



EUROPEAN COMMISSION
DIRECTORATE-GENERAL VIII
DEVELOPMENT



**Data Collection and Analysis for Sustainable Forest Management in
ACP Countries - Linking National and International Efforts**

EC-FAO PARTNERSHIP PROGRAMME (1998-2001)
Tropical forestry Budget line B7-6201/97-15/VIII/FOR
PROJECT GCP/INT/679/EC

**Review and Improvement of data related to Wood-Products
in Zimbabwe**

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December, 2000

This report has been produced as an out put of the EC-FAO Partnership Programme (1998-2000) - Project GCP/INT/679/EC Data Collection and Analysis for Sustainable Forest Management in ACP Countries - Linking National and International Efforts. The views expressed are those of the authors and should not be attributed to the EC or the FAO.

This paper has been minimally edited for clarity and style

Table of Contents:

1. OVERVIEW	3
2. CURRENT STATUS OF NATIONAL FORESTRY STATISTICS RELATED TO WOOD-PRODUCTS	3
3. EVALUATION OF DATA	5
4. IMPROVEMENTS ON NATIONAL FORESTRY STATISTICS PROCESS	6
5. REFERENCES	7

1. OVERVIEW

Zimbabwe is a sub-tropical and the predominant vegetation is typical savannah characterised by grassland with scattered trees. The growth rates of the natural forests are low, the average mean annual increment of just below 1m³ ha/yr.

The most and main important use of wood is as fuel for cooking and heating. Firewood is used by the majority of Zimbabweans who live in the rural areas. Commercial production of industrial wood from the natural forests is low. The main reasons are that the few commercially important species are scattered, the forests have been creamed off and the growth rate is low.

Commercial plantations of tropical pine and Australian hardwoods are currently the main source of industrial wood. These are concentrated in the east of Zimbabwe. These pine plantations produce pulpwood, sawlogs and veneer logs. The hardwood plantations are of eucalyptus species and black wattle (*Acacia mearnsii*). The main hardwood products are poles, pulpwood, charcoal and wattle extract.

Primary and secondary processing of industrial plantations produces sawn timber, veneer, plywood, fibreboard, pulp and paper, doors furniture, and engineered blocks. A large percentage of the sawn timber output and timber related products are exported. The main export markets are South Africa, Botswana, Europe and the US.

Development and expansion of the commercial forestry sector has been below expectations due to high interest rates, shortage of foreign currency and land distribution problems. The major industry has made Zimbabwe self sufficient in softwoods industrial timber and with a surplus available for export thus earning the nation valuable foreign currency.

2. CURRENT STATUS OF NATIONAL FORESTRY STATISTICS RELATED TO WOOD-PRODUCTS

At national level, The Forestry Commission is a corporate body wholly owned by the government and responsible for forestry. One of its functions is to collect data on plantation areas, afforested areas, sawlog out for processing and sawn timber output. The reports with the above data were three or so years out of date. Recently, the Forestry Commission (without any clear explanation) has stopped sending out the questionnaire to the industry and is therefore no longer collecting data and producing the reports.

The Timbers Producers Federation (TPF) is the main and the only authentic source of data and information on production from industrial plantations. The TPF is a non-government organisation formed by timber producers to safeguard and promote their interests. Membership of the TPF is voluntary and it is funded by levies from its members. It sends out detailed data form on production every monthly to its members. In turn members fill in and submit details of production output.

The data on industrial timber production is based on details filled in on standard TPF forms that are filled in each month. Timber companies who are the members are expected to provide accurate and update information. The data is obtained from forests

and processing plants. At these places the cantos are measured and checked at various stages in the product realisation process as part of the management process

Pulpwood is stacked in cords. The net volume of each cord is calculated by multiplying the length, height and width of each and multiplying by a factor between 0.65 and 0.75 depending on the species and the organisation.

The volume of sawlogs and poles is obtained by measuring the length and tip diameter of each piece. The volume is then interpolated from volume table issued by the Forestry Commission. Only one forest estate calculates volume by converting weight to volume.

Output from sawmills and other processing plants is obtained by multiplying the usual three dimensions. Accuracy is paramount due to the high value of the product.

The TPF validates data by comparison with past records and the budgeted targets for each processing plant. If the submitted figure is either too high or too low, the TPF usually requests for an explanation.

Every year, the TPF produces the basic facts and figures of plantation forestry production in Zimbabwe. The pamphlets are available not only to members of the TPF but also to the public on request and free of charge.

Company level quantities of timber produced in stands and delivered at processing plants are physically measured in order to quantify the resource for costing and production management purposes. For sawlogs, tip diameter and length are measured; then, volume is calculated from locally developed volume tables. At processing plants, the volume output boards and lumber is calculated by measuring length, width, breadth and length of each product.

Organisations involved in the collection, analysis and dissemination of data related to wood products are:

- The Timber Producers Federation (an independent association of timber producers).
- The Forestry Commission (a corporate body owned by the government that is responsible for forestry matters).
- Central Statistics Office (a government department responsible for compiling all vital national statistics for records and planning purpose. It also collects data on imports and exports of wood products).

Firewood is the most important wood product in Zimbabwe. Firewood is used as fuel for cooking and heating. It is increasingly also being used by the urban poor mostly for cooking.

After firewood, plantation grown softwood is probably the second most important wood product since it is the country's only local major source of industrial timber. Zimbabwe is self sufficient in most of its industrial softwood requirements.

The export of wood products is based mostly on down streaming processing of plantation timber. The main wood products exported are sawn timber, furniture and other timber related products (e.g. fibreboard, engineered blocks, doors and wood components).

The types of wood based industries in Zimbabwe are shown in Table 1.

Table 1. Types of Wood Industries (1999)

Type of Plant	No. of Plants	Annual Production	Comment
Sawmill and processed timber	41	395 292 m ³	Production of sawn timber and other related products e.g. doors, blocks.
Poles	6	94 380 m ³	Treated poles
Mining timber	4	5 179 m ³	
Veneer & plywood	2	11 151 m ³	Only pine species are used.
Particle and fibre board	1	53 000 m ³	
Paper and paper products	2	59 149 m ³	A large input consists of recycled paper.
Wattle extract	1	4 500 tonne	
Charcoal	1	9 200 tonne	Made mostly from wattle logs.
Matches	1	8 174 tonne	

3. EVALUATION OF DATA

The data on the volumes of plantation timber harvested and the output from processing plants is more or less accurate. All the major growers are members of Timbers Producers Federation. The organisations collect data from their members monthly and on a yearly basis. Standard forms are designed and are sent to each member organisation.

In case of the TPF, funding of the organisation is based on levies. A levy is paid for area under plantation, volume felled and volume produced from a processing plant. The data is required on a monthly basis. Submitted returns are compared with data from the previous month and the same of the previous year. In case of a significant difference in the return, the TPF usually demands an explanation. There is a follow up on late returns on questionnaire. The TPF has a good system in place to collect data and there is a strong belief in the industry that the TPF data is fairly accurate and reliable.

Production of industrial timber from natural forests is regulated, managed and monitored by the Forestry Commission. Payment from the concessions is based on the actual volume produced. This is made to the landowner and the Forestry Commission generates income by charging a levy. The Forestry Commission always ensures that the volumes harvested are measured accurately so that the landowner, usually the Rural Council and are not cheated out as it is an important source of revenue.

Collection of data on wood used as firewood and other non-industrial use is based on estimates done by various authors and organisations. The last proper survey was done

in 1981. The data used are estimated with projected growth based on population increase.

The data collected by the CSO on wood products on imports and exports is not very useful as it does not show quantities and value. The data for each year from 1980 is compared by factor from the 1980 data. The data only shows the trend in growth and has limited use.

There is no co-ordinated national, regional and sectoral collection of data on wood products. The authorities do not realise the importance of adequate data on wood product production, consumption, exports and importance for planning and development purposes.

There is not recognised collection system to collect data by sector e.g. whether to use mass or volume.

Existing national institutions can easily be tasked to and have adequate resources in terms of human skills, infrastructure and equipment to collect woods products data. These are the Forestry Commission, the Central Statistics Office, the TPF and the Furniture Manufacturers Association, Timber Promotion Council and the Association of Rural Councils.

The TPF has adequate and accurate data on woods products from industrial plantations. Other non-government organisations can easily emulate the TPF and collect data for their particular sectors.

The Forestry Commission does not have a system for validating wood products data that they are collecting. There is need to have collected data validated.

The data is used mostly by researchers, students and academics. The data is used by researchers and academics mostly in the writing of papers for presentation at seminars, workshop or journals. There is no National Forestry Action Plan in place that would require use of such data. Organisations that are currently compile wood product data make it available to users only on request with the exception of the TPF. The TPF compiles annual timber industry statistics that is made available to its members. This data is also made available on request to the public free of charge.

4. IMPROVEMENTS ON NATIONAL FORESTRY STATISTICS PROCESS

The Forestry Commission as the national public body responsible for forestry should direct and co-ordinate the development of a national database of forestry and wood products. The Forestry Commission under current legislation has a mandate to collect only forestry data but this should be broadened to include wood products.

The Forestry Commission should have the necessary legal powers to collect data on wood products production, consumption, imports and exports from individuals, companies and member association and/or organisations. The data would be submitted in form of a filled in questionnaire in order to standardise the collection and presentation format.

With the growth and popularity of the Internet it is proposed to build a Website dedicated to the collection and dissemination of forestry and wood products data in Zimbabwe. The Website should be managed by the Forestry Commission. One should also be able to submit the required wood products data on line.

The report on wood products should be in two forms, basic report and a detailed report. The basic wood products reports should be available on the Website. The Website should be updated regularly, at least once a year.

The Forestry Commission should at least once a year, disseminate a summary report to organisations and associations that have contributed by filling in questionnaires. The basic report should also be sent to local and international stakeholders like non-government organisations, relevant government bodies, relevant universities and colleges and international organisations (e.g. FAO) that are involved in forestry.

In order to recoup some cost in producing the annual statistics a detailed report (as opposed to the basic report mentioned earlier) should be available to the public at a nominal cost. The report can also be ordered on line through the Internet.

As mentioned earlier the data collected by the CSO is of little use and importance. It is recommended that the CSO should collect data by quantity and monetary value preferably in US\$ of wood products imported and exported. The data should also classify wood products by product type e.g. hardwood lumber, softwood veneer, hardwood solid door etc.

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6. Year Book on Forest Products

The production figures in the Yearbook were in higher than the revised figures supplied by the author. It seems most of the figures under the production were estimates for every year. Where data on the actual production was available has been supplied as the revised figure.

Most of the data on import and export quantities and values for wood products sawn wood was not available. Official government statistics combine all categories of wood, wood based and wood related products. This obviously makes it impossible to know the quantity and value for each category. In those sections, there are many gaps because the author was not in the position of obtaining data or estimating the figures.

The author was unable to verify or comment on validity or accuracy of the current year book data related to exports and imports.