and some upholstered chairs are made on spec and exhibited often in the open air, for sale to passers-by.

Standards range from 'fair' down to 'rudimentary' and the usual ginger coloured brush varnish finish does nothing to improve appearance.

Both categories of operators make solid panel doors of quite reasonable quality and appearance. With improved techniques it is possible these could be upgraded to export quality.

The quality of timber available for secondary manufacture appears good. There are numerous small lumberyards with undercover storage and a range of sizes, qualities and species. The supply system is well established with ample competition. Many small woodwork shops are located next to the lumberyards.

A major drawback is that there is no price differential between green (undried) and dry lumber, therefore the lumberyards block pile without stickers and make no attempt to dry their stock.

Some of the larger manufacturers have kilns, with a resultant substantial improvement in the quality and finish of their products.

Undoubtedly the smaller manufacturers would improve their performance if they could either afford to hold stock and air dry or were able to persuade the lumberyards to sticker their stocks and pay them enhanced prices according to dryness.

Most of the Liberian made plywood seen on the local market was of low grade. There is some small making of Rattan furniture of low quality.

#### MARKETS

Missing from the scenario is medium priced, solid wood furniture of sound construction, good design and good quality finish, such as would normally be from small batch (series) production.

A market exists among the more affluent Liberian population and the permanent and temporary expatriate residents.

Undoubtedly the expatriate controlled manufacturers could fill this market sector but they have not, and this might anyway conflict with their associated import business.

It is into this sector, therefore, that the larger of the Liberian small and medium sized enterprises (SME's) might best be encouraged to venture.

Eventually, involvement in improved methods, machines, design, quality and finish could lead these operators into exports of components, doors and then finished furniture. This would take some years but is achievable.

Achieving this upgrading of some of the SME's will require inputs of expertise in methodology, design, machining, cutter maintenance, surface finishing, cost control and general management. As well, there will be the need for funding arrangements for purchase of new machinery.

Enablement of this process must flow from Government action and climate of support. His Excellency President Doe has clearly indicated wishes to increase local manufacturing capacity and skills. The secondary woodworking industry could be a leader in this initiative, however, the inbuilt inertia in bureaucratic process has yet to follow through with active encouragement and action.

The UNIDO "Production of Charcoal and Briquettes Fuel from Wood Waste in Existing Sawmills/Wood Processing Industry in Liberia" Project XA/LIR/89/609 is ongoing however there are no current UNIDO or FAO timber industry projects.

The SME Development Project LIR/87/007 has been closely involved with the NIC in formulating the Draft Prodoc "Assistance to LWCIA for the Development of the Woodworking Industry".

Because the SME's have no collective voice or influence on policies and practices affecting their business it would appear essential for them to band together in an organisation such as LWCIA. As mentioned above the intention not to include the larger enterprises in LWCIA is likely to inhibit progress.

At the time of writing (end October 1989) the Project is held with the Ministry of Planning which is suggesting LWCIA should have to purchase the land and buildings which were proposed as being leased with a 3 year grace period as the major Government contribution.

Briefly, items listed in the Terms of Reference are summarised:

1. a) b) Construction and Housing.

This is firmly in the Reinforced Concrete and/or cement block category. There is considerable activity in housing, flats and individual houses. Other building appeared slow with some large office blocks either dormant in various stages or proceeding very slowly. Use of timber trusses made on site for houses is common, also for some larger buildings such as churches and halls.

No shipbuilding activity was observed.

c) Furniture and Joinery. These are discussed in 1. above.

d) Other products.

Miscellaneous uses are few. Fuelwood and charcoal are, of course, major industries and it should be noted that in the urban area of Monrovia the joinery and furniture manufacturers waste is collected and used for domestic fuel.

In packaging, the Firestone Company saws up some old rubberwood trees to provide packing for export of rubber, as well as using them for fuel for its boilers.

Otherwise with so few manufactured exports there is little call for packing materials.

2. PROBLEMS AND PROSPECTS

2. a) Technology

There are no exceptional technologies involved. The larger enterprises already employ generally good techniques and machining practice. Finishing often leaves much to be desired.

The SME's are at a low-tech level. They need more small woodworking machinery, correct tool maintenance equipment, understanding of joint techniques and modern fastenings. They need access to modern finishes and applications and above all the understanding of meticulous attention to proper detail preparation for finishing.

#### 2. b) Research and Development

It is unlikely any particular measures are needed specifically for Liberia. Most R & D has been already exhaustive in similar circumstances and conditions in other countries. The timber used and the consumables are again just the same as elsewhere. Kiln schedules for major species are well proven and even many LKS have been well researched.

#### 2. c) Manpower Training

As mentioned, LOIC and MVIC are in existence and without doubt the woodworking sections of their activities could be extended. The LWCIA project would also have facilities for some limited training in certain skills, particularly cutter, saw and machines maintenance.

2. d) Transport. There appeared to be no major problems relating to transport.

2. e) Markets

Domestic markets, as elsewhere, follow the general economic climate which in Liberia has seen some recovery from the mid 80's recession. Export opportunities are always possible, but as common, it is a question rather of whether production of consistent quality can be achieved than a question of finding a market.

3. STRATEGIES

The major problem in Liberia, as in the other 3 countries visited, is the promulgation of projects through the Government system.

The example mentioned above where the Liberia Ministry of Planning is proposing LWCIA should purchase land and buildings is a good example. If the project proposal had included an analysis of the financial implications and sensitivities it would have been quite clear the LWCIA proposal could not possibly be implemented if the purchase instead of lease of land had to be faced.

Spelling out clearly the financial and economic impacts is likely to expedite government procedures by clearly showing the advantages to the economy, short or long term, as well as the sensitivities in terms of time and various cost factors.

Specifically for Liberia it is suggested:

The Proposal for the LWCIA Project be enhanced by a financial evaluation.

The LWCIA proposed constitution be revised, simplified and strengthened and that negotiations with the larger enterprises take place to assess if they can be inducted into LWCIA.

It should be made clear to Government that a properly constituted LWCIA would be the implementing agency for the project with assistance from NIC.

The financial and practical implications of the working of the proposed Common Service Facility (CSF) should be re-examined.

LOIC and MVTC should be evaluated with a view to a future proposal for institution building in the training of both starter trainees and mature workers already in the woodworking industries.

The potential for commercial utilisation of old rubber trees for sawn lumber should be evaluated. This could be a possible export development.

#### 4. POTENTIAL FOR REGIONAL COOPERATION

There is unlikely to be any potential at this stage in the secondary processing sector of the timber industry. Possible cooperation on aspects of development of a sawn wood industry from rubber trees with Cote d'Ivoire could be kept in mind.

#### 5. ROLE OF INTERNATIONAL ORGANISATIONS

Clearly UNIDO has the expertise and potential for a considerable programme of assistance in development of the secondary wood processing sector, in technology, in training and in access to expert staff in the relevant sectors.

For the future supply of fuel and industrial wood FAO would have a critically important role to play.

#### 6. CONCLUSIONS

Liberia has good potential for development of its secondary wood processing sector. Like many tropical countries, Liberia has the advantage of availability of prime hardwood timbers which are becoming scarcer year by year. This gives unique opportunities to develop their potential for production and export of solid wood furniture and furniture components.

There are world markets for both medium and high quality furniture and other wood products. Access to these markets depends most of all on the

ability of the manufacturer to achieve reliability and consistency of supply at whatever level of quality standard the enterprise has entered its particular market sector.

As an enterprise develops, the elements of quality and cost control assume great importance, another reason why it is essential to assess the financial and economic aspects very carefully on both country and individual level.

It should not be forgotten that there is always a market for 'craftsman' made furniture and other items, which do not need a factory but depend solely on individual skills. In most developed countries craftsman-made items can command very high price levels for individual, unique pieces. This market might be more logistically difficult to enter, but it ought not to be ignored.



**Persons and Organisations contacted:**

**UNDP/UNIDO: Ms. Rita Kumar**

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**UNIDO: Mr. Khosla, CTA LIR/87/007**

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**National Investment Commission (NIC): Mr. Moses Jackson**

**Mr. Charles Bonar**

**Forestry Department Agency: Mr. Gbanja, Head of Planning and Research**

**FAO: Prof. L.A. Oduro-Oguvel, Head of Mission**

**Jantzen (Liberia) TNC: Mr. Ismail El-Ali Managory, Director**

**Firestone Plantation Co.: Company Secretary**

**Monrovia Vocational Training Centre: Woodmaking Staff & Trainees**

**LWCIA: President Elect Mr. Robert Stuart,  
Vice President and members**

**COTE D'IVOIRE**

The FAO Yearbook statistics 1988 No 4 Vol. 1 show:

Harvest Volumes m3

|      | Industrial | Fueiwood  |
|------|------------|-----------|
| 1985 | 3,934,000  | 7,927,000 |
| 1986 | 3,660,000  | 8,252,000 |
| 1987 | 3,251,000  | 8,541,000 |

The FAO Vol. 1 1989, statistics for Forest Products for sawn lumber and veneer (non-coniferous) gives forest products figures (see table 1, page 10).

The Ministry of Industry figures for the timber industries 1982 - 1986 are Table 2 on the next page.

**INDUSTRIES**

In 1986 it was said there were 77 companies, of which 74 sawmills, 8 peeler/plymills, 7 sliced veneer plants and 8 secondary processors (mouldings etc.). Since some companies carry out more than one operation the figures do not total. At that time 12 production units were at a standstill, but it was expected three new peeler lines and 2 slicers would be installed in 1986-87.

The Ministry advised that current production is falling and that the economic state of the industry is less buoyant. Only veneer exports showed any actual price increase in 1987 compared with 1980.

The larger and more successful operators are said to be foreign owned and managed. 48 companies were in a sound financial state and controlled 71% of the total market.

23 companies were financial run down and controlled 26% market share, and 29 companies were unviable with 3% market share.

TABLE 2

EVOLUTION DU SECTEUR

Au cours des cinq derniers exercices

**PRODUCTIONS**

|                     | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---------------------|------|------|------|------|------|------|
| <b>GRUMES</b>       |      |      |      |      |      |      |
| Exportées           | 2267 | 2267 | 2127 | 1394 | 1020 | 617  |
| Transformées        | 1819 | 1802 | 1751 | 1833 | 1930 |      |
| Total               | 4086 | 4069 | 3878 | 3227 | 2950 |      |
| <b>SCIAGES</b>      |      |      |      |      |      |      |
| Exportés            | 320  | 380  | 419  | 431  | 452  |      |
| Local               | 247  | 336  | 300  | 301  | 308  |      |
| Total               | 667  | 718  | 719  | 732  | 760  |      |
| <b>DEROULES</b>     |      |      |      |      |      |      |
| Exportés            | 39   | 47   | 44   | 59   | 70   |      |
| Consommés           | 68   | 73   | 73   | 78   | 57   |      |
| Total               | 107  | 120  | 117  | 137  | 127  |      |
| <b>TRANCHES</b>     |      |      |      |      |      |      |
| Exportés            | 5    | 6    | 5    | 9    | 11   |      |
| Local               | 2    | 1    | 1    | 1    | 1    |      |
| Total               | 7    | 7    | 6    | 10   | 12   |      |
| <b>CONTREPLAQUE</b> |      |      |      |      |      |      |
| Exporté             | 21   | 23   | 17   | 19   | 31   |      |
| Local               | 20   | 21   | 21   | 20   | 16   |      |
| Total               | 41   | 44   | 38   | 39   | 47   |      |
| <b>TOTAL</b>        |      |      |      |      |      |      |
| Exporté             | 385  | 458  | 485  | 518  | 564  |      |
| Local               | 369  | 358  | 322  | 322  | 325  |      |
| Total               | 754  | 816  | 807  | 840  | 889  |      |

**PRODUCTION**

(en m3)

|                            | <b>Consom. Grumes</b> | <b>Production</b> | <b>Dont Export</b> |
|----------------------------|-----------------------|-------------------|--------------------|
| <b>Sciages</b>             | 1,430,534             | 680,607           | 452,117            |
| <b>Deroulage</b>           | 183,489               | 70,183            | 70,464             |
| <b>Tranchage</b>           | 28,996                | 12,595            | 10,903             |
| <b>Contreplaque</b>        | 142,198               | 47,231            | 31,440             |
| <b>2ème Transformation</b> | <u>145,003</u>        | <u>28,139</u>     | <u>26,018</u>      |
| <b>TOTAL</b>               | 1,930,220             | 839,749           | 591,002            |

Une petite partie des sciages vendus localement ont en fait été exportés, le volume de sciages exportés donc un peu supérieur à celui indiqué ici (ventes plages).

## PLANS FOR ACTION

The Ministry of Industry Plan of Action is reproduced as Annex 2.

In March 1988 the Ministry of Industry published 'Schema Directeur Du Development Industriel De La Cote D'Ivoire' a comprehensive plan for virtually all sectors of industry. The UNIDO CTA M.A. Lungart has had considerable input into the production of the overall industrial development plan. The section on timber is reproduced as Annex I. It should be noted that tertiary processing in CDI is comparable with secondary processing elsewhere in this series of reports.

As can be noted, the potential developments are said to be a further 2 or 3 peeler mills, 1 sliced veneer mill and a further 20 - 25 plywood lines, some augmenting existing mill production.

The Plan for secondary (tertiary) processing is to utilise a further 120,000 m3 of sawnwood, basically through 10 new furniture factories.

One measure proposed is to ban the export of Framire (*Terminalia ivorensis*), and other intentions to ban certain other species as log exports are also extant.

It is proposed to try to attract overseas partners in secondary (tertiary) developments and suggested these might be vertically integrated with sawmill activities.

M. Lungart stated it was planned that an international team of experts would be deployed in January/February 1990 to identify and schedule 200 - 300 projects.

It is intended that all investments will be private sector through local and international banking and other sources.

A large meeting of some 200 - 300 persons was held early in 1989, of government, banks and industries to assist in devising the industrial

development package. 145 enterprises were selected for assistance by the 1990 teams, 40 of them in the timber sector of which 4 - 5 in the Abidjan area and the rest in the regions.

The plan for the (tertiary) sector mentions knock-down furniture for export.

Industrially, the timber sector is being assisted by ITC and local GTA for project IVC/87/011 is M. P. Y. Maurice. Two reports are available; ITC/DTC/89/1008 dated 18 May 1989 and ITC/DTC/88/852 dated 25 July 1989, both dealing with development of wood export industries. These appear to suggest assistance to a number of individual enterprises.

#### THE SITUATION:

The UNIDO PPD. 6 of 6 October 1986, Industrial Development Review Series, Cote d'Ivoire, page 5, para 1.3 states "The manufacturing sector in Cote d'Ivoire is characterised by the predominance of large scale enterprises, weak inter-industry linkages (particularly between foreign and small local enterprises), high proportion of foreign ownership and enterprises and concentration of industries in the Abidjan area. The manufacturing sector is based mainly on the processing of cocoa, coffee, timber and other agricultural commodities..."

This appears to describe fairly closely the situation in the timber and secondary processing sector.

The Ministry of Industry felt that as the large timber companies are all affiliated with overseas ownership or control, they were little interested in promotion of LKS or developments outside their own interests.

It was expected that differential log export tax and bans or restrictions on certain species would encourage secondary/tertiary utilisation within the country.

The use of fuelwood within CDI is very high, the World Bank/UNDP report 5250 IVC April 1985 highlights the growth in use of fuelwood and charcoal and the impending excess demand over supply in the urban areas.

Generally the impression was given that sufficient reports and consultations had been held and that the programme of work which is now in hand for future implementation is adequate to take care of the situation.

As a consequence it was necessary to avoid any feeling that some new change of direction was in view and this made the acquisition of some information relating to the terms of reference less simple.

According to M. Maurice there may be some interest in developing the production and use of rubberwood and the FAO Project Officer indicated that there are three projects in conjunction with WFP including planting of wood lots.

It is proposed therefore not to comment on the individual items in the terms of reference, but to make the following general comments.

#### COMMENT

As elsewhere, construction is based on steel and cement wherever affordable. The furniture and joinery industries are as in Liberia extensions of construction companies, or manufacturers/importers or small local manufacturers.

There are no particular problems related to technology or research and the situation in regard to training was not ascertained.

There is undoubtedly a market locally for medium cost furniture and no doubt exports can be developed.

There is production of excellent design, high quality Rattan furniture. Prices are very high, at least on the domestic market, probably 3 times Philippines prices, however the quality of cane and workmanship is exemplary.

### 3. STRATEGIES

These appear to be covered by the activities of UNIDO and ITC mentioned.

It is recommended that proposals in respect of knock-down furniture be re-examined because this market sector is in the lower price ranges, with intense competition within Europe from very large manufacturers, and anyway, as noted in the Liberia report, countries with supplies of prime hardwoods might best concentrate on solid wood construction in the medium to high price ranges where knock-down products are not acceptable.

4. There appears little potential for regional cooperation.

5. The role of international organisations is already defined.

### 6. Conclusions

The programme of work set out in the published plans and the stated intentions of UNIDO and ITC are self evident.



**COTE D'IVOIRE**

**Persons and organisations met:**

|  |                                      |                           |
|--|--------------------------------------|---------------------------|
| <b>UNDP</b>                            | <b>M. Hitz-Ward</b>                  | <b>Assistant Res.Rep.</b> |
| <b>UNDP</b>                            | <b>M. L'Ouest</b>                    |                           |
| <b>UNIDO</b>                           | <b>M. Lungart</b>                    | <b>CTA</b>                |
| <b>ITC</b>                             | <b>M. Maurice</b>                    | <b>CTA</b>                |
| <br><b>Ministry of Industry</b>        |                                      |                           |
|  | <b>Mlle Amand</b>                    | <b>Timber Section</b>     |
| <br><b>Syndicat Industriel Du Bois</b> |                                      |                           |
|  | <b>M. Kung</b>                       | <b>President</b>          |
| <br><b>Les Meubles</b>                 |                                      |                           |
| <b>ALIE-NZI</b>                        | <b>Furniture Manu-<br/>facturers</b> | <b>M. R. Alain</b>        |
| <br><b>FAO</b>                         |                                      |                           |
|  | <b>M. Jossef Tadesse</b>             | <b>Programme Officer</b>  |

## **GHANA**

### **INDUSTRIES**

The Ghana Timber Export Development Board has good statistics and the export and local consumption figures are tables 3 and 4 on the following pages.

As can be seen, Ghana has developed exports of lumber, sliced veneer and furniture parts. Lumber exports have returned to the levels of the mid 1970's and some gains have been made in secondary products.

The log and production figures do not correlate with the FAO statistics.

After the economic recession of the early and mid 1980's the primary and secondary industries have recovered with the assistance of e.g. the recent World Bank Project.

There is increasing emphasis on the secondary processing sector and the GTEDB felt that these efforts should be supported by a programme of improvements in sawmills' techniques to reduce wastes.

The Ghana Furniture Producers Association (GFPA) also recognised the need for improved techniques at shop floor level, and for management it was felt that cost control and appreciation of cost effectiveness were the major needs. It was felt that management has often only a general idea of costs and appropriate levels of selling prices.

### **THE SITUATION**

1. a) The construction industry in Accra did not appear active, few new developments were seen. Steel and concrete are the major materials. Shipbuilding was said to have had a development phase for fishing boats but once the fleet was built up it is difficult to find other markets for the available capacity. Wooden hulls are less used than steel or glassfibre products these days, though consideration could be given to a study of alternative markets for wooden hulls (possibly for fitting out elsewhere), both within the region and overseas.

TABLE 3  
TIMBER EXPORT DEVELOPMENT BOARD  
EXPORT PERFORMANCE BY PRODUCTS - 1986 - 1988

| P R O D U C T S         | 1986           |                    | 1987           |                    | 1988           |                    |
|-------------------------|----------------|--------------------|----------------|--------------------|----------------|--------------------|
|                         | VOLUME (m3)    | VALUE (DM)         | VOLUME (m3)    | VALUE (DM)         | VOLUME (m3)    | VALUE (DM)         |
| LOGS                    | 195,820        | 54848,274          | 298,314        | 62,099,676         | 338,922        | 79,589,046         |
| LUMBER                  | 83,577         | 40,693,438         | 161,927        | 68,594,341         | 169,640        | 79,492,471         |
| SLICED VENEER           | 11,885         | 7,946,518          | 14,081         | 9,727,170          | 14,460         | 12,611,907         |
| ROTARY VENEER           | 2,188          | 883,601            | 5,632          | 1,957,296          | 6,391          | 2,596,176          |
| RECONSTITUTED VENEER    | -              | -                  | 121            | 177,936            | 140            | 244,551            |
| PROFILE BOARDS          | 460            | 559,493            | 583            | 637,604            | 473            | 555,613            |
| CORESTOCK               | 38             | 24,110             | -              | -                  | -              | -                  |
| FLOORINGS               | 250            | 262,552            | 78             | 59,312             | 139            | 74,077             |
| PLYWOOD                 | 168            | 71,571             | 777            | 385,528            | 1,057          | 514,303            |
| PROCESSED/LUMBER/MOULD. | -              | -                  | 971            | 830,368            | 742            | 666,782            |
| CURLS                   | -              | -                  | 243            | 355,872            | 443            | 794,763            |
| BOULES                  | -              | -                  | 583            | 354,389            | 696            | 375,792            |
| RAW CANES               | -              | -                  | -              | -                  | 1,540pcs       | 1,600              |
| DOORS                   | -              | -                  | -              | -                  | 20             | 29,219             |
| TOYS                    | -              | -                  | 68             | 133,452            | 106            | 213,556            |
| FURNITURE PARTS         | 1,441          | 2,161,908          | 2,088          | 2,935,945          | 2,976          | 4,166,673          |
| BROOMSTICKS             | 127            | 38,710             | 73             | 29,656             | -              | -                  |
| DOWELS                  | -              | -                  | 17             | 14,828             | -              | -                  |
| DOOR LIPPINGS           | -              | -                  | 9              | 4,448              | 2              | 5,131              |
| <b>T O T A L</b>        | <u>295,954</u> | <u>107,490,175</u> | <u>485,565</u> | <u>148,297,821</u> | <u>536,213</u> | <u>181,931,660</u> |

1986 av. DM 2.1605 = \$1  
US\$ 49,752,453

1987 av. DM 1.77 = \$1  
US\$ 83,784,080

1988 av. DM 1.79 = \$1  
US\$ 101,637,800

TABLE 4

TIMBER OUTPUT, EXPORTS AND CONSUMPTION  
(1973 - 1990) (000m3)

| YEAR  | LOG PRODUCTION | LOG EXPORTS | LOG CONSUMPTION | MILL PRODUCTION | MILL EXPORTS | LOCAL CONSUMPTION | OF WHICH<br>VALUE ADDED |
|-------|----------------|-------------|-----------------|-----------------|--------------|-------------------|-------------------------|
| 1973  | 2050           | 1080        | 970             | 446             | 290          | NA                | 156                     |
| 1974  | 1420           | 430         | 990             | 525             | 237          | NA                | 289                     |
| 1975  | 1690           | 602         | 1078            | 405             | 194          | NA                | 291                     |
| 1976  | 1500           | 531         | 1059            | 476             | 167          | NA                | 309                     |
| 1977  | 1420           | 454         | 966             | 434             | 85           | 4                 | 345                     |
| 1978  | 1100           | 312         | 783             | 354             | 92           | 5                 | 257                     |
| 1979  | 880            | 198         | 682             | 306             | 39           | 4                 | 203                     |
| 1980  | 660            | 105         | 555             | 277             | 83           | 6                 | 188                     |
| 1981  | 420            | 54          | 366             | 146             | 54           | 4                 | 78                      |
| 1982  | 420            | 53          | 367             | 190             | 47           | 2                 | 141                     |
| 1983  | 445            | 61          | 384             | 173             | 56           | 3                 | 144                     |
| 1984  | 510            | 70          | 440             | 198             | 72           | 4                 | 122                     |
| 1985  | 626            | 130         | 496             | 223             | 96           | 3                 | 127                     |
| 1986  | 803            | 196         | 607             | 322             | 117          | 2                 | 205                     |
| 1987  | 1027           | 298         | 729             | 396             | 108          | 4                 | 198                     |
| 1988  | 1137           | 239         | 798             | 439             | 197          | 4                 | 242                     |
| 1989* | 950            | 202         | 748             | 411             | 176          | 7                 | 235                     |
| 1990* | 1304           | 500         | 804             | 362             | 200          | 10                | 152                     |

\* PROJECTIONS

SOURCE: TIMBER EXPORT DEVELOPMENT BOARD  
SEPTEMBER, 1989

b) Housing also did not show signs of significant activity, and as in the other countries, concrete block is the preferred construction.

c) The furniture and joinery industries are relatively well developed however there are needs for improvement in volume and technique. Some small craft making of Rattan furniture is seen of medium quality.

d) No time was available to look into other products and packaging.

## 2. PROBLEMS

These are similar to those of other countries, though Ghana is further advanced than many other countries in terms of potential volumes and the level of quality.

### a) Technology

No special technology is needed. The shop floor practice needs to be upgraded and the finishing up to export standard requires attention.

### b) Research and Development

There is need for research into properties of many lesser known species for manufacture of components, semi-finished and finished products. Some efforts have been and are being made but these need much greater emphasis and possibly cooperation with an overseas organisation such as TRADA, TNO or CIPT is indicated in order to speed up the basic research.

### c) Training

GPPA would like to see a vocational training centre for the industry, and a need for a 'pool' of experts able to assist all enterprises to upgrade skills and management.

The Italian woodworking machinery manufacturer SCM has offered to the Government to set up a wood machining training centre, supplying machines and training staff. The UNIDO JPO at UNDP Accra is to consult with the Italian Ambassador with a view to having UNIDO assist in the project by advising Government on e.g. appropriate technology and product potentials.

The Forestry Department Utilisation Section in Takoradi has buildings, an old sawmill and a joinery workshop with some old, some newer small woodworking machines, benches, tools etc. which might well be capable of being adapted to become the training centre proposed by GFPA. Present facilities appear much under-utilised.

d) Transport

Apart from the usual difficulties in sourcing spares from overseas, no special difficulties were noted.

e) Markets

GFPA and GTEDB are well briefed on their actual and potential markets.

3. STRATEGIES

3.1 The GTEDB, in conjunction with the Ghana Export Promotion Council and the Ghana Investment Centre, are asking the Government to formulate a request for an initial 4 - 6 month programme with UNIDO to assist in identifying the direction of potential full scale projects.

It was suggested the initial needs are for:

|                                      |              |
|--------------------------------------|--------------|
| Team leader                          | 6 man months |
| Specialist in computer survey design | 5 " "        |
| Wood technologist                    | 3 " "        |
| Marketing specialist                 | 1 " "        |

GTEDB is putting forward this request, however, GFPA stated a request made for a similar project by their Association had so far had no response from Government.

3.2. It appears likely that these request may be caught up in bureaucratic processes, and as in other countries it would appear necessary for project proposals to be explicit in economic and financial terms and pursued with the assistance of the relevant department of Planning and/or Economics.

3.3. There is need to assist in institution building to enable project to be implemented outside government departments by such organisations as GTEDB and GFPA.

#### 4. POTENTIAL FOR REGIONAL COOPERATION

With the exception of the shipbuilding mentioned above there seems little present potential.

#### 5. ROLE OF INTERNATIONAL ORGANISATIONS

International organisations are or have been heavily involved in the primary timber sector, the programme needs to be extended deeper into secondary processing.

#### 6. CONCLUSIONS

Ghana is well along the road once more and needs assistance to develop the furniture industry in particular. There are good foundations and a keen interest in future progress in this sector.

**NIGERIA**

**INDUSTRY**

The FAO statistics show that Nigeria's log production for 1987 was estimated to be about 5.6 million m3, no exports, and production of sawnwood at estimated 2.7 million m3 with no exports.

The FIAG report FIAG/84/21 from project RAF/82/006 reports that even in 1984 Nigeria was an importer of timber, and pointed out that the remaining exploitable forest resource would be virtually nil in 6 - 8 years from 1980, and that a harvest volume of around 6 million m3 p.a. "highlights an extremely dangerous position with regard to Nigeria's Forest Estate".

The number of wood using industries listed by FIAG is in Table 5.

Figures obtained from the Manufacturers Association for wood products and furniture manufacturing are as follows:

|                     |                       |
|---------------------|-----------------------|
| Installed Capacity: | 1,820,120 units       |
|                     | 300,000 pieces        |
|                     | 127,630 metric tonnes |

of which

|                       |                      |
|-----------------------|----------------------|
| Capacity Utilisation: | 262,121 units        |
|                       | 74,500 pieces        |
|                       | 69,367 metric tonnes |

It is not clear exactly how these calculations were made, nor the relationship between units, pieces and metric tonnes, and the Association's computer was down during the whole time of the stay in Nigeria.

However it could be inferred that the utilisation is something less than one third of capacity.

The sawmills and timber yards in Lagos appear grouped all together in one area and are unlikely to be very efficient.



TABLE 5

Number of Wood Using Industries and Rated Input Capacity

| <u>Sector*</u>  | <u>No of<br/>units</u> | <u>Input capacity<br/>m3/(AR)</u> | <u>Output<br/>m3 1980</u> |
|-----------------|------------------------|-----------------------------------|---------------------------|
| Sawmills        | 1300                   | ..12,000,000                      | 2,700,000                 |
| Flymills        | 6                      | 275,000                           | 68,000                    |
| Particle Board  | 2                      | residues                          | 45,000                    |
| Match Factories | 6                      | 25,000                            | 14,000                    |
| Pulp and Paper  | 3                      | Projected not<br>operational      |                           |

It is possible that the number of sawmills is underestimated. No permit is needed to operate. The majority of sawmills are small woodwasting units with a very low conversion rate.

\* Single shift

The moving of government departments to the new Capital, Abuja, makes it difficult to meet officials and find facts. Some departments have moved, some partially moved, some are moving. The Ministry of Industries is now located in Abuja.

All the senior officials of the timber section of the Manufacturers Association in Lagos were out of town, travelling.

The Nigeria Development Bank is able to act as implementing agency. Mr. Okudo of the Bank felt that the timber sector was overconsulted and expressed disappointment that no timber based projects were in hand. The NIDB has an agreement with UNIDO and can implement projects directly as it is doing with a metal project funded directly to the bank from Poland.

The FAO Project Officer explained that the Forestry was not a government priority sector, however it was felt that government was beginning to appreciate the needs in the sector and showing interest in assistance from e.g. FAO.

A Wood Residues project is in prospect with the Federal Department of Forestry, Agriculture and Land Resources and the Tropical Timber Action Plan is starting with a mission early in 1990 followed up by a feasibility study and project.

A scheme for training of trainers in plantation work is being developed.

As with the other countries, much frustration was expressed as bureaucratic delays in approving project proposals and projects.

There was considerable mention of a semi-government company Epe Plywood Industries for which proposals have been discussed for rehabilitation. NIDB is involved in this proposal. A visit to the mill, about 1 hour drive from Lagos disclosed a set of large buildings with much ply and veneer equipment, most of

which was not in working order. There is a joinery and furniture section, but again little activity, though there is a small showroom with some fair quality products. The company has been hoping for some time for a project to assist the company to rehabilitate and to expand into some type of either particle or other type of wood based board.

#### **THE SITUATION**

1. a) Construction in Lagos did not appear very active. There was no time to enquire in regard to shipbuilding.

b) Housing is very active, particularly on the outskirts of Lagos with large numbers of system built concrete houses, with wood rafters only, and 4 to 6 story apartment blocks, all of concrete block or concrete systems.

c) In such a large and populous country as Nigeria it is not realistic to make comment without background of a longer and more comprehensive study. However, if the Manufacturers Association figures are of any guide, and general comments from other reports and those on the spot, the woodworking industry generally suffers from the problems common elsewhere, run down and poorly maintained machinery, inadequate management and technical skills, and probably compounded by an increasing shortage of lumber.

d) There was no time to investigate other wood products.

#### **2. PROBLEMS**

a) There would be no particular technology difficulties, perhaps the use of plantation wood might happen sooner than in other countries, but the technology of this is well known.

#### **b) Research and Development**

It would seem likely Nigeria will need assistance in this area particularly in the furniture sector.

c) It is not known if there is any specific training for joinery and furniture.

d) Nigeria is a very large country and with separate States responsible for roads and transportation there are many complaints about quality and condition of transport and roads.

Many waterways are reported as being choked with weed with deleterious effects on waterborne transport and fishing.

e) Markets

Quite obviously the domestic market is very large and distribution a major consideration. Development of export may not be a practicable proposition at this stage in the redevelopment of the economy.

### 3. STRATEGIES

If the government can be convinced of the priority which needs to be given to rehabilitation of the wood using sector a comprehensive survey would be required to assess state of wood industries State by State. An economic evaluation of the potential of the industry to supply adequately the domestic needs and a view of eventual export potential would be needed.

This would need to take into account costs and locations of existing and any proposed plantations and the sources of imported wood.

### 4. REGIONAL COOPERATION

It seems likely Nigeria will have to establish relationships for import of wood through agreements with neighbouring resource rich countries.

### 5. INTERNATIONAL ORGANISATIONS

As it is implied the government is becoming more interested in assistance in the wood producing and using sectors, and with the current economic difficulties there will be considerable opportunity for project development.

### 6. CONCLUSIONS

With such a short visit and difficulty in finding officials and others it is not realistic to make firm conclusions. Nigeria is large and populous, its

timber resources are said to be stretched to the limit and so far government is said not to have shown much interest in the sector. A special mission able to spend time on assessments State by State to investigate the current position of woodworking industries would be a first step.

**NIGERIA**

**Persons and Organisations met:**

**UNDP: Mr. Mulagwe, Assistant SIDFA**

**FAO: Mr. Cruz, Project Officer**

**National Industrial & Development Bank (NIDB): Mr. Okudo, Senior Officer,**

**Nigeria Manufacturers Association: Statistical Department staff**

**Epe Plywood Industries Co.: Mr. J.A. Olaleye, Managing Director**

LIBERIA COTE D'IVOIRE GHANA NIGERIA

GENERAL CONCLUSIONS

As noted in the reports and mentioned in many previous reports, meetings and conferences, there is a number of common problems in the secondary wood processing sector. The following conclusions are adduced from the mission:

1. There is no general, effective promotion of the use of lesser known species.
2. Methods of logging, sawmilling and other utilisations are most often wasteful.
3. There is little utilisation outside urban areas of wood wastes.
4. Lack of training and training facilities on the scale needed for development of secondary wood industries.
5. Need for a pool of national experts trained to give assistance and advice on secondary processing.
6. Needs for training of management, particularly in product cost accounting and cost control.
7. Poor skills for machines and saw/cutter maintenance.
8. Low or no availability of statistics on secondary processing sector.
9. Trade Associations (or appropriate NGO's) require institution building to assist in capability to implement projects and serve as centres for raw material linkages and transfer of technology.

For future preparatory meetings, conferences and project proposals it is considered the following information needs should be addressed:

1. Specific conference(s) involving senior officers from government planning, economic and finance departments to consider:
  - a) economic strategy for use of remaining natural timber resources, presently and in the medium and long term.
  - b) economic strategies for provision and eventual utilisation of plantation wood. Both natural resource and plantation wood strategies.
2. Specific conference(s) for planners, economists and industrial departmental senior staff on regional strategies for future resource allocation and use and appropriate development in secondary processing woodworking industries.
3. Involve planning and economic departments in conferences, meetings and negotiations on wood using industries.
4. Evaluate and collate information on plantation wood (a) costs of eventual roundwood (b) type of future primary processing (c) eventual secondary product potential.
5. Reports and project proposals to include economic impact in-country.
6. Provision of long term forecasts of results of resource changes and in-country and inter-regional wood trade flows for both industrial and fuelwood, i.e., a resource: economic study, not resource alone.
7. Economic studies to include assessments of tax incentives and disincentives in natural resource use, plantation establishment and primary and secondary processing sectors.

In summary, it is felt there should be increased emphasis on the financial and economic forecasts both on a country and on an individual project basis.





the accounting of funds directly to the Board/Council. He will prepare budgets and annual programmes for approval by the Board and may not execute programmes or incur expenditures or commitments beyond the agreed budget. The Executive Director acts as secretary to the Board or Council and is legally responsible for the affairs of LWCIA. The Executive Director may appoint staff only in numbers and on terms and conditions approved by the Board and appointments and dismissals must be approved by the Board which will only in exceptional circumstances fail to uphold the decisions of the Executive Director.

LWCIA should encourage all companies and individuals to join and should seek methods of obtaining further funding and prestige, e.g., a small levy, say, 20 cents per m3 on log exports, levied by government through FDA and then on paid to LWCIA income, say \$100-140,000 p.a.) or a 5% import levy on imports of furniture and furniture parts \$35-90,000 p.a.

NOTE: LWCIA needs to have a regular and substantial income if it is to achieve its objectives and be self supporting, viable and a force in the promotion of eventual exports in the secondary sector.

## AXE BOIS

Pendant longtemps, les grumes n'ont pas souvent donné lieu à une transformation industrielle primaire.

L'industrie du bois comporte traditionnellement des stades de 1ère, 2ème et 3ème transformations.

La première est avant tout celle du sciage (747 000 m<sup>3</sup> en 1986), ensuite, celle du déroulage (130 000 m<sup>3</sup>) et , enfin , celle du tranchage.

La seconde transformation prend aussi des formes diverses : contreplaqué, baguettes, moulures bois, feuillard...

La troisième transformation est celle de la menuiserie, des meubles et accessoirement des jouets en bois.

L'épuisement de la forêt ivoirienne commande de réduire la première transformation aux besoins du marché local (la moitié des sciages possibles) et à la deuxième transformation (l'autre moitié). Le Schéma Directeur du développement industriel regroupera donc d'abord la première et la deuxième transformation avant de se consacrer à la troisième transformation.

### 12. PREMIERE ET DEUXIEME TRANSFORMATION DU BOIS

1. Les indicateurs statistiques du secteur révèlent :

en millions de francs CFA

|                              | 1981   | 1985   |
|------------------------------|--------|--------|
| Valeur ajoutée brute         | 11000  | 15200  |
| Chiffre d'affaires           | 27800  | 51400  |
| dont exportations            | 62,6 % | 71,9 % |
| Achats de matières premières | 7200   | 14800  |
| dont importations            | 2,7 %  | 1,6 %  |
| Effectifs totaux             | 5702   | 7565   |
| ivoirisation du capital      | 13,3 % | 38,5%  |
| ivoirisation personnel       | 48,6 % | 54,8 % |

Les industries du bois sont les plus anciennes de Côte d'Ivoire ( 1887) mais n'ont pris vraiment leur essor qu'à partir de 1965 . Le nombre des entreprises a doublé de 1965 à 1972 .

Globalement , l'activité , les investissements , les effectifs ont nettement augmenté de 1981 à 1986 ; les productions de sciages , de contreplaqué et de déroulés ont augmenté de 13 à 19 % entre ces dernières années, celle du tranchage de 71 % . Pour tous ces produits , les débouchés locaux se sont amoindris ( de 11 à 20 % pour les sciages , contreplaqués et déroulés ) et cette diminution a été plus que compensée par une forte augmentation des exportations plus rémunératrices que le marché local .

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En 1986, 77 établissements industriels étaient regroupés en 69 entreprises. Leur taux d'utilisation était de 90 % pour le déroulage, 73 % pour le tranchage et 69 % pour le sciage.

Les 69 entreprises dont les comptes ont été examinés font apparaître des résultats inégaux : un tiers systématiquement déficitaire, un tiers excédentaire et un tiers variable. Les entreprises déficitaires ont des charges salariales plus importantes, des capacités de production moins bien utilisées et sont plus orientées sur le marché local.

2. La surexploitation de la forêt ivoirienne implique un couple "limitation du sciage - développement de la deuxième transformation".

Ce développement est possible et souhaitable. Le pays dispose d'une main d'oeuvre expérimentée et d'une expérience industrielle. La technologie du secteur est simple et stable. Il peut contribuer à l'équilibre des échanges extérieurs, le marché mondial étant énorme au regard des potentialités ivoiriennes (la Côte d'Ivoire ne fournit que 5 000 des 800 000 m<sup>3</sup> de contreplaqué achetés par l'Europe de l'Ouest). L'industrie du bois peut aussi renforcer l'équilibre régional; elle est accessible à des PME et n'oppose pas de seuils d'investissement hors de portée.

3. Des obstacles doivent cependant être levés.

D'abord, les déforestages agricoles et une exploitation forestière de type minier ont conduit à un appauvrissement qualitatif et quantitatif des ressources forestières.

Ensuite, les scieries ont souvent un matériel peu performant et les directions des scieries ivoiriennes ne savent pas laisser passer les défauts admissibles de telle sorte que leur production est de trop bonne qualité au détriment du rendement/matière.

Les entreprises du secteur manquent de soutien bancaire. Lorsqu'elles sont installées à l'intérieur du pays, elles supportent des surcoûts (énergie, encadrement, transport) qui peuvent aller jusqu'à contrebalancer le gain dû à la proximité de la matière première.

Enfin, la fiscalité de la transformation industrielle du bois n'est pas favorable, car elle frappe la valeur du bois sans qu'un système de TVA généralisée permette une déduction correspondante.

4. Le développement de cette filière devrait donc obéir aux lignes suivantes :

### Objectifs

Une réorientation de l'utilisation de la matière première conforme au tableau 7 (page ci-contre)

Le tranchage, qui valorise le plus le produit brut lors de la première transformation devrait pouvoir augmenter de 70 % et le déroulage presque doubler. Le sciage devrait diminuer de 16 %; il serait réservé au marché local. Par rapport aux années antérieures, la proportion d'exportation du déroulage (75%) devrait fortement augmenter. Elle reste stable à un niveau très élevé (90%) pour le tranchage. Les exportations des contreplaqués augmenteraient un peu moins que les débouchés locaux.

LES STRATÉGIES SECTORIELLES PRIORITAIRES

Tableau 7

**Productions primaires (en mètres cubes)**

| Type                     | Export | Local  | Total  |                |
|--------------------------|--------|--------|--------|----------------|
| Sciage                   |        | 630000 | 630000 | (- 117000) (a) |
| Déroulage                | 200000 | 70000  | 270000 | (+ 141000) (a) |
| Tranchage                | 20000  | 2000   | 22000  | (+ 9000) (a)   |
| Affectation des sciaques |        |        |        |                |
| • marché                 |        |        | 300000 |                |
| • 2ème transformation    |        |        | 320000 |                |

**Production secondaire (en mètres cubes)**

|                     |                 |       |        |
|---------------------|-----------------|-------|--------|
| Contreplaqué        | 31000           | 25000 | 56000  |
| 2ème transformation | 160000          |       | 160000 |
|                     | (+ 132 000) (a) |       |        |

(a) par rapport à 1986

**Mesures**

Outre les politiques communes d'accompagnement (politique fiscale, politique bancaire, formation, politique des coûts des facteurs), les mesures suivantes sont préconisées :

- suppression des quotas : d'une manière générale, ils constituent une prime à la mauvaise gestion ; ils n'ont pour effet que de maintenir artificiellement en vie des entreprises très dégradées financièrement ; la plupart des entreprises n'ont pas besoin de quota pour réaliser des bénéfices ;
- mise en liquidation ou restructuration des entreprises à situations financières très dégradées (11 sociétés) ;
- interdiction d'exportation de grumes d'un certain nombre d'essences indispensables au programme prévu, comme par exemple :
  - pour déroulage : ilomba
  - pour tranchage : koto-aniegre
  - pour 2ème transformation : samba-bahia
  - pour l'ensemble : fromager et bété
- développement du marché local pour :
  - . promouvoir l'utilisation du bois dans la construction
  - . accélérer la normalisation des produits ligneux
- au plan commercial, étude des prix des marchés internationaux et des prix de revient de la concurrence, notamment du Sud-Est asiatique en vue de prendre les mesures nécessaires à la maximisation des recettes à l'exportation.

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**Potentialités de développement**

Elles apparaissent les suivantes :

| Type d'unité  | Nombre  | Investissement<br>(en milliards de francs) | Emplois nouveaux  |
|---|---------|--|---|
| - déroulage (environ 86000 m3 :<br>région de San Pedro  | 2 ou 3  | matériel industriel<br>20                  | les effectifs seront<br>maintenus à leur niveau<br>actuel étant entendu<br>qu'on ne tient pas compte<br>du personnel employé en<br>forêt. |
| - tranchage (environ 3000 m3)   | 1       | matériel forestier<br>7                    |   |
| - 2ème transformation<br>hors contre plaqué<br>(environ 120000 m3)  | 20 - 25 | matériel de transport<br>10                |   |
| - les augmentations de production<br>du contreplaqué se feront par<br>reconversion ou utilisation de la<br>capacité existante |         | autres 4                                   |   |
|   |         | <b>Total 41</b>                            |   |

### 13. TROISIEME TRANSFORMATION DU BOIS

1. Les indicateurs statistiques du secteur se présentent ainsi :

|                               | En millions de francs CFA |        |
|-------------------------------|---------------------------|--------|
|                               | 1981                      | 1985   |
| Valeur ajoutée brute          | 1462                      | 359    |
| Chiffre d'affaires            | 3200                      | 1000   |
| dont exportations             | 0,6 %                     |        |
| Achats de matières premières  | 1100                      | 376    |
| dont importations             | 47,9%                     |        |
| Effectifs totaux              | 851                       | 252    |
| Ivoirisation du capital       | 33,6 %                    | 43,9 % |
| Ivoirisation personnel        | 69,4 %                    | 66,7 % |
| Ivoirisation de l'encadrement |                           |        |
| Menuiserie (13-20)            | 5 %                       | 35 %   |
| Meubles (13-30)               | 49 %                      | 25 %   |

La troisième transformation du bois est constituée par des entreprises qui pratiquent indifféremment la menuiserie, l'ébénisterie, l'agencement et la décoration. On connaît très mal ce secteur où de nombreuses petites entreprises ne communiquent pas leur comptabilité. Neuf unités ont présenté leur bilan en 1985 et leur taille est modeste. Elles sont souvent gérées par des étrangers ainsi que le montre la faiblesse du taux d'ivoirisation du capital et de l'encadrement.

L'effondrement de la production, la régression importante des effectifs sont liés en partie à la crise qui a frappé le pays. La stagnation des salaires et la cessation de fourniture par l'Etat de meubles aux fonctionnaires, la diminution du nombre des étrangers expliquent la diminution de la production des meubles. La crise du bâtiment est à l'origine de celle de la menuiserie. La régression de l'ivoirisation de l'encadrement dans les fabriques de meubles n'est pas un signe favorable.

2. Pourtant, le secteur est intéressant au regard des objectifs de l'industrialisation. Il valorise les ressources locales et bénéficie d'une certaine expérience industrielle. Il peut contribuer à l'équilibre extérieur car le marché régional et le marché américain sont en croissance ; le marché européen, en régression lente, reste important. Le marché du meuble devient de plus en plus un marché du produit semi-fini qui ouvre des occasions de sous-traitance. La technologie du secteur est simple; le secteur contribue à l'équilibre régional et il n'est pas fermé aux PME. Sans que les réalisations passées soient bonnes, il peut donner lieu à ivoirisation et engendrer des relations interindustrielles. Le secteur des jouets est également à considérer.

3. Le développement du secteur se heurte à des obstacles :

Le marché des meubles est devenu très complexe et évolue rapidement tant en ce qui concerne la qualité des produits que leur design, leur style et leur prix. Pour la menuiserie, les entreprises