Quantifying NTFPs

An ITTO-sponsored project helps address the lack of information on non-timber forest products in Central Africa

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Bagged: Rattan baskets are an important source of income for these women *Photo: IUCN*

Central Africa contains the world's second-largest expanse of tropical forest; it is home to the most diverse fauna and flora of Africa, including more than 400 mammal species, 1000 birds and probably more than 10 000 plants, of which about 3000 are endemic (Bikié *et al.* 2000; Congo Basin Forest Partnership 2005; Mallaise 1997).

In Central Africa, as in many other parts of the world, little information is available on the socio-economic importance of non-timber forest products (NTFPs) and the ecological impacts of their exploitation. Timber certainly makes an important contribution to gross domestic product—9% in Cameroon, 1% in Congo, 4.7% in Gabon and 10% in Central African Republic (Makon *et al.* 2005)—but the undoubtedly significant role of NTFPs is mostly uncounted in national statistics.

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Despite this paucity of information, however, there is no doubt that NTFPs play an important role in local economies in the region. More than half the population in Central Africa, for example, takes part in the harvest of NTFPs for food, medicines and the generation of income (Ndoye *et al.* 1997; Ngwasiri *et al.* 2002).

To help address the shortcoming in information on NTFPs, the International Union for the Conservation of Nature (IUCN), with funding from ITTO and the Common Fund for Commodities, carried out a sub-regional study[1] in Cameroon, Congo, Gabon and Central African Republic on the sustainable management of NTFPs. The study comprised: 1) a literature review of NTFP production and marketing channels; 2) the identification, by geographic zone, of the various types of NTFPs; 3) field research in the main NTFP production areas at the national and transboundary levels; 4) field research on the marketing of NTFPs in both rural and urban areas; 5) a study of the optimal marketing channels for NTFPs; 6) development of local and national strategic action plans for the harvesting and marketing of NTFPs; and 7) recommendations at the sub-regional level.

Diverse but similar legislative frameworks

The legal and regulatory frameworks governing the use of floral and faunal products in the sub-region are different in design and enforcement but similar in the issues with which they grapple. Reforms have been under way in many forest domains and governments have also committed themselves to further reform at the sub-regional and international levels.

Socio-economic importance of NTFPs

The study identified the main actors involved in the promotion of NTFPs in Central Africa and their respective motivations, and developed a classification of NTFPs according to their uses and market values. The main actors are:

- *village communities*, who gather, harvest, hunt and sell NTFPs;
- *urban communities*, who are buyers and consumers of the products. Within these are agents or traders who bring the NTFPs to market;
- *institutions*: these might be public (ministries, research centers, etc) or private (logging companies, agricultural companies, horticultural companies, and NTFP-processing companies, including restaurants); and
- in some countries, such as Cameroon, municipal councils and local elected officials.

[1] *Project code : CFC/ITTO/68 FT PPD 19/01 Rev. 1 (I)*

Principal motivations of actors

The predominant motivation of actors in NTFP harvesting is the quest for income generation. Some NTFPs are used directly to shore up local food security, while others—such as rattans, the leaves of raffia palms, which are used for roof building in the Central African Republic, and tree bark for medicinal uses—are processed to give them added value in the marketplace. Activities to add value to NTFPs are increasing to meet growing needs for housing, health-care and financial resources among local and surrounding populations and to generate income and employment.

Classification of NTFPs according to use

Although highly diverse, NTFPs can be classified according to use. There are two broad groupings: NTFPs of animal origin (game and other faunal products), and those of plant origin. Within each of these two broad groupings, product types can be categorized according to their presence in the market and their final use (Table 1). Most commonly, NTFPs are used for food, medicines, magical therapies and craftwork.

NTFPs as medicines

Traditional phytotherapy uses many NTFPs of both animal and plant origin. They can be either fresh or dried: the difference in choice depends on the parts used and the ability to conserve them. Many different parts of the plant can be used, including the leaves, flowers, buds, roots, bark, sap, gums and resins, shoots, fruits and nuts. Similarly, animal parts that are used for medicines include hair, bone, teeth, horn, droppings, claws, gastric and some other internal organs (especially viscera).

Many of the pharmaceuticals are prepared using processes such as softening, maceration, grinding, pulping and carbonization, in some cases mixed with 'vehicle' products such as water, milk, alcohol, lime juice, wine, palm oil, kernel oil or karite (shea) butter. NTFP medicines might be used externally (as a balm, cataplasm, liniment plaster, soap, lotion, etc), internally (as a tablet, electuary, potion or syrup), or in various other forms (eg medicinal cigarettes, eye lotions and suppositories).

Market value of NTFPs in Central Africa

NTFPs can be grouped according to their market value and use:

NTFPs for marketing and with high added value: eg gum arabic, *Rauvolfia vomitora* (used as a purgative, among other things), *Xylopia aethiopica* (used as a spice and in traditional medicine), honey, bee polish, *Piper guineense* (used as a spice);

NTFPs for day-to-day consumption: the leaves of *Gnetum buchholzianum*, caterpillars, mushrooms, *Maranthaceae* spp. leaves, palm oil, bush meat;

NTFPs used for local craftsmanship: eg rattans (canes) such as those derived from *Laccosperma secundiflorum* and *Eremospatha macrocarpa)*

NTFPs for medicinal uses; and

NTFPs with protective virtues.

Constraints and opportunities of managing the various categories

Constraints to and opportunities for the management of NTFP differ both by product (some products are easier to manage than others) and by stakeholder—such as public authority, village community, and vendor (Table 2).

Challenges ahead for NTFPs

Although they have been used for hundreds or thousands of years, many NTFPs are coming under increasing harvesting pressure. For each of the four countries, the problems facing NTFPs, their users and managers are described below.

Central African Republic

A lack of a coherent policy: NTFPs are insufficiently integrated in sectoral development policy

Poor legislation on NTFPs

Inadequate knowledge of NTFPs and their potential utilization

Lack of data on NTFPs destined for export

Except for a few products, exploitation is done on an individual basis

Poorly adapted methods of exploitation have negative impacts on the environment

Many kinds

Table 1. Categories of NTFPs

Plant products		Animal products	
Category	**Description**	**Category**	**Description**
Food	Plant food and drinks derived from fruit, nuts, grains, roots, mushrooms, etc	Live animals	Mainly vertebrates, such as mammals, birds, reptiles, raised/bought as domestic animals
Fodder	Food for animals or bees, from leaves, fruits, etc	Honey and polish	Products from bees
Medicine	Medicinal plants (leaves, barks, roots) used in traditional medicines and/or by pharmaceutical companies	Meat and game	Meat of vertebrates, especially mammals
Perfumes and cosmetic products	Aromatic plants that provide essential oils and other products used in cosmetics	Other edible products	Especially from edible invertebrates such as insects (caterpillars) and other secondary animal products (eg eggs, nests)
Colorants and tannins	Plant materials (especially bark and leaves)	Hides and skin	Animal hides and skins used for various purposes
Utensils, craftsmanship products, building materials	Heterogeneous group of products including bamboos, fibres, etc	Medicine	Whole animals or parts of animals, including various organs used for medicinal purposes
Ornamental	Whole plants used as ornaments	Ornamental	Whole animals or parts of animals, including various organs used for ornamental purposes
Exudates	Products in the form of exudates from plants such as gum, resins, etc	Other non-edible animal products	Bones used as tools
Other	Plant extracts used as insecticides and fungicides		

Source: Walter (2001)

Many uses

Table 2. Description of NTFP uses, constraints and opportunities

Product category	Use	Management	
		Constraints	Opportunities
NTFPs of plant origin	Food	– Gathering/destruction of habitat – Seasonality of products – Difficulty in maintaining sustainable harvesting rates – Difficulty in regulating harvesting and use to ensure legality	– Most actors have a good knowledge of the products – Possibilities for domestication – Possibilities for processing – Possibilities for increasing access to marketing information – Job creation
	Medicinal and psychotropic	– Poor knowledge of products (only a few privileged actors have good knowledge) – Products are difficult to process (eg because of toxicity or other dangers) – Notoriety of healers – Difficulty in accessing information – Difficulty in regulating legality	– Development of new products (edible, medicinal) and chemicals through scientific research – Use of local knowledge
	Craftsmanship	– Gathering/destruction of habitat – Lack of security over the resource	– Maintain constant supply – Flow-on effects to other sectors (eg fabrics in cane furniture) – Job creation – Development of national markets
NTFPs of animal origin (eg reptiles, birds and insects)	Food	– Difficulty of domestication – Destruction of habitat – Risk of over-harvesting – Difficulties in managing resource sustainably – Difficulty in collecting and accessing data on harvesting – Difficulty in enforcing regulations – Poaching	– Enhancement of some sectors by reorienting the uses of NTFPs – Ease of establishing a regulatory framework
	Medicinal and psychotropic	– Weakness of the resource – Notoriety of healers – Difficulty in accessing information	– Development of new products through scientific research – Taking into consideration local know-how
	Craftsmanship	– Lack of guarantee of resource availability	– Ease of establishing regulations

Source: Nguimbi (2006)

Limited access to promising markets: harvesters do not have enough information on the prices obtained for their NTFPs beyond their production area

Lack of organization for better sales of their products

Lack of a policy to encourage increased processing of NTFPs.

Gabon

Legislation assigns very little importance to NTFPs (especially those used for food)

No guarantee of regular supply to markets, causing problems in preservation (particularly foods), processing, marketing and investment

Informal (unregulated) exploitation of NTFPs is high

Low capacity to invest in product development

Exploitation of NTFPs is regarded as seasonal activity that contributes to improving the living conditions of rural and urban populations.

Cameroon

Lack of synergy between support structures and the various actors involved

Limited and undeveloped markets

Lack of processing and product preservation techniques

Lack of technical and institutional support

Lack of appropriate markets

Lack of information on NTFPs at economic, institutional and policy levels.

Congo

No consideration given to traditional knowledge about the exploitation, management, processing and use of NTFPs

Lack of participation of local people in forest management in general and NTFPs in particular

Inadequate involvement of researchers and state authorities, hindering the task of improving scientific and technological knowledge

Lack of effective involvement of development actors (NGOs) as an interface between authorities and local communities in the process of policy development.

Where to from here?

Cameroon, Gabon, Congo and Central African Republic have each held national workshops to validate the policies and a final report incorporating the results of these workshops is available through ITTO (fi@itto.or.jp). ITTO is continuing work to add value to NTFPs and other forest services through its biennial work programs and through its new thematic programs.

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