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Growing imbalance between supply and demand for rattan?

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Abstract—A key objective of the joint FAO-INBAR-Sida Expert Consultation on Rattan Development (Dec. 2000) was to analyse the global supply situation and to formulate key requirements to guarantee a sustainable future supply of rattan. The meeting highlighted that most of the raw material for local processing and for supplying the rattan industry is still obtained by harvesting of unmanaged, wild rattan resources in natural tropical forests. Only a very small share is obtained from rattan plantations. The huge economic and social importance of the rattan sector is based on a dwindling stock of wild rattan mainly from forests of tropical Asia and, therefore, compromising its future outlook. However, there are no reliable statistics on the status of rattan resources at a regional level for Asia and Africa in order to assess if the supply situation is really critical or not. A preliminary review of available data on trade in rattan products showed that reported quantities remained within approximately the same levels from 1995 to 2001. When looking at data from the international trade in rattan products during this period, there seems to be no indication of an imbalance between supply and demand, neither that the global cane supply is decreasing. What has changed is the direction of trade: Indonesia is now the main exporter of cane and China is the world's biggest importer. Shortages in the supply of cane may indeed in some cases be caused by dwindling resources of rattan in the forests, but in the economically successfully performing countries of South East Asia, a shortage of cane is often more due to the fact that rural people are gradually less interested in rattan harvesting as other (and better) options to sustain their livelihoods become available.

Key words: Rattan; international trade; global cane supply; rattan resources.

INTRODUCTION

An Expert Consultation on Rattan Development was held at FAO Headquarters in Rome, Italy, from 5 to 7 December 2000. This meeting was organized by the Food and Agriculture Organization of the United Nations (FAO) and the International Network for Bamboo and Rattan (INBAR), with the support of the Swedish International Development Cooperation Agency (SIDA) and brought together 23

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key experts in rattan from 16 different countries [1]. A key objective of this meeting was to analyse the global supply situation and to formulate key requirements to guarantee a sustainable future supply of rattan.

The meeting highlighted that most of the raw material for local processing and for supplying the rattan industry is still obtained by harvesting of unmanaged, wild rattan resources in natural tropical forests. Only a very small share is obtained from rattan plantations. The huge economic and social importance of the rattan sector is based on a dwindling stock of wild rattan mainly from forests of tropical Asia, and therefore compromising its future outlook.

The purpose of this article is to recall the importance of this expert meeting and particularly to revisit some of its key findings and recommendations related to the perceived imbalance between supply and demand for rattan products at global level.

RESOURCE STATUS

Rattans are climbing palms belonging to the Palm family. There are around 600 different species of rattan concentrated solely in the old world humid tropics of Asia and Africa. There are no true rattans in the new world. Some 60 rattan species are used commercially [1].

Rattan is normally a tree climber and produces long stems (cane) of great strength and remarkable pliability which make them easy to work with to produce finished products with intricate designs and fine quality. Undoubtedly, furniture is the most popular rattan product. Besides furniture, other rattan products include carpet beaters, walking sticks, umbrella handles, handles for cricket traps, animal traps, hats, ropes, cordage, birdcages, matting, baskets, panelling, hoops and boxes. Cane is the most valuable part of the plant, while shoots may be important locally as a vegetable.

About 90% of the production of cane comes from natural forests and the rest from plantations being raised by most of the major producing countries. Indonesia is the world's largest producer of rattan raw materials [2]. In an assessment made by Menon in 1989 [3], some 9.3 million ha of forests have been identified as potentially productive rattan forests, and potential sustainable yield has been estimated to nearly 600 000 tons per year, of which about 250 000 tons was assessed to be commercially important. Actual production ranged between 113 431 in 1982 to 168 854 tons in 1988 with an average production of 141 251 tons per year during the period, indicating an increasing trend. Silitonga [1] reports that there are over 3 million ha of forests containing rattans in the country, and that the highest output reached was in 1980 with 573 000 tons.

Concerns about dwindling rattan resources emerged from the early 1990s. For example, in the Philippines, the DENR Master Plan for Forestry Development of 1990 [4] estimated that 90% of the raw materials comes from the wild, and that these natural stands were faced with rapid depletion because of rampant timber harvesting, conversion of forest areas into other land uses and the unregulated cutting of rattan which reduces regeneration. Alarmed by the dwindling supply of raw materials, the rattan cottage and furniture manufacturers alerted the government of an imminent collapse of the industry. As an immediate response, development of plantations was initiated to possibly rescue the industry from decline.

Regarding the global status of rattan resources, the above-mentioned expert meeting [1] summarized that in Asia the overall resource status of rattan is critical, with several species threatened, particularly big-diameter cane species. Several countries face resource depletion such as India, Vietnam or Thailand. However, rattan resources are still abundant in key producing countries like Indonesia and Laos. In Africa, rattan is still widely available; although with a lower species diversify as compared to Asia. The meeting further noted that harvesting is mainly from wild sources with little or no management. In addition, during the meeting the global area of rattan plantations was reported to be around 130 000 ha. but with indications that some rattan plantations have been converted to other land uses in view of their low profitability, such as in Malaysia.

PRODUCTION AND TRADE

The meeting recalled the poor statistical knowledge available. Reliable data are needed to quantify the socio-economic importance of the rattan sector. Available production and trade figures of countries do often mix rattan data with other similar products and/or add data of raw cane with those of semi-processed canes and values of furniture. Reports from some producing countries in Asia indicate a steadily increase in the volumes of rattan production and trade till the mid-1990s with stagnating production trends since or even sharp decreases (as in the case of Thailand and Sri Lanka) [1]. Several explanations were put forward during the meeting, such as: shortage of quality raw material (explicitly due to dwindling forest resources but also including shortages caused by export bans on raw cane in neighbouring countries); that the rattan industry is highly fragmented and with a poor lobbying, marketing and financial power; that rattan marketing is focussing too narrowly towards its use for mainly furniture, a ‘complex’ sector in which rattan faces stiff competition from many substitutes such as bamboo, plastic or wicker and; because large furniture stores show a declining interest in stocking rattan furniture as they are bulky products with relatively low value, and difficult for applying the ‘flat-package’ system.

The best global statistics on rattan so far are those reported by countries on their respective imports and exports of rattan products. Volumes and values on international trade among countries are compiled in the UN COMTRADE database [5]. Data available on rattan include the following products: ‘raw and semi-processed cane primarily used for plaiting’, ‘seats’ and ‘furniture’. Only one product code exists specifically for the first group ‘Rattan used primarily for plaiting’ and in which a wide range of semi processed cane products of different qualities, sizes and prices are aggregated. The two other groups are even broader and do also include products made with other wicker materials such as bamboo. Despite these limitations, available COMTRADE data do give an indication about the order of magnitude of trade in rattan products and their trends.

Available data from the period 1988–1992 were compared with those from 1995–2002 as to observe if (reported) quantities in trade are declining or not.

In 1992, total world trade in rattan cane (based on import statistics) was valued at US$ 88 million. From 1988 to 1992, the average value was US$ 66 million. Discrepancies in export and import statistics are obvious in Table 1, but import information, being generally more reliable has been used to estimate value of world trade [2]. The reported import volumes ranged from 41 239 tons in 1988 to 71 333 tons in 1992, but data on reported quantities are undervalued because several countries report only the value of their imports and not their volume/quantity (or errors are made on the reported volume, particularly frequent is confounding the volume units such as tons with kg).

Reporting in the COMTRADE from 1995 onwards is based on the Harmonized System (HS); which is the basis for reporting used by customs world wide. The HS code 140120: 'Rattan used primarily for plaiting' is however similar to the previously used SITC Rev.3 code. Comparing trade data from prior to 1995 (based SITC Rev.3) with those after (based on the HS, versions 1996 and 2002) should be taken with much care in view of refinements and adjustments incorporated in the reporting methodologies and are therefore presented here in separate tables.

The reported quantities from rattan imports range along 101 145 tons in 1995 to 78 832 tons in 2000; while the quantities reported by the exporting countries oscillates from 37 259 to 34 877 tons for the same years.

Main exporters by volume are: Singapore (with reported volumes ranging from 15 106 tons in 1995 to 12 508 tons in 2000), followed by Malaysia (13 264 tons to 3373 tons, respectively) and Indonesia (where data on exported volumes was not available in 1995, but since have been growing steadily to 14 680 in 2000 and 22 125 tons in 2001).

Main importers by volume are: China (from 42 411 tons in 1995 to 50 819 tons in 2000), Singapore (from 10 688 tons in 1995 to 4090 tons in 2000) and USA (with no volume data available for 1995 to 3913 tons in 2000).

Table 1.
Value of world rattan trade (1988–1992)

Year	Value (US$ 1000)	
	Imports	Exports
1988	62 816	22 635
1989	70 542	75 042
1990	57 292	56 077
1991	52 471	49 142
1992	88 229	40 894

Source: COMTRADE data base system [5] (from Ref. [2]).

Interesting is that the ‘reported’ export quantity is on the average between one-third and one-half of the ‘reported’ import quantities. Between 1995 and 2001, total world imported quantities of rattan cane vary from 101 145 tons in 1995 to 78 832 tons in 2000; and 100 551 tons in 2001.

The reported quantities traded do vary within approximately the same levels of magnitude from 1992 to 2001, as well as the ‘average’ import prices of cane (total world import value/volume). During this period there seems to be no indication that there is a ‘growing imbalance’ between supply and demand, but that the demand for rattan fluctuates according to the economic conjuncture. What has changed is the direction of trade; Indonesia is now the main (official) exporter and China the world’s biggest importer.

Indonesia used to dominate the world trade in raw rattan accounting for about 80–90% of the trade until a ban was imposed on export of raw rattan in 1979, followed by another ban on export of semi-processed rattan in 1988 to encourage domestic downstream processing. Prior to the ban, Indonesia used to harvest around 120 000 tons of rattan every year during the seventies, most of which was exported in raw form. The highest export ever recorded was 100 000 tons for 1979 [1]. Consequently, Indonesian cane exports shrunk to an average of 882 tons per year over the period 1989–1991. This, however, does not tally with the import records obtained from COMRADE database. It appears that in spite of the ban on raw/semi-processed rattan, unrecorded export was still going on.

Since the recession that has hit many countries in Southeast Asia during the late 1990s, Indonesia has lifted the ban on the export of raw cane and is currently flooding the market with relatively cheap supplies of cane, negatively impacting the cultivation industry of Malaysia in particular [1]. The rattan export ban of raw cane had a negative effect on domestic cane prices in Indonesia. The main reason was the inefficiency of the Indonesian rattan-processing industry. Hence, the industry had to depress domestic prices of rattan in order to compete with China’s rattan industry, which has lower prices and better quality rattan products on the

Table 2.
Value of world’s rattan trade (1995–2001) HS 140120

Year	Value (US$ 1000)	
	Imports	Exports
1995	93 083	56 126
1996	93 614	60 475
1997	64 219	45 740
1998	67 894	46 618
1999	67 410	41 021
2000	58 085	34 877
2001	54 387	33 589

Source: COMTRADE data base system [5].

international market. The depressed price was a disincentive for rattan farmers or collectors to cultivate/harvest rattan in a sustainable manner [3].

Very limited data are available on rattan export from countries in Africa. Oteng-Amoako, Obiri-Darko [1] reports of a limited export of finished products from West Africa to Europe and raw rattan to Asia.

When looking at statistics of furniture, there are two categories that do include rattan-made furniture, but also furniture made of bamboo and of/or combined with other wicker materials.

Seats of cane, osier, bamboo or similar materials, HS 940150

> World import values oscillate between US$ 409 million in 1995 to US$ 378 million in 2001, and with reported quantities, respectively from 87 499 to 107 744 tons. Major importing countries during the period 1995–2001 are USA, Germany, Netherlands and Japan. World export values remain within US$ 328 million in 1995 and US$ 320 million for 2001, with Indonesia, Italy and the Philippines as major exporters.

Furniture of cane, or materials not else specified, HS 940380

> World import values steadily increase from US$ 819 million in 1995 to US$ 961 million in 2001, and with reported quantities, respectively from 205 160 to 368 219 tons. Major importing countries during the period 1995–2001 are: USA, France and Japan. World export values rise from US$ 832 million in 1995 to US$ 985 million for 2001, with Italy, China, Indonesia and the Philippines as major exporters.

For both seats and furniture, the value of world exports is very close to the reported world value of imports. In the period 1995–2001 both values and quantities gradually increased. Having among the major exporters countries like the Philippines, Indonesia and China, which are known as being major producers and exporters of rattan furniture, we may assume that rattan-made products still represent the lion share in each category (although it is possible that a declining relative share of rattan-based products could have been off set by increased trade in non-rattan made seats and furniture). Also for these categories, although less direct than in the case of raw cane, there seems to be no clear indication of a sharp decline in rattan made seats and furniture traded between 1995 and 2001.

TRENDS

Many questions about the trade and cultivation of cane remain, i.e. uncertainty about the future patterns of supply and demand, about the shifts in global rattan trade, about cane prices and the economics of cultivation and yields and the lack of uniform policies that affect the sector. The following generalizations are based mostly on the Asian situation, since the region is the dominant force in production and trade of rattan products.

By all counts, shortage of quality cane is definitely felt in parts of the region and the problem of resource supply is there more glaring than ever before [1]. There seems to be a decline in the planting of rattan by national forest departments despite the need to increase the supplies. Although resource depletion exists in countries like Thailand and Vietnam, rattan is still abundant in natural forests of Indonesia and other countries like Laos, Cambodia or Malaysia. Particularly interesting is the case of Malaysia, where national forest inventories do indicate the availability of important rattan resources in the country, while at the same time it is the second largest importer of raw cane (from 1995 to 1999; and third afterwards). As the country becomes richer and its people wealthier, gradually rural people are less interested in harvesting rattan because they (may) have now better income earning activities in other sectors.

Cane harvesting is hard work and processing it to furniture is a very labour intensive activity. Shortages in the cane supply may in some cases be caused by dwindling resources of rattan in the forests, while in the economically successfully performing countries of the region it may be more and more because rural people prefer other options to improve their livelihoods than harvesting rattan (at the present level of cane prices!).

Market acceptance of rattan furniture in consumer countries in Europe, North America, Japan and other industrialized nations is well established. However, in the furniture sector, rattan faces stiff competition both at local and at international markets from products like wood, bamboo or even plastics. Trade restrictions and export duties on cane should be relaxed, while incentives for cane producers could help promote the use of rattan by local or foreign furniture manufacturers and boost the supply of cane for global markets. Market intelligence for rattan products should be improved through better production and trade statistics and be reviewed periodically to enhance sector policies and the market position of rattan products *vis à vis* competing materials.

KEY RECOMMENDATIONS

The above-mentioned expert meeting provided several recommendations, some of which are listed here below in view of their high relevance for enhancing the supply of rattan:

Resources:

- intensifying *ex situ*/*in situ* conservation;
- research: assessments, studies on growth, yield, basic biology and taxonomy;
- techniques of enrichment planting and management of rattan in degraded forests (rattan planting guidelines).

Products:

- increase knowledge of the properties of commercial species and of the potential of underutilized/lesser known species;

- technologies for reducing post-harvesting losses, biological deterioration, improved storage and processing;
- introduction of quality grading (and improving cane/product quality in Africa).

Policy and institutional support:

- assess importance of the rattan sector by improving production/trade statistics;
- improve tenure security for rattan gatherers and/or planters;
- introduce incentive schemes for rattan cultivation and management;
- promote market deregulation.

In a follow-up to the above recommendation to improve statistics on the rattan sector, 6 additional HS codes for specific rattan products were identified during a joint INBAR-FAO expert consultation in 2002, and were submitted to and accepted at the Review Subcommittee meeting of September 2003 of the World Custom Organization (WCO) for inclusion into the HS, version 2007 [6].

CONCLUSIONS

A shortage of quality cane is definitely felt in parts of Asia and the problem of resource supply is more glaring there than ever before. There seems to be a decline in the planting of rattan by national forest departments despite the need to increase the supplies. Although resources have been depleted in countries like Thailand and Vietnam, rattan is still widely abundant in natural forests of Indonesia and other countries like Laos or Malaysia. However, there are no reliable statistics on the status of rattan resources at a regional level for Asia and Africa in order to assess if the supply situation is really critical or not and what future supplies may be.

A preliminary review of available trade data in rattan products showed that the reported quantities did remain within similar levels from 1992 until 2001. Apparently during this period there seems to be no indication that there was an imbalance between supply and demand. What has changed is the direction of trade: Indonesia is now the main exporter of cane and China, the world's biggest importer. Similar trends were also observed when looking at two other products groups which cover seats and furniture made mainly from rattan.

Cane harvesting is a particularly hard and fastidious job and processing it to furniture is also very labour intensive. Shortages in the supply of cane may in some cases indeed be caused by dwindling forests resources. In the economically successfully performing countries of South-East Asia, shortage of cane may also be more and more because rural people are gradually less interested in rattan harvesting in view of other (and better) options available to sustain their livelihoods.

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