

CIFOR
Center for International Forestry Research
April 2002, Number 1
infobrief

CIFOR *infobriefs* provide concise, accurate, peer-reviewed information on current topics in forest research

Planning for woodcarving in the 21st century

The positive impacts of woodcarving for people and wood values

Woodcarving, like the trade in many non-timber products, is largely hidden from the attention of policy makers in the development, forestry and tourism sectors. In this *infobrief*, we draw attention to the importance of woodcarving to local livelihoods and the negative repercussions on species and ecosystems. We then suggest means of making the woodcarving industry a vibrant and sustainable sector.

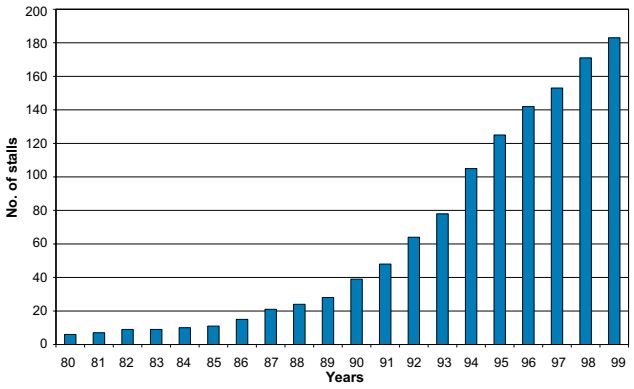
Woodcarving contributes significant income

- Bali, Indonesia, exports US$ 100 million of carvings per year.
- India has a US$ 65 million industry with 50 000 people involved in a single centre alone (Saharanpur).
- In Kenya, woodcarving involves over 60 000 woodcarvers producing commercial/export carvings, and provides significant household income for about 300 000 dependants.
- In South Africa, woodcarving provides household income of around US$ 500-2000 per year, or around 80% of the household cash.
- In densely populated areas like the Central Valley area of Oaxaca, Mexico, woodcarving contributes around US$ 2500 per year to the incomes of carver households.

Woodcarving is often closely linked with tourism

- In most countries the development of the woodcarving sector was initially driven by tourism. In Zimbabwe, the number of markets offering handicrafts, mainly made out of wood, rose from only five at the beginning of the 1980's to over 200 in 1999, coinciding with the tourism boom (Figure 1).
- The woodcarving sector gives positive feedback to tourism, as it enriches tourism by attracting visitors to places with unique local cultures.

Figure 1. Cumulative woodcarving stall growth in Zimbabwe since independence



Woodcarving adds more value to wood than other uses

- In Kenya woodcarving adds more value to wood than does the use of the wood for timber, fuel or poles (Figure 2).
- Damar in Indonesia used for sawn-timber sells at US$ 120 m^3; when carved into spoons it sells at US$ 300 m^3.
- *Dalbergia melanoxylon* from Tanzania fetches US$ 20 000 m^3 in the international market to make woodwind instruments.
- In the lowveld of South Africa, a kilogram of *Pterocarpus angolensis* wood is US$ 1; once carved it fetches US$ 7.

Woodcarving - Key points

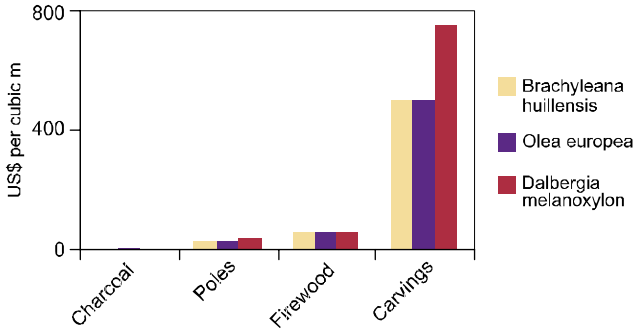
Pros
- Contributes significant income in many developing countries
- Provides a safety net where other opportunities are limited
- Links closely with tourism
- Adds considerable value to wood compared to other uses

Cons
- Depletes raw materials and can affect biodiversity of indigenous forest
- Impacts negatively on livelihoods of some non-carver households

Challenges
- Inequitable distribution of profits
- Lack of support to woodcarving by governments
- Wood resource access and trade barriers
- Competition with local users
- Forestry policy drives carvers to get wood from illegal sources
- Trade barriers
- Inefficient use of raw material

Answers
- Reformulate policy
- Provide incentives to local communities to manage forests and supply wood
- Create market information systems

Figure 2. Value of wood for various purposes for species in Kenya



Is woodcarving sustainable?

Resource depletion in Zimbabwe

Results from studies carried out in southern Zimbabwe showed that the current growing stock of the 9 indigenous tree species preferred for the production of carvings on communal land does not allow sustainable extraction rates. The yearly consumption of these tree species is over 1 200 m^3 yr^{-1} (or more than 700 trees with a dbh > 50cm) in 7 craft markets in the same area (37 000 ha^{-1}), indicating that the woodcarvers will face severe resource supply problems in the near future!

Declining resources in Kenya

A recent inventory carried out in Arabuko-Sokoke Forest Reserve in Kenya confirmed a declining resource of the existing *Brachylaena huillensis* stock. The results indicated an existing stock of 2.7 m^3ha^{-1}, of which only 50% was suitable for carving. With the current illegal, unsustainable extraction from the forest estimated at over 2 500 m^3 per year coupled with the low growth rates for the species (2.5% per year), the study concluded that the entire resource will be depleted in less than 2-3 decades.



TONY CUNNINGHAM

Brachylaena huillensis *logs being off-loaded for woodcarvers in Kenya. Some of the trees shown are at least 200 years old.*

What are the negative impacts of woodcarving?

Depletion of the raw materials and negative ecological impacts

- Where harvesting from wild populations occurs, overexploitation of favoured carved wood species is leading to local scarcity and depletion in many countries (e.g. Kenya, Uganda, South Africa, Zimbabwe, Mexico, India).
- Other negative impacts include threats to biodiversity, forest degradation and the loss of nesting sites and shelter for rare forest dependent species (e.g. the Sokoke Scops owl in Kenya).
- The continued growth and economic success of the carving sector is placing increased pressure on an already limited resource base and is resulting in an expansion into new harvesting areas.
- In some countries selected carving species have been listed as threatened under national conservation legislation. African ebony (*Dalbergia melanoxylon*) has been proposed for CITES listing (to restrict international trade).

Negative impacts on livelihoods

- The loss of the raw material has direct consequences for the livelihood security of local producers.
- The substitution of alternative woods, while often a positive change, sometimes increases pressure on species with multiple uses and which are important for subsistence (e.g. fruit trees normally reserved for subsistence and food security in drought years).
- In other cases indigenous knowledge and traditional beliefs associated with particular species are lost when the species declines.

What problems need to be solved?

- There have been few attempts to address this resource depletion problem and to implement participatory resource management strategies.
- There are few resource inventories, and little to no regular monitoring of quantities harvested and its impacts.
- Little detailed data exist on growth rates and population dynamics of even the most popular species – the data necessary to calculate sustainable extraction rates are generally missing.
- There are some positive examples where woodcarving has been put on a sound basis through shifts to fast-growing species. We need to understand how these shifts can be promoted.
- Local institutional arrangements that facilitate carving but protect the interests of non-carvers need to be devised and facilitated.

Inequitable distribution of profits

Woodcarving requires a great deal of skill, creativity and artistry. Quality pieces can fetch considerable sums of money. However, carvers rarely see their fair share of these profits, with most value captured by those at the top end of the market chain. The time and effort required to produce a carving are rarely appreciated or acknowledged. Indeed, buyers often pay very low prices. The situation for those providing the raw material is even starker. This acts as a disincentive for planting, intensification and sustainable management.


TONY CUNNINGHAM

Processing marula (Sclerocarya birrea) fruits, a species also valued by woodcarvers. As there are male and female trees it is possible to work towards sustainable management of the population.

Lack of support to woodcarving

Development support for carvers tends to be very localised and provided by NGOs. Most countries lack any national strategy for woodcarving.

- There is little integration and cooperation between relevant stakeholders in the tourism, arts, cultural, and conservation sectors to address wood-carving problems.
- Often governments do not recognise the potential contribution of forest products, including carving to rural development.
- Woodcarvers are often invisible to formalised business and commerce in that they are cut off from credit facilities or the kinds of institutional assistance that small businesses receive (e.g. in South Africa woodcarvers are not recognised by the Small Business Development Corporation).

Wood resource access and trade barriers

Competition with local users

- Carving species are harvested from a variety of property regimes and tenure arrangements (e.g. commons, sacred areas, private land, and state land). Consequently access to these resources can vary according to traditional and official resource use restrictions and boundaries.
- Balancing the rights of access between commercial harvesters (who harvest over a very wide area) and those of village residents who may assert their rights over resources within their commons is always a challenge. Outside users, often of urban origin, frequently pose a threat to local users (e.g. using wood for charcoal).

Rules for accessing wood discourage local management

- Many of the carving species, even when outside state forests, are protected by national and provincial legislation and are effectively state property. This means that local managers cannot benefit from efforts to cultivate or improve management.
- Generally, there is a lack of policy and legislation devolving property rights/ownership and control over resources to resource users.
- In some countries there is competition between the carving and timber industries in accessing raw materials, with the formalised timber industry as the much more powerful stakeholder being favoured.

Trade barriers

- Trade barriers and restrictions, such as municipal by-laws controlling street vending, can have negative impacts for the marketing of woodcraft especially when there are few alternative markets.
- Costs of certification are prohibitive for carvers.

Inefficient use of raw material

- A common feature of the woodcarving sector is the use of only part of the tree (e.g. stem) for the production of carvings.
- During harvesting up to 80% of the wood mass may be left behind in the form of the crown, stump and branches. This wastes raw material potentially suitable for the production of small items.
- It is generally only when wood becomes scarce that carvers turn to using smaller diameter pieces.
- Wastage due to cracking is also a common problem for some species. This is usually a consequence of carving the wood before it has dried adequately.
- Lack of attention to quality, often a result of poor tools, can result in some carvings never being sold. Similarly, lack of innovation and constant repetition of the same products will have the same outcome as consumers become bored.

Reformulating policy

Present policies neglect the significant economic and livelihood contributions of forest products other than timber. Carved woods are one of the products which require more attention from the policy makers in Forestry, Tourism and Development sectors.

- Proportion of revenues allocated to the Forestry sector for timber production should be earmarked to support woodcarving.
- Subsidies – these can be useful to take pressure off the declining resource base. In Zimbabwe, subsidies for cooking fuel (kerosene) diminished the competition for species used for fuelwood and woodcarving.
- Macroeconomic policies – reduced or zero customs levies on the importation of craft products into North America and Europe can boost carving exports.
- Forestry regulations – current forest management plans usually focus solely on timber, neglecting species utilised for health care, food, crafts, woodcarving, as well as those possessing cultural significance.
- Routinely, forestry budgets are allocated solely for timber extraction and commercial plantation production (timber, tannins, and oil palms). Recognition of the significant economic and employment contributions of other forest



SILVIA PURATA

Family painting wooden figures in Oaxaca, Mexico.

products can assist forestry departments to reallocate a share of their budgets to include management for multiple forest products.

- Forest departments can make small lots available to harvesters for woodcarving (who cannot afford or use the large lots or concessions of saw mills).

An illegal trade?

- Many of the main species for carving are considered State property (e.g., *Dalbergia melanoxylon* in Kenya, *Santalum album* in Indonesia). In Zimbabwe, three of the four most traded species are listed as illegal to extract. Bans on cutting hardwood species for carving exist in national legislation but are rarely enforced. This acts as an incentive against planting or management by local people and creates confusion. Policy changes offer opportunities for improved incentives for local level management. However, where conservation objectives are paramount the legislation needs to be enforced, with use of appropriate penalties (in many cases penalties are no disincentive to harvest illegally).
- Certification – there is much opportunity for greater innovation and flexibility of certification processes and better funding mechanisms to improve access needed for small-scale wood producers, including woodcarvers. Examples are group certification schemes for small-scale producers and cost-recovery through direct support from exporters, retailers or public buyers.

Providing incentives to local communities to plant trees for carving

- The cultivation of major carving species and their inclusion in multi-strata agroforestry systems needs promotion. For example, in Zimbabwe, cultural and spiritual incentives are used to stimulate planting of trees.
- Access to local resources for communities needs to be facilitated where sustainable use is possible.
- Support for small scale planting, including technical support, making state land available, etc. need to be considered.



TONY CUNNINGHAM

Women with face masks sanding a large carving in Bali, Indonesia; health risks in the woodcarving industry are usually not considered.

Creating market information systems

- Governments and donors needs to facilitate the establishment of market information systems (on prices, markets, quality, etc.) to improve the efficiency and transparency of marketing systems.
- In India there is a Ministry of Textiles which promotes handicrafts, encourages market access and keeps abreast of certification and eco-labelling issues.

Woodcarving has the potential to improve livelihoods for millions of households. Livelihoods need to be secured by providing supportive policy frameworks and targeted assistance and by ensuring sustainable supply of raw material. Declining resource trends need to be reversed.

This *infobrief* was prepared by the following people (alphabetical): B. Belcher, O. Braedt, B. Campbell, A. Cunningham, S. Choge, W. de Jong, R. Höft, O. Ndoye, P. Omeja, P. Permadi, S. Purata, D. Rohadi, S. Schmitt, S. Shackleton, P. Shanley and W. Standa-Gunda, currently involved in a global comparison of woodcarving cases. For funding we thank the Department for International Development (DFID) of the United Kingdom and the WWF People and Plants programme.

Center for International Forestry Research
office: Jalan CIFOR, Situ Gede, Sindang Barang, Bogor Barat 16680, Indonesia
mailing: P.O. Box. 6596 JKPWB, Jakarta 10065, Indonesia
Tel: +62(251) 622 622 Fax: +62(251) 622 100
E-mail: *cifor@cgiar.org* Website: *www.cifor.cgiar.org*
Cover photos: Ramadhani Achdiawan, Tony Cunningham, Oliver Braedt and Silvia Purata