



ARMENIA

Armenia Tree Project works with Yale's Global Institute of Sustainable Forestry

The Armenia Tree Project (ATP) recently completed a two-year project to develop sustainable forestry training models for Armenia. Through a collaborative effort with Yale University's Global Institute of Sustainable Forestry, ATP conducted an analysis of the forests around the village of Margahovit.

"The degradation of forested areas in Armenia necessitates a new and bold approach to forestry practices," stated ATP Executive Director Jeff Masarjian. "With Yale's expertise, ATP has been able to collaborate with forestry officials to bring cutting-edge forestry training to Armenia. It is our hope that the project will literally reshape the nation's landscape and ensure a sustainable future for its population."

ATP presented a new *Sustainable Forestry Manual* to stakeholders in Armenia and developed a seminar training model to use as a guide. The manual is currently being published in eastern Armenia, and an English-language version is available on the ATP Web site.

In addition, ATP assisted the local community of Margahovit in identifying NTFPs, bringing environmental education into the local schools and through stakeholder meetings that outlined the benefits and challenges of community forestry. "An assessment was made of plants, herbs and other NTFPs that may be harvested for generating alternative income for residents living in proximity to the forests," explained Masarjian.

"The collaboration between ATP and Yale has been a great success," concluded Dr Oliver, Director of the Yale Global Institute of Sustainable Forestry. ATP is currently developing a plan to conduct sustainable forestry training seminars throughout Armenia. [Source: *The Armenian Reporter* [Armenia], 8 April 2009.]

BANGLADESH

Implications of livelihood dependence on NTFPs in Lawachara National Park

Nowadays it is indisputable that NTFPs play a significant and often critical role in the quality and even survival of life of very large numbers of rural poor households in most tropical developing countries such as Bangladesh. In fact, their role and importance are diverse, helping households achieve self-sufficiency, food security, income generation, accumulation of savings and risk minimization. It has also increasingly been recognized that the collection and use of NTFPs are ecologically less destructive than timber harvesting, and development and promotion of such products could provide a sounder basis for sustainable forest management and community upliftment. NTFPs play a role in the household economy of not only the poor, but also the rich.

The present study was conducted at Lawachara National Park (LNP), located in the division of Sylhet in northeastern Bangladesh. Approximately 167 plant species and 276 animal species are found within the park, which covers an area of 1 250 ha. There are 14 villages in and around LNP: two are located within the park and the rest in the area surrounding it. The study was conducted in LNP with the aim of investigating and comparing the role of NTFPs in the livelihoods of the communities of two villages: Magurchara Punji, within LNP and Baligaon, which is adjacent to the park. These villages were chosen because they are both easily accessible and depend heavily on forest resources from the park.

The study reveals that the villagers of Magurchara Punji and Baligaon collected 11 categories of NTFPs from LNP: betel leaves; bamboo; cane; fuelwood; mushrooms; wild vegetables, such as bamboo shoots, taro, thankuni (*Centella asiatica*); wild fruits such as chapalish (*Artocarpus chaplasha*), kau (*Garcinia cowa*), jackfruit, cane fruits, bananas, dewa (*Artocarpus lacucha*); different kinds of medicinal plants; birds, such as horikol (orange-breasted green pigeon) and jungle fowl; animals; and fish. The villagers' income from these NTFPs in LNP is given in the table.

The study illustrates that local people meet their fuelwood demands from the forest either by collecting it themselves, or by purchasing it from the market. The Khasia communities in the interior village depend highly on the park, since their only source of cash is betel leaf cultivation on forest lands. All households – except a few wealthy homes in the village located outside the park – collect bamboo, cane, wild vegetables and medicinal plants for their domestic consumption. For Khasia households in the interior village, the hunting of wild animals and birds is a part of their traditional culture.

These findings suggest that an understanding of the role of NTFPs in the livelihoods of local communities should be incorporated in the formulation of comanagement policies for all protected areas. [Contributed by: Md. Parvez Rana, Department of Forestry and Environmental Science, School of Agriculture and Mineral Sciences, Shahjalal University of Science and Technology, Sylhet 3114, Bangladesh. E-mail: parvez_200207@yahoo.com]

Local people's income from various NTFPs in the Lawachara National Park, Bangladesh

NTFPs	Respondents*	Income (US\$)
Betel leaves	40 (88.89)	857.14–928.57/first three months before winter 428.57–500/last three months after winter
Fuelwood	28 (62.22)	2.29–2.43/day
Cane	20 (44.44)	2.14–2.29/day
Bamboo	15 (33.33)	2–2.29/day
Mushrooms	12 (26.67)	28.57–35.71/month
Wild vegetables	10 (22.22)	171.43–214.29/year
Wild fruits	9 (20.00)	142.86–157.14/year
Medicinal plants	19 (42.22)	185.71–228.57/year
Birds	5 (11.11)	1.43–1.71/day
Animals	1 (2.22)	2.14–2.43/day
Fish	2 (4.44)	1.43–1.71/day

*Note: same respondent earned income from more than one product. Figures in parentheses indicate percentage of respondents.

A look at a parasitic plant: *Cuscuta reflexa* Roxb.

Cuscuta is a rootless parasitic plant with a thread-like herbaceous stem that twines on woody or herbaceous hosts from which it obtains nutrients by means of haustoria. Leaves are reduced to small functionless scales. The plant's English name is dodder; in Bangladesh it is known by a variety of names: swarnalata, sunno lata, tarulata, algusi, haldi, algusilata. It belongs to the family Cuscutaceae under the genus one *Cuscuta*, which is enriched with 170 species in the tropical and temperate zone. Its distribution is worldwide and includes six genera in Bangladesh: *C. reflexa*, *C. chittagongensis*, *C. hyalina*, *C. australis*, *C. campestris* and *C. chinensis*. Of these, *C. reflexa* is the most common and widely distributed in Bangladesh. It grows on trees, herbs and shrubs as a parasite. It flowers during January to February and fruits in February to March.

Cuscuta species have been found to grow on many host plants, such as *Ziziphus mauritiana*, *Mikania scandens*, *Eupatorium odoratum*, *Ixora* sp., *Acacia auriculiformis*, *A. nilotica* and *Bougainvillea* sp. Like other vegetables, dodder is a source of various nutrient elements, such as carbohydrates, protein and vitamins. Cooking it makes it as tasty as other vegetables but, for medicinal purposes, it needs decoction and the addition of some other elements.

A test was made for its growth and usages.

C. reflexa was grown to spread over the host, *Ixora* sp., during 2007 to 2008 inside the Bangladesh Forest Research Institute campus. Its green weight was 500–600 g/m²; height of the host (*Ixora* sp.) was 81–90 cm, while in the control plot (without *C. reflexa*) it reached a height of 103–200 cm. The difference might have occurred through the parasitic effect of *C. reflexa*. Luxuriant growth (*C. reflexa*) vigour was observed during post-monsoon (mid-September to mid-October) when sampling was done. Its greenish-yellow colour changes to yellowish-green when it matures. The stalk colour was pale and the diameter reduced during the drought period (February to April). The diameter of *C. reflexa* was 3.1 mm on *Ixora* sp. and *Acacia auriculiformis*, but 3.3 mm on *Mikania scandens* during the optimum growth period in September. In the light, the growth vigour of *C. reflexa* was better than on the shaded site.

Dodder is rich in food value, even higher than many vegetables and fruits. Generally,

tribal people process *Cuscuta* by boiling it and adding some onion, chilli and salt. They then eat it with rice. It is used by various communities in Bangladesh.



Authors' recipe for a tasty meal using dodder

1 kg dodder stems
59–75 ml edible oil
50 g chopped onion
10–15 green chilli (according to taste)
5–10 cardamom seeds
10 g carminative cumin seeds (*Cuminum cyminum* – Jira-Bengali)
Turmeric (for colour)
Salt
Wash the collected thread-like herbaceous stems and cut into pieces of 1–3 in (2.5–7.6 cm). Boil for 4–5 minutes and then make a mould by pasting. Then fry the dodder mould in edible oil with the chopped onion and add chilli (if used), cardamom, cumin, turmeric and salt. Cook for 2–5 minutes. Allow to cool and serve.

Certain women were found to collect *Cuscuta* and were asked why they did it. Some replied that this information could not be disclosed to the male, but they told the female author that *Cuscuta* species were used for curing stomach aches, for energy and antifertility purposes. Some of the women used dodder extract on their heads, believing it would make the head cool and protect against hair loss. One scientist at the Bangladesh Forest Research Institute advised that his late father added a few drops of honey to the juice of *Cuscuta*, which he took against coughs and for the well-being of the stomach. The plant is also regarded as an alternative purgative and anthelmintic. In addition, the decoction of stems is useful in constipation, liver complaints and bilious affections; seeds are taken as a depurative; and the fruits are used to combat fever and coughs.

This species was also found to be used for ornamental purposes, as well as to provide

cool shade where neighbours rest and pass the time by chatting or sitting together for decision-making.

There is scope to look into the growth and yield of the plant, medicinal usages and processing as food. (Contributed by: ATM Emdad Hossain, Ph.D., Divisional Officer [Soil] and Shukla Rani Basak, Research Officer, Forest Botany [Taxonomy], Bangladesh Forest Research Institute [BFRI], PB 273, Chittagong, Bangladesh 1000. Fax: +880-031-681566; e-mail: bfri_ssd@ctpath.net sr.basak@yahoo.com)



Première évaluation de la biodiversité des Odonates, des Cétoines et des Rhopalocères de la forêt marécageuse de Lokoli (Sud-Bénin)

La forêt marécageuse de Lokoli a été prospectée en 2006 pour établir un premier inventaire des Odonata, Coleoptera cetoniidae et Lepidoptera rhopalocera: sur 24 espèces d'Odonates recensées, 13 sont nouvelles pour le Bénin, parmi lesquelles *Oxythemis phoenicosceles* Ris, espèce rare, et *Ceriagrion citrinum* Campion, classée comme vulnérable sur la liste rouge de l'UICN et justifiant à elle seule la protection du site.

Douze espèces de Cétoines ont été recensées, pour la plupart typiquement forestières; *Cyprolois aurata* (Westwood) se révèle une espèce typique des forêts inondées et *Grammopyga cincta* Kolbe n'est connue au Bénin que de Lokoli et de la vallée de l'Ouémé; sur 75 espèces de Rhopalocères, 28 sont nouvelles pour le Bénin et 9 seulement sont strictement inféodées à des milieux forestiers. *Eurema hapale* Mabille, *E. desjardinsii regularis* Butler et *Acraea encedana* Pierre, espèces peu communes, sont inféodées aux milieux humides. La forêt marécageuse de Lokoli, unique au Bénin sur le plan écologique et contribuant à la biodiversité régionale, devrait impérativement être élevée au statut de réserve naturelle.

(Source: extrait d'un article par Séverin Tchibozo, Henri-Pierre Aberlenc, Philippe Ryckewaert et Philippe Le Gall.)

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BHUTAN

Boost for bamboo-product makers

With a crash course in cane furniture making from Guwahati under his belt, Ap Sangay Wangdi from Thrimshing set out for Thimphu not long ago with two freshly built bamboo chairs and a table – hoping to sell them all. But he returned home, his furniture on the back of a bus, his demeanour anything but jaunty.

He never imagined it would turn out this way. For years, Ap Sangay, 64, had been selling Kangpar and Thrimshing bamboo products in Thimphu. He sold bangchung, ara palangs, quivers, mats, hats, and dalas (bichap) to Thimphu residents. His was a modest business. Ap Sangay found out that cheaper and better furniture – made of wood – had broken into his market. It was not that he had not been aware of this in the past. But bamboo products still ruled the roost. Discovering that wooden ones had nudged him out of the market was, indeed, a bitter pill to swallow. Bamboo furniture making was his main source of income.

But he did not want to switch to wooden products. Moreover, Thrimshing Kangpar farmers, from whom he bought bamboo products, depended on his business doing well. For them too, bamboo meant money.

The solution was some interesting new designs, not to mention marketing skills. It was with this realization that 70 people jumped at the opportunity to participate in a ten-day bamboo-product development training, sponsored by the United Nations Development Programme (UNDP) and the Netherlands Development Organisation (SNV) recently. They were taught to make new designs by blending traditional weaving styles, but using treated material for longer product life.

When Kuensel visited their villages recently, Dorji Tshomo, 56, was hard at work on the new designs picked up at the

training. “It involves hard work. However, we have better tools,” she said, displaying a set of tools provided free from the training programme. A Thrimshing farmer said, however, that they would still continue to produce traditional products besides the new ones, which include lampshades, hangers, ladles, tissue paper holders, trays and other utility products.

The Government has assured them of good marketing, at least in the beginning. Meanwhile, Ap Sangay has got back the spring in his step and can be seen in Thimphu’s market vending his wares. (Source: Kuensel Online [Bhutan], 22 February 2009.)

Bamboo demise in Bhutan

Dying bamboo on the hills of Jarey gewog in Lhuentse, northeastern Bhutan, creates a resource crisis for the villagers who depend on bamboo for roofing and other domestic purposes.

Villagers have started penetrating deeper into the forests, but say there are not many bamboos around. “Whatever’s available is very far and difficult to transport,” said a villager. “We’ve started scaling the other side of Jarey hill in the hope of finding bamboos to reroof our houses before the monsoon sets in.”

Elders in the village said that they have never faced such problems in the past. (Source: Kuensel Online [Bhutan], 10 April 2009.)


CountrySTAT-Bhutan

The recently launched CountrySTAT-Bhutan is a Web-based system for disseminating national food and agricultural statistical data together with metadata for analysis and policy-making.

Developed over the past 18 months with financial and technical support from the FAO-Netherlands Partnership Programme (FNPP), Country STAT-Bhutan aims to provide reliable information on key sectors of the country’s agriculture-dependent economy to relevant stakeholders. The system contains statistical data on land use, agricultural production (crops, livestock and forests), export and import of agricultural products, agricultural inputs, commodity prices, farm machinery and development infrastructure.

CountrySTAT-Bhutan will complement and be compatible with FAO’s FAOSTAT database. Data are classified as per national, dzongkhag and gewog levels, with national-level data shared with FAOSTAT.

“District- and gewog-level data are highly useful for national planning and policy-making purposes, as well as for researchers and rural development projects. Data on land suited for agricultural production are vital in a country where farming is limited by steep and rugged mountain terrain, altitude and the high priority given to forest cover,” states the media release. “Forest-related data are needed to determine the quantity of wood being harvested for various purposes and the income generated by farmers from the sale of NWFPs.” (Source: Kuensel Online [Bhutan], 16 March 2009.)


BOLIVIA (PLURINATIONAL STATE OF)
The importance of plant knowledge

How important is traditional plant knowledge in the Amazon? According to a recent study among the Tsimane’ in the Amazonian Plurinational State of Bolivia, each standard deviation of maternal ethnobotanical knowledge increases the likelihood of good child health by more than 50 percent. And the study raises the question: What will be the cost – to the Tsimane’ and other indigenous peoples – if such ethnobotanical knowledge is lost?

The Tsimane’ number about 8 000 people who live in approximately 100 villages along the Maniqui River and the interior of the Pilon Lajas region of the Bolivian Amazon. Tsimane’ villages are small, with an average of about 24 households linked by kinship and marriage. At the time of the study, no household had electricity or running water and half the villages were inaccessible by road. The Tsimane’ have traditionally lived by slash-and-burn agriculture, gathering, hunting and fishing. However, since the 1970s, their territory has been encroached upon by colonist farmers, logging firms, cattle ranchers and oil companies. The Tsimane’ now increasingly interact with the market economy through the sale of goods and wage labour, primarily on cattle ranches, logging camps and farms.

Such integration into the market economy brings about changes in occupation, preferences, social organization, and health and nutritional status. The Tsimane’ are now starting to merge into a culture that places no value on their indigenous knowledge, especially their ethnobotanical knowledge. Under this

pressure, traditional knowledge of medicinal plants is starting to disappear, with little to take its place. Too often, as here, the global market holds out the offer of Western medicine without providing the means to gain access to it.

Thomas McDade and William Leonard from Northwestern University set out to learn what impact the loss of traditional plant knowledge might have on the health of children. To do this, they assessed the health of 330 Tsimane' children, aged from two to ten years old, and tested their mothers and fathers on both their knowledge of local plants and their skills at using them. Local ethnobotanical knowledge was quantified using five measures: agreement with local experts on plant uses; botanical knowledge; skills in using plants; total number of plants used; and diversity of plants used. Child health was measured using three variables: concentration of C-reactive protein, a marker of infectious burden; skinfold thickness, a measure of fat stores; and stature, used to calculate height-for-age scores, an indicator of nutritional and health status.

The results were striking. For each measure of health, mothers with higher levels of plant knowledge and use had healthier children, independent of potentially confounding variables related to education, market participation and acculturation.

The Tsimane' ethnomedical tradition may play a particularly important part in protecting health because effective commercial medicines are expensive and difficult for the Tsimane' to procure. If remedies derived from local plants are effective in preventing or treating illness, this would contribute not only to lower levels of inflammation but also to improved linear growth and body fat stores by reducing allocations of energy to fuelling immunity and fighting infection.

Strikingly, although the authors infer a direct association between maternal plant knowledge and child health, it may be that this association is mediated by the children themselves. Tsimane' children spend much of their time away from parental supervision, playing and foraging in small peer groups, and the authors report seeing older children use medicinal plants both for themselves and for younger children. It may be that plant knowledge – like so much other cultural knowledge – is passed, not from adults to children, but rather from

older children to younger children. In the preservation of plant knowledge lies the destiny of the people. [Source: RedBolivia Internacional [Bolivia], January 2009.]

BULGARIA

Bulgarian honey trade

According to the Bulgarian Bee Union, Bulgaria produces 8 000–11 000 tonnes of honey each year. The annual consumption of honey per person is 0.4–0.5 kg (average consumption for Europe is 1.5–2 kg per year).

Between 5 000 and 8 000 tonnes are sold within Bulgaria and 3 000–6 000 tonnes are exported. Every year in Europe 140 000–150 000 tonnes of honey are traded and therefore Bulgaria accounts for only 1 percent of the European honey trade. The major trade partner for Bulgaria is Germany, followed by France, Italy and Spain.

The Bee Union aims to popularize honey consumption in Bulgaria because it has been proved that the price on the local Bulgarian market is better than for export. [Source: *Bees for Development Journal*, 89, December 2008.]



CAMBODIA

Mondulkiri honey going wild

Indigenous Phnong (also referred to as Bunong) communities in Krang Thes and Pou Chrey communes are operating a honey enterprise project, a NTFP-based livelihood initiative that started in 2007 with support from WWF. The project currently covers 46 households, all honey collectors, and promotes a sustainable harvesting practice that respects biodiversity and maintains the intimate relationship and harmony with the forests.

During their harvest period of March to May 2008, the communities achieved a

honey collection of 1 000 litres. Of these, 400 litres were packaged following hygienic practices. In June 2008, the brand name "Mondulkiri Wild Honey" kicked off its first promotions in ten shops and NGO-based selling outlets in both Mondulkiri Province and Phnom Penh. Many environmental and commercial events were opportunities to introduce this new product.

"At the Third Cambodian Nationwide Trade Fair held in December last year, the community sold around US\$799 worth of honey during the four-day event annually organized to promote Khmer products. This was good exposure for the community's honey and a good opportunity to convey the message of linking forest conservation to the livelihoods of the community," said Amy Maling, Community Extension Technical Advisor with WWF's Eastern Plains Landscape Project (EPL).

Honey is one of the forest-based resources that has the potential to generate income among the Phnong indigenous communities in Mondulkiri. Proper handling and good honey harvesting practices not only result in higher production, but maintain the intimate relationship and harmony between people and the wilderness. Honey bees need the forest to survive and produce honey. They require large trees for nesting and are important agents of pollination for many plants in the forests.

Besides improving honey productivity, the development of the honey enterprise also brings change to the local honey trade situation. Traditionally, fresh wild honey is sold only to Mondulkiri's local buyers who offer a low and unstable price. In 2007, for example, honey was sold for 10 000 riel (around US\$2.5) per litre. But with the increased market in the province and capital of Phnom Penh, the Phnong collectors sold an average of 18 000 riel (around \$4.5)/litre in 2008.

According to Maling, the honey collectors are now collecting information about the number of honeybee nests, a crucial step for the management of this important NTFP resource. Trees where they collect honey are being tagged and mapping of the collection areas is being carried out.

To promote sustainable use of forest resources, EPL's community extension team conducts regular awareness-raising of the importance of forests among 16 local villages and encourages them to protect these natural resources, which can sustain their livelihood for generations to come.

The increased awareness of local people about the environment and their involvement in livelihood activities, conservation and natural resources management are a crucial contribution to preserving Cambodia's unique wilderness of dry forest Eastern Plains, which harbour a number of globally important wildlife. (Source: *Voices from the forest*, 16, March 2009.)

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Community forests signed over to Kampong Thom villagers

Thirty-two Community Forest Agreements were signed in Kampong Thom Province in late March, formally handing over the management of 15 000 ha of forest land to local communities. This is part of a 15-year social land concession that development officials say will reduce exposure to deforestation and offer residents a new source of income.

Development groups involved in the handover say forests in the hands of local communities have fared better than forests on public land or unregulated private land.

"[Villagers] have the most to gain and the most to lose from what happens to the forests they depend upon," said Yam Malla, Executive Director of the Regional Community Forestry Training Centre. "They are the most willing and most able to invest time, effort and their considerable human resources to ensure the forest is protected and well managed."

Ty Sokun, Director General of the Forestry Administration, said the Kampong Thom concession could be the beginning of

a much broader project. He promised a total of 2 million ha of Cambodian forest to community forestry, although he did not specify a timeline. Such a plan would put 20 percent of the country's forests into the hands of local communities; currently the figure stands at just 3 percent. (Source: *The Phnom Penh Post*, 31 March 2009.)

"Ecstasy oil" distilleries threaten rain forests

Authorities, working with conservationists, have raided and closed several "ecstasy oil" distilleries in Cambodia's Cardamom Mountains. The distilleries posed a threat to the region's rich biological diversity, reports Fauna & Flora International (FFI), the conservation group involved in the operation.

"The factories had been set up to distill 'sassafras oil', produced by boiling the roots and the trunk of the exceptionally rare Mreah Prew Phnom trees (*Cinnamomum parthenoxylon*) and exported to neighbouring countries," said FFI. "The oil is used in the production of cosmetics, but can also be used as a precursor chemical in the altogether more sinister process of producing MDMA – more commonly known as ecstasy."

The distillation process not only threatens Mreah Prew Phnom trees, but damages the surrounding forest ecosystem. Producing sassafras oil is illegal in Cambodia. (Source: Mongabay.com [Cambodia], 25 February 2009.)

CAMEROON

Cameroon raid nets key poachers and huge bushmeat haul

Prompted by concerns about poaching from WWF, the Cameroon Ministry of Forestry and Wildlife organized a major week-long antipoaching operation in the region in tandem with the national military. A combined unit of soldiers, police and game rangers uncovered more than 1 000 kg of bushmeat, the remains of which included several protected species: gorillas, elephants and chimpanzees. They also confiscated more than 30 guns from the suspected poachers.

WWF is now calling on the Ministry of Forestry and Wildlife to push for the swift prosecution of the 15 suspected poachers arrested to complete last week's spectacular antipoaching drive properly.

The operation was carried out in targeted villages with the help of local traditional rulers and the local population. The teams also carried out in-forest and maritime patrols during which two elephant tusks, three elephant tails and great ape parts were confiscated.

"It is critical for both government and other stakeholders to examine the alarming wildlife decimation in order to forestall what could turn out to be a regrettable carnage and irreversible loss of biodiversity," says Martin Tchamba, National Director for WWF Cameroon. "We need to urgently work out the causes of the present poaching upsurge and determine appropriate actions in order to safeguard key wildlife species in and around the parks." (Source: WWF Cameroon, 7 May 2009.)

L'impact du braconnage dans les forêts tropicales d'Afrique centrale et celles de l'Unité technique opérationnelle (UTO) de Deng Deng au Cameroun en particulier

L'UTO de Deng Deng est située dans la région de l'Est-Cameroun. Les populations qui s'y trouvent sont inactives à d'autres activités indigènes; pourtant, il y a souvent une rareté des produits agricoles, situation rare au sein de telles collectivités rurales d'Afrique avec un sol fertile. Pour ces populations, le braconnage est la seule source de revenus: d'où la chasse non contrôlée des espèces fauniques; d'après mes enquêtes, les populations exerçant l'activité de braconnage déclarent qu'elles ont des revenus limités; la chasse serait donc leur seul moyen de survie. Notre objectif est d'assurer la gestion durable des ressources naturelles pour un développement socioéconomique au sein des collectivités villageoises. Dans ce cas précis, faut-il préserver les ressources tout en laissant les populations dans la pauvreté?

Cependant, l'ampleur du braconnage est devenue telle que certaines espèces sont désormais menacées d'extinction. La récolte actuelle de viande de brousse en Afrique centrale est d'environ un million de tonnes par an, soit une valeur de 4 millions de têtes de bétail. A ce rythme de braconnage, dans 50 ans, les forêts tropicales du bassin du Congo deviendront silencieuses, conséquence de la perte de la biodiversité et de la rupture des équilibres naturels. Parallèlement, les populations seront toujours dans la pauvreté.

Résoudre ce problème revient à réaliser dans de telles régions des projets de la préservation des ressources forestières tout en assurant le développement par la mise en

œuvre de façon durable des fonctions environnementales, économiques et sociales des forêts tropicales. (*Contribution de:* Gwomb Bi Hell Emmanuel, Président fondateur du GFCS, B.P. 33939 Yaoundé, Cameroun. Courriel: dabereh@yahoo.fr)

Life around Ngovayang Forest

Environmental experts have started implementing field-level microprojects aimed at improving the livelihoods of people living in and around the Ngovayang Forest in the South Region. The initiative to conserve and manage sustainably the biodiversity of the Ngovayang Forest was officially launched in November 2008 at a workshop organized under the auspices of the Cameroon Biodiversity Conservation Society (CBCS), an affiliate of BirdLife International. The launching ceremony brought together representatives of relevant government ministries, community-based organizations and traditional institutions in the area.

The Ngovayang Forest constitutes an important source of livelihood for the local people, derived from the use of NTFPs. The management and sustainable harvest of these products necessitate a better understanding of the collection, processing and marketing of the products.

The indigenous people of the area are the Bagneli and Bakola, living alongside their Bantou neighbours, who often claim ownership of all natural resources in the region.

CBCS has long been carrying out research activities in the Ngovayang Forest area geared towards enhancing the living conditions of the indigenous people while conserving biodiversity in the region.

The microprojects designed to alleviate poverty, following research results in the area, touch on improvement of income-generating activities, sustainable harvesting of NTFPs, creation of community farms and enhancement skills in craft work. These projects are intended to link the livelihood improvement to biodiversity conservation by strengthening the capacity of the indigenous people.

CBCS is in the process of implementing a five-year development and conservation project on livelihood improvement in the area. For this initiative to have maximum impact and benefits for the indigenous people and the site support groups, collaboration among, and identification of, the various stakeholders become of paramount importance. (*Source: Cameroon Tribune*, 30 March 2009.)



Non-timber forest products get their own directory

Blueberry wine, fiddleheads, bird-watching tours, mushrooms, birds-eye wood sculptures and maple butter are just some of the items in a new NTFP directory in Atlantic Canada.

Called *From Our Atlantic Woods*, the new directory was put together by several forestry organizations in New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Maine and contains more than 260 items.

The Atlantic team, led by INFOR Inc. in New Brunswick, has been working closely with the Buy BCwild team on developing an online and printed directory similar to that of Buy BCwild. "We are very happy to collaborate with the Royal Roads University's Centre for Non-Timber Resources team on this project, which makes it much easier for us to embark on this initiative and affords a certain consistency across borders," explains Janette Desharnais, Executive Director of INFOR Inc. "We are constantly discovering new and unique NTFPs throughout the region – and the producers are very happy to hop on board and promote their goods through our directory. It will be a great tool for people seeking local and natural products from the forest land base."

The directory is available at www.FromOurAtlanticWoods.com

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www.fromouratlanticwoods.com/en/index.php

The agriculture and agrifood sector in British Columbia

The agriculture and agrifood sector in British Columbia is naturally diverse, producing over 350 products from our rich and varied land and aquatic resources. Non-timber forest resources (NTFRs) and wild products are part of the natural bounty that British Columbians enjoy. Since the early 1950s with the onset of use of woody florals harvested from the forest understorey, to the diversity of NTFRs that have appeared regularly in the marketplace, British Columbian First Nations, harvesters and producers are contributing at least \$600 million per year to the economy.

NTFR development can represent important economic opportunities for remote and rural communities, in particular those affected by mountain pine beetle, and other resource-dependent regions. First Nations communities have a long history with NTFRs and some have specifically targeted NTFRs as part of their economic development plans. Supporting community and cultural values is important to all British Columbians – thoughtful advances and partnerships in appropriate NTFR development can be part of sustaining healthy communities.

Providing some crossover with NTFRs, the British Columbian Ministry of Agriculture and Lands supports an agroforestry programme – an integrated systems approach that encompasses and balances economic, environmental and social values. The programme is driven by partnerships and identified gaps, needs and interests. Sustainable, ethical development of NTFRs and services is essential when capturing the value of the forest understorey – without compromising cultural or traditional rights, biodiversity and healthy ecosystems.

British Columbians value their environment and their diverse cultural heritage. Consumers everywhere are increasingly interested in the detailed story behind a product – who produces it, where it comes from and how it is produced are now part of the package. A local sustainability ethic is one of these key pieces. The Ministry of Agriculture and Lands is pleased to support the Centre for Non-Timber Resources in its work to provide key resources for sustainable, conscientious development in this emerging sector. (*Source: Buy BCwild*, 2008/2009.)

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Wild harvesting may come at a cost

The choice to buy something foraged from a Canadian forest instead of imported broccoli may seem good, but when wild foods hit the mainstream, the risks of overharvesting can threaten the species and large-scale industrial processing can diminish the qualities that attracted people in the first place.

A few years ago, wild leeks, also known as ramps (*Allium tricoccum*), were enjoyed only by foragers and gourmets who knew the woodland plant offered a delectable onion flavour with a hint of garlic. This year, the wild relative of the onion is everywhere. But all this attention is not good news for the leek, says Gérald Le Gal, President of the Quebec-based Association for the Commercialization of Forest Mushrooms and owner of Gourmet Sauvage, a company that sells prepared wild fruits and vegetables. Mr Le Gal does not think anyone should be selling ramps. "Don't touch the stuff. It's just too vulnerable," he says.

When you pick a ramp, you take the entire plant, including the bulb. Once the bulb is gone, there is nothing left of the plant; it will not grow back the next year. The Toronto and Region Conservation Authority considers it to be "a species of conservation concern". And eating a nice-sized bulb could be the equivalent of dining on an old-growth cedar. "It's a really, really, slow-growth plant. A bulb could be 18 to 20 years old," Mr Le Gal says.

In Quebec, the wild leek saw a similar surge in popularity in the early 1990s. At farmers' markets across the province, bottles of pickled wild leek were snapped up by the hundreds, pushing the species to the brink. Today, in Quebec, it is illegal to sell wild leeks. In an attempt to stop extinction by commercialization, the provincial government only allows people to harvest 50 bulbs a season for personal use. Chefs are not allowed to cook with them, and it is forbidden to import them from other provinces.

Wild leeks are not the only forest product growing in popularity. NorCliff Farms Inc., the country's largest supplier of fiddleheads (*Matteuccia* spp.), has seen a 20 percent rise in demand each year for its fresh and frozen

products over the past ten years, says Chief Executive Officer Nick Secord. This spring, the company opened a processing plant in Quebec where about 60 000 tonnes of fiddleheads roll off the conveyor belt every day. To satisfy demand, the company trucks in fiddleheads foraged from riverbanks and forests in Ontario, Quebec, New Brunswick and Nova Scotia, as well as the northeastern United States of America, Mr Secord says.

Unlike ramps, harvesting fiddleheads does not endanger the plant – as long as you do not take too many from the same patch, says Jonathan Forbes, owner of Forbes Wild Foods. He says pickers should only take three of the seven fronds of each plant or else risk its survival.

Experts say problems start when people do not respect these guidelines. "You've got people who are aware of how to harvest properly and others who just want to make a buck," says Tim Brigham of the Centre for Non-Timber Resources at Royal Roads University on Vancouver Island, a research centre dedicated to the sustainable use of forest products.

Mr Brigham believes that it is possible for Canadians to harvest wild foods commercially from nature in ways that preserve the ecosystem. He is part of a group trying to put together a national network of sustainable harvesters.

As long as harvesting is done sustainably, wild foods can help to protect nature, Mr Forbes says. "When people realize that the forests provide really good food, it gives it an ecological value it didn't have before. Then they may go easy on the environment." (Source: *The Globe and Mail* [Canada], 21 May 2009.)

Tapping trees for that classic Canadian flavour

It has been sweet success for a new breed of sapsuckers who introduced the maple syrup industry to Vancouver Island seven years ago.

A study of demand and supply of medicinal plants in India carried out by the Board during 2007-2008 highlighted alarming shortages of some of the plants used by the Ayurvedic industry.

Ladysmith's Gary Backlund and five others in the Master Woodland Manager programme at Vancouver Island University decided to create a West Coast maple syrup industry in 2002. More than 85 percent of the world's maple syrup is produced in Canada and is most commonly made in the eastern provinces of Quebec, Ontario, New Brunswick and Nova Scotia. In 2007, more than 40 600 tonnes of Canadian syrup,

valued at \$231 million, were sold to 45 different countries.

While the Vancouver Island production is a drop in the ocean compared with the eastern industry, Backlund and his fellow sapsuckers produced 3 000 litres of sap in their first season. Last year, more than 60 000 litres of sap were collected from bigleaf maples all over Vancouver Island. Backlund and his daughter Katherine do not measure their success in how much money they make from their maple syrup hobby.

Commercial success, however, was on the mind of Bram Lucieer of Campbell River, one of the original six island sap seekers. He did not make syrup. Instead, he produced a rare maple wine. Lucieer's ambition to sell his award-winning maple wine in the national and international market was corked when he ran into the arduous commercial regulations.

It is a huge disappointment since he is confident that he tapped into something that has the potential to make a large profit with hardly any overheads.

"The raw material is virtually free for the taking. The commercial profit would be huge. It's not like maple syrup where the reduction rate is about 40 (litres of sap) to one (litre of syrup). One litre of sap makes one litre of wine," said Lucieer.

Lucieer says he would be willing to share his trade secrets to help others take West Coast maple wine to the next level. A plantation of bigleaf maples would be the first step in making a profitable maple wine or maple syrup company. (Source: Canada.com [Canada], 23 February 2009.)



China introduces traditional medicines into basic health care programme

Beijing. China is trying to incorporate its centuries-old traditional medicine, mostly based on herbs, into the national basic health care programme.

The State Council, the country's Cabinet, pledged in a circular on Thursday to enable

every community and village health service centre to provide a traditional medicine service for citizens. "Traditional medicines have outstanding advantages. They cost much less than Western medicines. They will fit in with the health service in rural areas and communities," said Professor Ha Xiaoxian from Tianjin University of Traditional Chinese Medicine.

The State Council said that traditional medicine hospitals will be on the list of designated hospitals under the country's basic health insurance programmes for both rural and urban residents. In addition, the Government welcomes private investors to invest in hospitals or pharmacies of traditional medicine. It also encourages veteran doctors to open their own clinics and allows doctors to work at chemists' shops dispensing traditional medicines.

The circular admitted that the country sees many problems in passing on and renewing the ancient knowledge of traditional medicine. "A lot of valuable knowledge was not passed from the older generation to the younger and some important therapies were lost." The Government plans to register ancient medical books, develop a catalogue and set up a digital database for them. It will also support research and publishing of these books.

More resources will be spent on the education and training of doctors. The central government will support some key research institutes and colleges. It also encourages apprenticeships for training doctors as an alternative to medical schools, especially in rural areas. For thousands of years, doctors of traditional Chinese medicine passed on their knowledge through apprentices, especially from father to son. Even now many doctors prefer keeping effective and original prescriptions as "family secrets" and only telling them to people they trust. [Source: Xinhuanet.com [China], 7 May 2009.]

COLOMBIA

La recolección excesiva de productos forestales no madereros

La demanda y el consumo de diversos productos del bosque están provocando su agotamiento a un ritmo alarmante, siendo una de las causas subyacentes de la pérdida de la biodiversidad.

En Colombia, la recolección excesiva, con fines comerciales y ornamentales, de varios grupos de plantas como orquídeas, zamias y palmas, ha supuesto que varias

especies se encuentren en alguna categoría de amenaza. La explotación de orquídeas de los géneros *Anguloa*, *Cattleya* y *Cycnoches*, es un factor que incide en las poblaciones naturales, llevándolas a diferentes niveles de amenazas. Casos similares se documentan para varias especies de zamias, principalmente *Z. encephalartoides* y *Z. wallisii*, de las cuales se ha realizado extracción ilegal de tubérculos y semillas con fines comerciales, y a nivel de palmas, las que presentan amenaza por sobreexplotación del recurso son la palma estera (*Astrocaryum malybo*) y las palmas de cera (*Ceroxylon* sp.), cuyas hojas se extraen para la elaboración de ramos para la Semana Santa.

Fuente: López Camachó, René. 2008. Productos forestales no maderables: importancia e impacto de su aprovechamiento. *Revista Colombia Forestal* Vol. 11 - diciembre 2008.

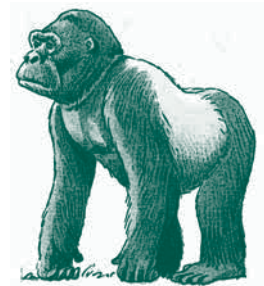
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(Please see page 20 for more information
on palm fronds.)

ETHIOPIA

EU grants €251 million to support development programmes

Addis Ababa. Ethiopia signed a multisectoral grant agreement on Thursday amounting to €251 million with the European Commission to assist its development endeavours in the road sector, productive safety net programmes and forest management, including technical assistance to support implementation of its development strategy.

Of this amount, €6 million will be used for the sustainable management of Ethiopia's forests in order to improve food security, strengthen the rural economy and reduce environmental degradation. It will also be used to improve forest conditions and forest-based livelihoods through building up the capacity of the Ministry of Agriculture and Rural Development and the community to scale up and mainstream participatory forest management and NTFP development. [Source: *The Africa Monitor* in AllAfrica.com [Ethiopia], 30 January 2009.]



GABON

Urban hunters do most harm to ape populations in Gabon

Commercial hunters from towns are exacting a much bigger toll on great apes than subsistence hunters from small villages, according to an analysis of ape nest density near human settlements.

The finding that numbers of gorillas and chimpanzees appear to have dwindled twice as much near towns in Gabon than near villages supports a focus on conservation efforts that tackle commercial hunting over those that aim to convince villagers to give up subsistence hunting, says Hjalmar Kühl at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, who conducted the study with colleagues. [Source: *New Scientist*, 3 March 2009.]

GEORGIA

Breakthrough sustainable forest-use plan

A conservation group in Georgia has realized a milestone for the Caucasus hot spot with a landmark management plan balancing sustainability and development while opening the door for transboundary cooperation along the West Lesser Caucasus biodiversity conservation corridor.

With Critical Ecosystem Partnership Fund (CEPF) support and input from all stakeholders, the Association for Nature Protection and Sustainable Development (Mta-Bari) has developed the management blueprint for the buffer zone surrounding Mtirala National Park. Roughly 20 000 ha of mostly pristine mountain forest fall under the purview of the document, which identifies areas for intervention and lays the groundwork for careful land use.

"The plan contains needed guidelines for sustainable use of natural resources and generation of alternative livelihoods, such as beekeeping, grape cultivation and

small-scale tourism," explained Zurab Manvelidze, Project Coordinator and Mta-Bari chairman. "It is the first of its kind in the hot spot and should serve as an important template for work in other protected areas of the Caucasus."

Unique geology, terrain and climate have made the Caucasus among the most biologically diverse regions in the temperate world. A quarter of its 6 500 species of vascular plants are found nowhere else on Earth – the highest level of endemism in the temperate zone. However, unsustainable use of forests, poaching and overharvesting of decorative plants are major threats to the buffer zone and the park.

Beyond establishing a framework to counter these threats, the management plan, which has been approved by the Georgian Government, has also served as a launching pad for discussions on transboundary cooperation with Turkey. Its Jamili Biosphere Reserve is a short distance from the Mtirala buffer zone and borders a proposed protected area in Georgia's Machakhela region. Close cooperation between the countries would strengthen conservation in the region, while promoting tourism and other economic opportunities for communities. (Source: CEPF E-News, March 2009.)



Ghana to build shea butter processing plant with Brazilian help

The Produce Buying Company (PBC) of Ghana signed a memorandum of understanding (MOU) with Sysgate Ltd of Brazil to establish a shea nut processing plant in the country. The establishment of the plant, which is the brainchild of Vice-President John Mahama, would allow for the export of shea butter and help Ghana tap into a fast expanding global shea trade projected to gross US\$500 million/year within the next five years. The establishment of the plant would enable PBC to process between 40 and 100 000 tonnes of nuts annually.

Vice-President Mahama described the event as the "first conspicuous step" towards revamping the shea industry and making it a driving force in the development of the savannah area of Ghana. He reported that the shea trade is crucial in the socio-economic development of the northern parts of the country and

promotes improved rural livelihoods for women.

Brazilian Ambassador, Mr Luis Fernando Serra, tasked the two organizations to use the pact as a demonstration that it is through fair and free trade rather than aid that poverty can be significantly reduced. Mr Serra promised to work towards integrating the economies of the two countries through the promotion of trade.

Although the shea crop is widely available in the northern regions of Ghana, the difficulty in harvesting the wild crop and the lack of processing facilities has contributed towards the downturn of the industry. According to the PBC, Sysgate was chosen because of the company's expertise in providing a special technology to maximize yields from shea processing. (Source: Ghana home page – ghanaweb.com [Ghana], 27 March 2009.)



Karaya: an underutilized Indian tree for gum production in tribal areas

The karaya tree (*Sterculia urens*) yields gum karaya, which is an important NTFP in central Indian tribal areas. The tree was very common in the central Indian forests, but has now nearly disappeared from the states of Gujarat, Rajasthan, Madhya Pradesh and Maharashtra through overexploitation. The state of Andhra Pradesh is at present the major gum producer.

The karaya tree is native to tropical, dry, deciduous forests, preferring an unusual natural habitat, occupying hill tops, exposed ridges, rocky crevices, eroded slopes and similar hostile habitats. It is extremely resistant to drought and will grow on the poorest of dry stony soils. It is

THE BAIF STRATEGY FOR KARAYA DEVELOPMENT

BAIF (formerly known as the Bharatiya Agro Industries Foundation) is currently implementing integrated tribal development projects in tribal areas across India and has established the Resource Centre for Tribal Development (RCTD) to ensure strong technical support to the field programme. RCTD has recently launched a major initiative to promote tree farming of karaya, which is threatened with extinction in many of its natural habitats.

The tree, which was a major livelihood resource from natural forests in BAIF's operational areas, is now nearly extinct. BAIF's plan is to restore the lost glory of this resource and now to reestablish it consciously on privately held marginal lands to avoid any conflict over tenure of natural trees, and ensure long-term sustainable harvesting practices.

also not grazed by cattle. If incorporated into farming systems of drought-prone areas, it has great potential to leverage extra livelihood support for small and marginal farmers during crisis situations.

This medium-sized deciduous tree is leafless in winter and summer. It flowers in January to March and fruits ripen in April to May when seed collection is possible. Capsules need to be harvested before they are too dry otherwise they burst open while still on the plant and the seeds are scattered. The seeds are eaten by children and monkeys and, therefore, seed collection may be a problem.

To extract gum from the bark, it is necessary to damage it. The traditional practice of extracting gum from the bark by axe also harmed the inner wood. Accelerated gum extraction has led to a rapid decline in natural stands.

Some problems associated with karaya gum collection are:

- the supply of substandard quality gum karaya lowers prices at all levels;
- gum tapping of karaya requires a specialized skill and knowledge in order to access the best-quality gum while minimizing damage to the tree;

- since the gum is widely used in the food and pharmaceutical industries, both in domestic and foreign markets, maintaining high-quality standards is critical; and
- proper scientific processes are critical in tapping, processing, packing, storing and marketing gum karaya.

Gum karaya is extensively used in the food industries as an emulsifier, stabilizer and thickener. It is also used in the pharmaceutical industry, as a laxative and in denture adhesives, and in many other industries such as petroleum and gas, textiles, paper and pulp, leather and allied products, ammunition and explosives, electrical appliances, adhesives and cosmetics.

Estimated annual income from the karaya tree

- Gum yield from one tapping of one tree: 30–50 g
- No. of times a blaze (cut bark) is tapped/month: 12
- Gum yield/month from one tree: 360–600 g
- Gum yield/year from one tree: 4 320–7 200 kg
- Average rate of gum/kg: International Normalized Ratio (INR) 100
- Possible approximate income from one tree: INR 500.

Opportunities within the karaya gum value chain

- Other NTFPs are available for a limited period, while gum karaya can be harvested all year round.
- Multiple industrial and household applications ensure continuous and stable demand.
- There is potential for developing new value-added products.
- Gum karaya is a natural, non-toxic and biodegradable product and therefore services a growing industry.
- Trees are easy to regenerate through cuttings, are extremely drought tolerant, grow on poor-quality lands and are not browsed. There is great potential for increasing the natural resource through community forestry.
- Technical improvements in post-harvest management, such as introducing solar driers and quality control laboratories at the community level, will help increase value.
- The community can be organized into collective initiatives for alternative marketing mechanisms.

(Source: Resource Centre for Tribal Development Fact Sheet, 1, September 2008.)

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Ex situ conservation of giloe (*Tinospora cordifolia*) – a potential tropical mediclumber in India

Tinospora or heart-leaved moonseed (giloe or guduchi in Hindi, *Tinospora cordifolia* [Willd.] Miers ex Hook. F. & Thoms) is a widely used shrub in folk and Ayurvedic medicine systems. Conservation of this mediclumber species is of utmost importance because of its depleting natural wealth. Most tropical and subtropical forests are dominated by this woody climber hanging with its aerial roots.

The annual demand for giloe was 2 932.6 tonnes in 2004–05, which is increasing with an annual growth rate of 9.1 percent. The shrub is widely used in veterinary folk medicine/Ayurvedic medicine for its general tonic, antiperiodic, antispasmodic, anti-inflammatory, antiarthritic, antiallergic and antidiabetic properties.

Ex situ conservation of the species can best be achieved through preservation in botanical gardens, herbal gardens and through cultivation. A recent paper by Ankur Sharma and Manmohan J.R. Dobriyal discusses the cultivation aspect – for both its conservation and to ensure its sustained supply to the pharmaceutical industries.

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Ethnic groups crucial to biodiversity

With an estimated 10 percent of India’s over 46 000 plant species being either extinct or in the endangered category owing to ruthless exploitation, scientists say that the key to conserving plant

diversity lies in the protection of ethnic communities, which have traditionally lived in the forests.

“The vast majority of important plants are still conserved by tribal communities residing in the remote forest areas of the different phytogeographic zones of India,” says D.C. Saini, senior scientist and taxonomist at the Birbal Sahni Institute of Palaeobotany in Lucknow.

Living in close association with nature and natural resources, these indigenous tribes have managed and conserved the biodiversity of their localities. “This vast repository of knowledge related to plants has been cared for, nourished and conserved by the tribal communities as a common property for thousands of years by experience, trial and error and it is also being freely transmitted from generation to generation by means of oral communication,” Saini says.

He explains that tribal people are not only familiar with thousands of commercial plant species in their ecosystems but they also have a good knowledge of the ecological interrelations of the various components of plant diversity. Moreover, many plants have been conserved in their natural habitats thanks to the people’s deep knowledge of beliefs, faith and taboos. (Source: *The Deccan Herald* [India], 3 March 2009.)



Italian group defends honour of rare white truffle

The Alba white truffle association, based in the heart of Italy’s truffle country, is campaigning to defend the image of the rare fungus as a dispute involving a restaurant bill heads for the courts.

The association is reacting to media reports that an unnamed top executive refused to pay a €4 000 (£3 530) bill after dining on white truffles with five guests at Milan’s Michelin-starred Cracco restaurant.

Chef Carlo Cracco – author of *White truffle utopia* – said that his restaurant refused to accept the anonymous businessman’s offer to foot half the bill or that there was any confusion over the weight or price of the truffles before the diners began eating. Cracco said the party of six consumed about 300 g of truffle, which cost €10.90 per gram.

"They did not want to see the menus. They just said: 'We want the truffles'," he said, adding that they picked two large ones and were duly informed of the weight. The diner said the truffle had not been weighed, newspapers reported, without giving details as to his identity.

The media attention comes at a time when the economic downturn threatens luxury spending and the purveyors of the expensive truffle are keen to keep their customers.

Located in Langhe, the hilly southern area of the Piedmont region, Alba is the main area for white truffles – the most prized variety of the underground fungus. The town, which has a population of 30 000, has held an annual truffle fair in autumn for nearly 80 years.

"We are comfortable with the price the restaurant charged," said Alberto Cirio, head of the Association for the International Fair of the Alba White Truffle, which organizes the annual event. "But we want to make sure we avoid misunderstandings in the future."

Mr Cirio said the association would encourage restaurants to agree on a set of rules to make sure truffles are weighed and grated on the dishes in front of the clients, with the price on display. [Source: *The Independent* [United Kingdom], 18 February 2009.]



KRYGYZSTAN

Increasingly forested but fruit and nut trees still endangered

A new map of Kyrgyzstan reveals that 7 percent of the country is woodland, slightly more than previously thought. However, experts are warning that 90 percent of Central Asia's fruit and nut trees have been lost during the past 50 years. According to the map produced by the Kyrgyz-Swiss Forestry Support Programme, 1.39 million ha of Kyrgyzstan are forested.

Flora & Fauna International (FFI), a conservation non-profit organization, is cautioning that 44 tree species in Kyrgyzstan, Kazakhstan, Uzbekistan, Turkmenistan and Tajikistan are facing extinction. Many of these trees are the wild ancestors of domesticated fruit and nut trees, including walnut, cherry and apricot.

Some 3 percent of the Kyrgyz state budget is earmarked for environmental protection. The lack of funding is widely acknowledged to "hamper" conservation

efforts, the CA-news.org news Web site reported on 13 May 2009.

Regionally, just 3.9 percent of Tajikistan is forested, Turkmenistan is 8.8 percent woodland and Uzbekistan is the most densely forested, with trees covering 10.1 percent of the country. [Source: EURASIANET.org, 15 May 2009.]



Walnut forests in rural Kyrgyzstan

Agroforestry is the predominant way of life in forested parts of southern Kyrgyzstan and walnut forests are a major part of the cultural landscape. Local farmers lease forest plots from the state and these provide a wide range of NTFPs.

NTFPs, including walnuts, wild apples, rosehips and mushrooms provide an important source of subsistence food; other useful products include firewood, hay and medicinal herbs. Collecting, processing and marketing NTFPs – mostly walnuts – are also sources of potentially high and much-needed cash income for local households.

The prime role of NTFPs from walnut forests is to contribute to local people's basic subsistence needs. However, because of the strong variations in yields, the role of these forests as a reliable source of income is limited. [Source: *id21 insights*, 77, May 2009.]



LIBERIA

Redefining a wildlife management strategy to stem imminent bushmeat crisis in Liberia

Bushmeat is a renewable natural resource that remains central to meeting the income and food security needs of resource-dependent households in the Central and West Africa region, as well as other regions in the developing world. In Liberia, as is variably true in the region, there are heightened concerns about the impending loss or reduction of this resource because of the harvesting methods used, the overcentralized strategies and policies governing wildlife use and management,

and the changing social and economic conditions that drive demand for bushmeat to a level where it now exceeds the rate at which hunted wildlife is replaced in the forest.

Finding ways to conserve and protect endangered and threatened wildlife species without compromising the health and welfare of the poor rural and urban families who are almost entirely dependent on this resource is a challenge that can be credibly met by effecting three proposed priorities: (i) shift demand to locally produced alternatives to bushmeat; (ii) revitalize existing traditional wildlife management practices; and (iii) recognize the multiple stakeholders with conflicting interests as leading social actors involved in bushmeat harvesting, processing and marketing.

These priorities are suggested as among the key elements of a wildlife management policy and strategy that should be designed so as to deal with the threatening bushmeat crisis in Liberia. [Source: *Nature and Fauna*, 23(2), 2008.]

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MALAYSIA

Agarwood Research Centre in Melaka
Melaka. An agarwood research centre will be set up by the Melaka Biotechnology Corporation (PBM) to carry out research on the various uses and development of the fragrant wood in the country. PBM Chief Executive Officer Professor Dr Ramli Hitam said the research would be used to create a profile of agarwood and perfume and for marking the agarwood trees. "It is also to find the best technology to produce agarwood resin," he told Bernama here today.

Recently, Malaysian Agarwood Association President Datuk Seri Syed Razlan Jamalullail had suggested that an *Aquilaria* research centre be set up to carry out a study on agarwood, which is useful in the making of perfumery and cosmetic products, as well as medicine.

Dr Ramli Hitam said there were various species of agarwood and that the research would be useful to determine which of them could produce the most and highest-quality resin. He said that for research and development purposes, the corporation had planted agarwood in a 40-ha area in the state, adding that the Forestry Department also had its own agarwood farm. [Source: Bernama [Malaysia], 17 February 2009.]

MEXICO

Moringa oleifera: La Moringa – Experimentan con planta nutritiva

El árbol de moringa podría ser el alimento del futuro, ya que de esta planta se pueden elaborar diversos alimentos nutritivos, aseguró Leopoldo Martínez Velarde, presidente de la Red de Inventores Sinaloenses.

Informó que este árbol regularmente crece en los cementerios pero que con el apoyo del Instituto Sinaloense de Desarrollo Social se ha logrado tener un campo experimental de 400 de estos árboles, ubicado en la colonia Loma de Rodriguera. "Éste podría ser un complemento alimenticio que proporcione a las madres y a los lactantes todos los nutrientes básicos para un sano desarrollo, ya que es un nutriente de rápido aprovechamiento y sumamente económico".

La hoja verde de la moringa gramo por gramo contiene siete veces más nutrientes y más vitamina C que la naranja, así como más calcio que la leche y el queso, detalló Martínez Velarde, quien también explicó



Moringa oleifera

que además con esta planta se puede producir aceite de calidad similar al aceite de oliva, así como a través del mismo aceite se puede producir biodiesel y hasta etanol.

«Esto no lo estamos inventando, si no que lo estamos redescubriendo, porque en el mundo el aceite de Moringa se comercializa, por eso digo que nosotros en Sinaloa, estamos comenzando a hacer lo que otros países ya han desarrollado con este árbol». [Fuente: Noroeste, México, 1 de febrero de 2009.]

Bamboo planting boosted

The Mexican Government and the United Nations have signed an agreement to boost bamboo planting in the country, its National Forestry Commission (CONAFOR) said.

Some US\$715 000 will be used to establish the Centre of Bamboo Technology Development in the east state of Veracruz as part of the country's productive reforestation strategy. The centre will be the fourth largest in the world, after China, India and Cuba, and bamboo produced there will be sent to the United States of America, Latin America, Europe and Asia through the Panama Canal.

The project will improve the livelihoods of rural people in the mountainous area of the Huatusco municipality in Veracruz and help them recover lost forest land. [Source: Xinhua [China], 5 January 2009.]

La envasadora y comercializadora de hongos silvestres en Los Pueblos Mancomunados de Oaxaca, México

En México, el conocimiento extenso sobre el uso culinario, las propiedades medicinales y el uso ritual de los hongos silvestres forman parte de la riqueza cultural de las poblaciones indígenas y rurales. Según los expertos, de las 140 000 especies presentes en el país, 200 son las que se consumen y 50 se consideran medicinales. Según las estadísticas oficiales, los hongos comercializados en el mercado nacional e internacional representan entre 450 000 y 850 000 USD por año, en beneficio de 3 000 hogares rurales.

En el estado de Oaxaca, los hongos silvestres representan un producto forestal no maderero (PFNM) ampliamente conocido por los indígenas que habitan en los bosques templados y en particular en la región de la Sierra Norte, y se colectan dentro de las áreas de uso común de los ejidos y las comunidades indígenas. En diferentes lugares de este estado (uno de los más pobre del país) se consumen y comercializan varias especies comestibles

de hongos, como el hongo de pan (*Boletus edulis*), el duraznito (*Cantharellus cibarius*), el hongo de huevo (*Amanita caesarea*) y un hongo codiciado por los japoneses: el matsutake (*Tricholoma magnivelare*).

La organización comunitaria de segundo nivel Pueblos Mancomunados constituye un territorio agrario de 30 000 hectáreas ubicado en la Sierra Norte de Oaxaca entre 2100 y hasta 3300 msnm. Allí se encuentran ocho pequeñas comunidades que cuentan con una población de origen zapoteca de 3 500 habitantes. A finales de los años 70, las familias de los Pueblos Mancomunados iniciaron una lucha social con la finalidad de obtener los permisos del gobierno para realizar su propio manejo y aprovechamiento comercial de los bosques de pino y pino encino, en una superficie de 13 000 hectáreas. En la década de 1980, se logró anular la concesión proporcionada por el gobierno a empresas privadas y estatales que explotaban los bosques; la comunidad formó entonces su propia empresa forestal. En el 2002, con el apoyo de la ONG Methodus, Pueblos Mancomunados diversificó sus negocios con la creación de una unidad de deshidratado, empaquetado y comercialización de frutas y diferentes especies de hongos silvestres.

La recolección y comercialización en fresco del matsutake a Japón es una actividad que inició a mediados de los 90 con la llegada de los primeros compradores japoneses a la región. Debido a los altos precios pagados a los recolectores (8 a 30 USD/kg), la oferta de hongos *matsutake* ha perdurado a pesar de la reducción del número de compradores. Con la creación de la unidad de deshidratado de hongos, se abrió para los recolectores nuevas opciones de ingresos, a través del aprovechamiento de especies más abundantes en los bosques. El boletus, hongo de huevo, duraznito y otras especies son deshidratados, empaquetados y distribuidos directamente por la empresa comunal a diferentes tiendas de productos gourmet ubicadas en varias ciudades del país.

Considerando que la demanda de hongos silvestres en el mercado interno y externo es aún insuficiente y que la operación de la empresa requiere procesar ciertos volúmenes para garantizar su rentabilidad, la envasadora y empacadora de Pueblos Mancomunados tiene cuatro retos principales: (i) lograr la máxima

valorización de los hongos en el mercado para poder ofrecer a los recolectores una remuneración atractiva por sus colectas; (ii) extender las áreas de aprovechamiento a través de asociarse con otras comunidades de la región y del estado; (iii) promover el buen manejo y la conservación de las áreas de producción; y (iv) establecer esquemas de comercialización que permitan valorizar la calidad y origen del producto.

Las empresas forestales comunitarias y las iniciativas privadas vinculadas han permitido generar empleos y favorecer la formación de recursos humanos dentro de los Pueblos Mancomunados.

En Oaxaca, los fenómenos migratorios no se han visto frenados con el desarrollo de empresas forestales; sin embargo, estos procesos, iniciados a finales de la década de 1980 en varias comunidades indígenas, están contribuyendo a generar empleos más atractivos para la población joven que opta por permanecer en sus comunidades. Para mantenerla en su región de origen, se requerirá mejorar la infraestructura social de las comunidades y desarrollar iniciativas de diferentes índoles (culturales, educativas o deportivas) que permitan competir con los ingresos que genera la migración a los Estados Unidos. De la permanencia de los jóvenes calificados en la comunidad dependerá sin duda el futuro de estas pequeñas empresas forestales, que tantos esfuerzos costaron a las generaciones anteriores. (*Fuente: Desarrollo de pequeñas y medianas empresas forestales para la reducción de la pobreza: oportunidades y desafíos en mercados globalizantes. Memorias de conferencia. 2007. Centro Agronómico Tropical de Investigación y Enseñanza [CATIE], Turrialba, Costa Rica.*)

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MOZAMBIQUE

Hidden forest

Using Google Earth to create an ecological map of the Mozambique highlands, conservationist Julian Bayliss accidentally discovered what is now thought to be the largest piece of mid-altitude rain forest in southern Africa.

The discovery of 7 000 ha of virgin rain forest in northern Mozambique has caused huge excitement in the scientific community. "It's extremely rare in this day and age to make such discoveries, especially in Africa, and to be the first biologist to enter such a huge area of untouched rain forest – well, it's a dream come true for a field-based conservationist such as myself, and to be the one who discovered it is incredible," says Bayliss.

The canopies of Mount Mabu have so far yielded five new species of butterfly and two species of snake. (*Source: The Guardian Weekly [United Kingdom], 20 February 2009.*)

NEPAL

Potential of managing wild mushroom in community forests for community benefit

A recent paper by A.K. Das *et al.* is based on a study conducted to assess the impacts of managing wild mushrooms in community forests. The study reveals that a small community forest area of Tibrikot, near Pokhara, alone contains 90 varieties of wild mushrooms, many of which are edible. The ethnic users are the main consumers of wild mushrooms; moreover, they are well acquainted with identifying characteristics, use values, collection, processing, trade and value addition.

There are more than 14 000 community forests in Nepal covering about one-third of the national forest area, benefiting more than a third of the population. This large resource base is important and vital for managing wild mushrooms for community benefit. The sustainability of community forests is very much linked with increasing income-generating activities associated with forests. (*Source: International Journal of Forest Usufructs Management, 9(2), July–December 2008.*)

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Economic potential of NTFPs in Nepal: myth or reality?

In a recent article in the *Journal of Forest and Livelihood*, Mani Ram Banjade and Naya Sharma Paudel discussed the worldwide shift in forest policies away from a narrow focus on timber towards an emphasis on NTFPs and problems in Nepal associated with this shift.

The reasons given for promoting NTFPs against timber are the following.

- 1) Although timber is found in surplus in many high altitude forests, it is inaccessible for the city markets because of a lack of road networks in many high mountain areas. In these places, transportation of and trading in high-value NTFPs, even in low volume, is more cost-effective compared with timber.
- 2) Harvesting of NTFPs, particularly those of herb and shrub origins and also parts of trees such as leaves, flowers, fruits and exudates, is ecologically less destructive as compared with the harvesting of trees themselves.
- 3) Timber production needs a relatively long time; it may take decades to get a harvest, whereas NTFPs take less time, i.e. they have a short gestation period. Generally, poor people who are dependent on forests cannot wait for long periods of time to receive returns from the management of their forests.
- 4) The poor have better access to NTFPs than to timber because while timber is sold, NTFPs may be collected free of charge in most of the community forests.

Following the changing global focus, forest policies in Nepal for the last two decades have also highlighted NTFPs through various policy documents, public meetings, party manifestos and other documents. It is now time to examine their economic, social and environmental outcomes. The original rationales and promises need to be revisited, because a critical analysis of the current scale of production and management of NTFPs shows that a misplaced optimism regarding the economic potential of NTFPs prevails.

For the purpose of reflection and re-examination, the following questions are pertinent. What has been the role of various organizations in NTFP promotion? To what extent have the benefits of NTFPs been realized? To what extent have the rationales and promises of NTFP promotion been achieved? What are the

NTFP COLLECTIONS AND SALE IN SUSPA CFUG, DOLAKHA

The Suspa Community Forestry User Group (CFUG) is rich in NTFPs. Almost 50 percent of the households of the Suspa CFUG are engaged in NTFP collection, which provides more money each day than the daily wages they can earn in the village. The wage rate in the area is about Nrs50/day (approximately US\$0.75). From the collection of lokta (*Daphne bholuwa*), a person can earn from Nrs125–200/day (\$2–3). There are other NTFPs, such as machhino, nigalo, argeli and mushrooms, from which many of the middle- and richer class users are getting better returns. Surprisingly, none of the poorest households were involved in the collection of NTFPs. When asked why, one of the women said that she did not know whether it would fetch a lucrative return and did not even know when it is open to collect.

challenges so far? Are there any hidden objectives for NTFP promotion? Are there any trade-offs with timber management and trade?

NTFPs are rationalized as goods for linking conservation with livelihoods. Government and other agencies are providing programmes such as research, education (training and other awareness programmes), enterprise development and poverty reduction, with specific focus on NTFPs and not on timber. Since the Government is reluctant to promote timber management, other development agencies are only left with the option of supporting NTFP development rather than timber. However, because of the constraining regulations and bureaucratic hurdles surrounding NTFP trade, both development agencies and users are left without any commercial opportunities to harness NTFPs.

Records of formal trade in NTFPs show that the optimism in the discourse on NTFPs is not sufficiently grounded. Although the Government and other development agencies exaggerate NTFPs as a panacea for resource conservation and poverty reduction, this is largely a rhetoric that raises the expectations of the people. The reality, however, is that the initiatives taken by these



agencies are far from realizing the glorified potentials of NTFPs. The endeavours of these organizations are not yet putting adequate efforts into enforcement of policy and the regulatory frameworks are not yet harmonized with nor developed in line with policy.

In the field, while promoting discourse on NTFPs, timber management is receiving less attention. It would have been better if Community Forestry User Groups (CFUGs) could put their energy and resources in both timber and NWFP management. Furthermore, it would have been better had CFUGs accessed the market more aggressively. In other words, NTFPs should be understood, managed and traded as an additional product and opportunity from timber, rather than amplifying it as a substitute.

Although NTFPs have a comparative advantage in some hilly districts, in many mid-hill areas, and even more so in the Terai, timber management produces far more income than NTFPs. The need is to make concerted efforts in releasing the barriers of marketing and trade in forest products, and supporting and facilitating individuals and communities to harness benefits from forest products. It is not helpful to undermine the value and potential of NTFPs, but it is important to caution the agencies concerned to re-examine their perspectives and practices so as to get benefits from hidden treasures such as NTFPs, rather than romanticizing them through exaggerated discourse. NTFP management should be understood as complementary to timber management and not as a substitute for the potential of timber. [Source: *Journal of Forest and Livelihood*, 7(1), December 2008.]

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Socio-economic determinants of cultivation of NWFPs in southern Nigeria

In a recent article in *Biodiversity and Conservation*, N.A. Chukwuone examined determinates for the success of NWFP cultivation in Nigeria. NWFP cultivation, although a veritable means of ecosystem and biodiversity conservation and improved natural resource management, has not been sustained in southern Nigeria (Nigeria's major forest region), notwithstanding the unprecedented rate of depletion of the resource in the wild.

For example, efforts in the past to support cultivation of NWFPs in southern Nigeria under a US Agency for International Development (USAID)-funded Cross River State forestry project, especially through nursery establishment for some rural communities, were not sustained because the initiative was abandoned by the participants. Hence, to promote cultivation of NWFPs, this study ascertained socio-economic factors that influence their cultivation.

A multistage sampling technique was used in the selection of respondents (households) from two states in southern Nigeria: Cross River and Enugu. A sample size of 400 households was used for the study. The findings show that cultivation of NWFPs was positively determined by gender, farming occupation (especially of female farmers), distance to forests where NWFPs were collected, proportion of household food from NWFPs and medium wealth category. Age had a negative effect on cultivation until the age of 46, after which the effect became positive.

In addition, household size, gender and farming occupation of household heads positively influenced the cultivation of NWFPs in plantations as against home gardens, while gender and farming occupation had a positive effect on cultivation of some stands of NWFPs as against home gardens.

Incorporating the findings of this study in future intervention projects for NWFP cultivation will help sustain the initiative. [Source: *Biodiversity and Conservation*, 18: 339–353, 2009.]

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Desert encroaches on nation at 600 m per year

Current statistics from the Federal Ministry of Environment show that Nigeria loses about 600 m of its arable land mass yearly to desert encroachment. A statement issued yesterday by Special Assistant to the Minister of Environment, Mr Rotimi Ajayi, noted that the Minister, Mr John Odey, was worried by the state of things and charged the people to cultivate non-timber forest trees to combat desertification in the northern belt of Nigeria.

"He said that there was a need to change Nigerians' attitude towards the forest, which could only be done by integrating the needs of the masses into forest development plans. "We need to work towards a policy on alternative energy use by Nigerians. We need to emphasize NTFPs. This is the only way we can make our forest management sustainable." (Source: ForestPolicyResearch.org, 26 January 2009.)



NGOs, producers partner to ensure a sustainable Brazil nut industry

Commercially harvested in the Plurinational State of Bolivia, Brazil and Peru, the Brazil nut (*Bertholletia excelsa*) is an important part of the region's economy, producing a large number of jobs and a considerable source of income for rural communities. In Peru, Brazil nut production is mainly carried out through concessions and small businesses that extend throughout the entire production chain, from harvesting and processing the nut through selling the final product to international exporters.

As part of USAID's Initiative for Conservation in the Andean Amazon (ICAA), the Rainforest Alliance is working with forest concessionaires in Peru's Madre de

Dios department to provide training and technical support in sustainable forest management and to strengthen markets for NTFPs, such as the Brazil nut.

Brazil nut producers in Madre de Dios – an area known as the "biodiversity capital of Peru" for its rich and exuberant vegetation – are receiving support in how to conserve and use their natural resources sustainably while also earning a profit. The Rainforest Alliance and its local partner, Comercio Alternativo de Productos No Tradicionales y Desarrollo para Latino América Perú (Candela Perú), are working together to train more than 60 Brazil nut producers in how to meet the certification requirements of the Forest Stewardship Council (FSC) for their harvested nuts.

Candela Perú was founded in 1989 with the goal of finding forest resources that could provide the residents of Madre de Dios with a steady income while not damaging the biodiversity-rich environment, thus assuaging many of the social and economic problems in the area. The organization currently works with 280 Brazil nut producers to process and export the nuts to international markets, mainly the United States of America and Europe.

Candela Perú's organic production programme involves 171 Brazil nut producers, including members of the Grupo Recolectores Orgánicos de Nuez Amazónica de Perú (RONAP), based in Madre de Dios. Nearly 70 of RONAP's Brazil nut producers have achieved Fair Trade certification, making it easier for them to meet the requirements necessary to achieve FSC certification through the Rainforest Alliance's SmartWood certification programme – the world's leading (FSC) certifier of forest lands.

Daniel Navarro, a director at Candela Perú comments: "It is extremely important to us to be involved in the whole production process, but in particular with harvesters who are usually at a disadvantage when they try to access markets – they are our best partners and the true guardians of the forest in Madre de Dios." Candela is not only interested in developing the commercial side of Brazil nut production, but it also wants to find "alternatives that will ensure the conservation and long-term sustainability of this incredibly biodiverse region by improving the quality of life for local residents," he adds.

Navarro believes that certification is a key tool to improve the Brazil nut production process and maintain the high level of quality that is needed to obtain a niche position in

international markets and therefore increase the income of Brazil nut harvesters. He endorses SmartWood certification because of its comprehensive approach that takes into account social, environmental, economic and quality issues. Additionally, many of FSC's criteria are in line with the mission of Candela Perú. "Trees that are left standing generate the income needed to improve the quality of life of the harvesters in Madre de Dios," he states.

Katherine Pierront, manager of the Rainforest Alliance's Sustainable Forestry Division in South America, explains, "Our goal is to use this model and replicate the experience in other regions in Peru and with other products."

To date, the total of certified forests in Madre de Dios is 210 280 ha, of which 179 894 ha are Rainforest Alliance/FSC-certified. Through similar partnerships between the Rainforest Alliance and organizations such as Cesvi Perú and the Asociación para la Conservación de la Cuenca Amazónica, this number will continue to grow and help to ensure the conservation of Peru's "biodiversity capital". (Extracted from: Eco-Index [Peru], March 2009.)

Peru gets US\$120 million to protect 55 million ha of Amazon rain forest

The Japanese Government will loan Peru US\$120 million to protect 55 million ha of Amazon rain forest over the next ten years, reports *El Comercio*. The loan, to be distributed in three phases starting next year, has an interest rate of 0.10 percent, payable over 40 years.

Antonio Brack, Peru's Minister of the Environment, said the loan will be used to establish permanent forest reserves, including indigenous territories. Brack estimated the initiative would avoid emissions of 20 billion tonnes of carbon dioxide.

Peru – home to the fourth largest extent of tropical rain forests after Brazil, the Congo and Indonesia – has historically had one of the lowest annual deforestation rates in the Amazon basin, but forest loss has been increasing in recent years as a result of illegal logging, mining, agriculture and expansion of road networks, including the paving of a highway that provides access to a remote and biologically rich region in the southeastern part of the country. In 2005 – the most recent year for which data are available – at least 150 000 ha of forest were lost, while a similar area was degraded through logging and other activities. (Source: Mongabay.com, 13 May 2009.)



Dos millones de plantones de camu camu

La producción de más de diez millones de alevinos (larvas) de diversas especies de peces para consumo humano destinadas a ser la gran despensa alimentaria frente a los problemas del hambre que se avecinan en el futuro, así como también de dos millones de plantones de camu camu (*Myrciaria dubia*), son parte de los principales proyectos que se están ejecutando y que impulsan el desarrollo de la Amazonía en el Perú.

Así lo se reveló el doctor Luis Campos Baca, presidente del Instituto de Investigaciones de la Amazonía Peruana (IIAP), en el foro Nuevos Desafíos para el Desarrollo Sostenible de la Amazonía Peruana que se realizó en el Congreso de la República. La reunión fue organizada ante la preocupación sobre el futuro de esta vasta región del planeta que, según estudios científicos, se encuentra amenazada por el avance de la acción del hombre y por el irreversible calentamiento global.

A esa importante cita participaron representantes de instituciones científicas, expertos, autoridades regionales, todos ligados al desarrollo de esta región, y en ella no sólo se denunciaron los graves problemas de deforestación, invasiones, caza y pesca indiscriminada, etc. sino que también se plantearon propuestas y proyectos destinados a enfrentar estos problemas.

Campos Baca añadió que la producción de camu camu en la Amazonía, un fruto nativo y de extraordinarias propiedades alimenticias y medicinales, tiene un potencial de exportación que será concretado en un futuro próximo. (*Fuente: El Comercio* [Perú], 4 de febrero de 2009.)

REPUBLIC OF THE CONGO

Stratégie et plan d'action national pour le développement du secteur des PFNL

Les différents climats du Congo sont favorables au développement de la diversité biologique, plus particulièrement des ressources naturelles forestières importantes pour le bien-être des populations rurales et citadines. Parmi ces ressources, le bois d'œuvre n'est accessible qu'aux sociétés industrielles privées et, dans une certaine mesure, aux sociétés étatiques. Cependant les produits forestiers non ligneux (PFNL) sont les produits les plus accessibles aux populations.

Les PFNL sont multiples et variés en Afrique centrale en général et au Congo en particulier. La majorité de la population

congolaise, et plus particulièrement la population rurale, utilise ces ressources au quotidien pour satisfaire leurs besoins de subsistance et également comme source de revenus et d'emplois. Pour ces populations (rurale et citadine), les PFNL constituent une source importante de nourriture, de plantes médicinales, ornementales, d'énergie, de matériaux de construction, d'équipements de pêche, de biens et d'ustensiles. A ce titre, les PFNL contribuent tant à la sécurité alimentaire qu'à la réduction de la pauvreté.

Malgré l'importance socioéconomique des PFNL, ces produits sont encore très peu valorisés au Congo. Cette sous-valorisation est la conséquence d'un manque de connaissances appropriées du rôle que jouent ces produits dans l'économie du ménage et la sécurité alimentaire dans le pays. Par ailleurs, l'absence de stratégie de développement de ces produits empêche leur exploitation optimale par les différentes couches sociales concernées.

La gestion des PFNL relève de la Direction de la valorisation des ressources forestières (DVRF), notamment du service en charge des PFNL dans cette Direction qui ne contrôle que les stocks des PFNL généralement alimentaires qui rentrent dans les granges. Nombreux de ces PFNL échappent au contrôle de cette direction. Le cadre légal et institutionnel est peu développé. La politique pourrait valoriser les PFNL à travers des stratégies sous-régionales et nationales telles que le Plan de convergence de la COMIFAC, le PSFE, le PNSA et le DSRP.

Etant donné l'importance socio économique des PFNL, la FAO à travers le projet GCP/RAF/398/GER appuie l'élaboration de politiques et de stratégies nationales et sous régionales pour le développement du secteur PFNL en Afrique centrale. Dans ce contexte, le projet apporte un appui technique au Ministère en charge des forêts de la République du Congo afin de faciliter le développement d'une stratégie nationale/plan d'action pour le développement du secteur PFNL dans le pays.

Pour matérialiser la vision et la stratégie, le chronogramme de la réalisation des activités de chaque axe stratégique est proposé. Ce plan d'action a été élaboré dans un processus participatif par les représentants de tous les acteurs présents à l'Atelier national d'élaboration et d'adoption de la stratégie et du plan d'action pour le développement du secteur des produits. Il est conçu et proposé en vue de servir de pilier pour le développement du secteur des PFNL. Il doit déboucher sur un engagement de la

part de tous les partenaires pour conduire à court et moyen termes aux changements fondamentaux et répondre efficacement à toutes les attentes.

La présente stratégie de développement du secteur des PFNL constitue un cadre de mise en œuvre du Plan d'action à court et moyen termes. C'est une stratégie qui aboutit à un Plan d'action ambitieux qui, une fois mis en œuvre, favorisera le développement du secteur des PFNL par la création des PME et PMI. Les instruments de mise en œuvre du Plan d'action sont la Direction de la valorisation des ressources forestières (DVRF) du Ministère de l'économie forestière (MEF), les divers ministères représentés dans le Groupe de travail sur les PFNL et les programmes de politique économique du pays.

La réussite de la mise en œuvre de cette stratégie dépendra fortement de l'engagement politique de l'Etat et des bailleurs de fonds à consentir les efforts nécessaires dans le financement des dossiers de projets d'investissement. Les producteurs, les commerçants et tous les acteurs doivent œuvrer pour faire sortir ce secteur de sa situation informelle.

La réalisation des activités prévues dans les différents axes stratégiques contribuera à la sécurité alimentaire et à la réduction de la pauvreté. (*Source: Stratégie et Plan d'action national pour le développement du secteur des produits forestiers non ligneux en République du Congo par Félix Koubouana. Août 2008. Projet GCP/RAF/398/GER Renforcement de la sécurité alimentaire en Afrique Centrale à travers la gestion et l'utilisation durable des produits forestiers non ligneux.*)

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REPUBLIC OF KOREA

Gorosoe sap: prized elixir from the forests of the Republic of Korea

At this time of year, villagers climb the hills around Hadong, Republic of Korea, to collect a treasured elixir – sap from the maple tree known as gorosoe (*Acer truncatum*, also known as painted maple). Unlike North Americans, who collect maple sap to boil down into syrup, Korean villagers and their growing number of customers prefer the sap itself, which they credit with a wide range of health benefits.

In this they are not alone. Some people in Japan and northern China drink maple sap, and birch sap has its fans in the Russian Federation and other parts of northern Europe. But no one surpasses people in the Republic of Korea in their enthusiasm for sap, which they can consume in prodigious quantities. "The right way is to drink an entire mal [20 litres, or about 5 gallons] at once," said Yeo Man Yong, a 72-year-old farmer in Hadong. "That's what we do. And that's what gorosoe lovers from the outside do when they visit our village."

Drinking gorosoe has long been a springtime ritual for villagers in these rugged hills, for whom the rising of the sap in the maples is the first sign of the new season. Some villagers even use the sap, which tastes like vaguely sweet, weak green tea, in place of water in cooking.

In the past decade, thanks in part to the bottling industry and marketing campaigns by local governments, gorosoe sap has become popular with urban dwellers as well.

Gorosoe sap sells for about 2 500 won, or US\$1.60/litre. Hadong produces 1.2 million litres of sap a year from its wild maples. Although most sap harvesters here are tea or persimmon farmers who gather sap on the side for extra income, some enterprising villagers have begun planting thousands of maple trees as a primary business venture.

Promotional pamphlets advertise the sap's purported benefits: it is good, they say, for everything from stomach aches to high blood pressure and diabetes.

Most of these claims have yet to be substantiated, said Kang Ha Young, a researcher at the Korea Forest Research Institute. "But one thing we have found is that the sap is rich in minerals, such as calcium, and is good, for example, for people with osteoporosis," Kang said. "Somehow, our ancestors knew what they were doing when they named it 'tree good for the bones.'"

Now that sap-gathering is becoming more commercial, some environmentalists have criticized tree tapping as "cruel". Kang says that careful tapping is harmless. To ensure this, the national forest authorities recently began requiring licences from sap collectors and regulating the number of holes they can bore into each tree.

Gorosoe farmers, who were doing a brisk business selling sap to visitors from makeshift stands, acknowledged the need for restraint. "The trees donate their blood to us," said Yang Heung Do, 51. "If you donate too much blood, you get weak. So we drill

only one to three holes per tree, depending on its size." (Source: *The International Herald Tribune* [United States of America], 24 February 2009.)

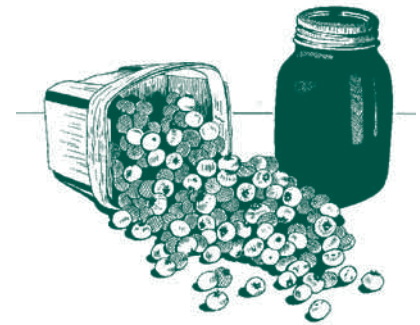
Use of forest resources

In a recent paper by Yeo-Chang Youn, the patterns of forest resource use in the Republic of Korea were overviewed together with the forest resource availability to forest users and in relation to the socio-economic conditions of local people. In the Republic of Korea, forest income comes more from NTFPs and forest ecosystem services than from timber. The relationship between the availability of forest resources and the income of residents in mountainous villages was addressed with a statistical analysis of results of household surveys conducted in Gangwon-do Province.

The result indicates that the mere existence of forest resources and related cultural heritages is not enough for local communities to obtain income from forest land. Proper arrangements for local communities in accessing forest resources and knowledge of making use of the resources are required to make the relationship constructive for people's livelihood. A joint management agreement between forest communities and the forest owner serves both parties for sustainable forest management in the Republic of Korea, as seen in the case of maple sap collection within Seoul National University forests. The traditional knowledge held by local residents is of value for income generation for forest-dependent communities and is considered an integral part of sustainable forest management, as seen in the case of native honey beekeeping near protected forest areas managed by the national forest authority. However, traditional cultural values may be positive or negative for ecologically sound forest management, as seen in the pest management policy of the Government of the Republic of Korea, which was formulated based on cultural values rather than on considerations of ecosystem health. (Source: *Forest Ecology and Management*, 257(10): 2027-2034, April 2009.)

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RUSSIAN FEDERATION

Russian governor says picking mushrooms and berries can beat crisis

Moscow. The Governor of the Sverdlovsk region in the Urals of the Russian Federation, Eduard Rossel, has called on residents to pick mushrooms and berries to get through the financial crisis. "We need to resume picking berries and mushrooms. One businessman picked 180 tonnes of mushrooms, processed them and sold them abroad. We can gather them and feed ourselves and others," Rossel said. "So we have three directions of work – the picking of wild berries and mushrooms, the development of the village and cleaning up," the Novy region Web site quoted Rossel as saying.

It is common in the Russian Federation to see people selling produce they have picked at the roadside or on the fringes of regular markets. (Source: *RIANOVOSTI*, 10 March 2009.)

SRI LANKA

Relief essential to cinnamon industry

The Export Development Board (EDB) has proposed a low-interest loan repayment scheme to support the cinnamon industry, which is facing a major crisis resulting from the global financial meltdown. EDB proposed a 12 percent interest scheme for smallholders, who comprise over 80 percent of the country's cinnamon industry, which is the fourth largest foreign income earner.

The Chairman of EDB said that the board will initially bear 90 percent of the cost of the machinery used for value addition for cinnamon and thereafter will bear 60 percent of the cost. Around 5 percent of the annual export income from the cinnamon industry will be allocated as an incentive for those who have been exporting cinnamon since last year.

Cinnamon producers said that they are unable to sell their produce because of the

sharp reduction in prices, which were around Rs800–900/kg for fine grades. Prices have gone down to around Rs350–400. Smallholders are finding it difficult to meet their daily expenses and pay the peelers and other workers. Buyers have cancelled or delayed orders until the world crisis eases.

Experts said that over 400 000 people depending on the cinnamon industry would lose their livelihoods if speedy measures are not taken to support the industry. The United Union of Cinnamon Producers said that if the Government fails to address the issue these people will have no alternative but to take to the streets.

The cinnamon industry has called upon the Government to commence a minimum price support scheme for producers, institute a low-interest repayment scheme, grant a subsidy for fertilizers and provide incentives for exporters.

Sri Lanka has been exporting cinnamon since the colonial era and the Ceylon cinnamon brand is known as the best all over the world. (*Source: The Sunday Observer*, 18 January 2009.)

Branding and marketing of cinnamon and other spices

The Export Development and International Trade Minister of Sri Lanka, Professor G.L. Peiris, met representatives of companies in the spice sector to discuss a wide range of issues related to strengthening their trade performance. One of the main issues discussed was the concept of branding and its usefulness in relation to the marketing of cinnamon and other products. Professor Peiris explained to industry representatives the measures that had been taken by his ministry in this area.

Cabinet approval has been granted to the Export Development Board to hold ownership of the Ceylon cinnamon brand. It has also been decided to appoint three committees regarding scientific identification, logo design and preparation of rules and regulations and certification procedure of a brand launching programme. (*Source: The Daily News* [Sri Lanka], 12 May 2009.)



Honey – a product of value in southern Sudan

Bees for Development has been working with Dr Jacob Mogga, an apiculturist from the Catholic Relief Services (CRS)

Agricultural Recovery Programme, to survey four counties in southern Sudan. The aim is to understand the importance of honey selling for rural communities and to analyse the potential for developing a successful honey industry in the region.

The survey revealed the importance of honey within the communities. Owning many hives is considered prestigious and reflects the fact that honey is highly valued for its social, cultural and economic benefits. Honey is used for marriage ceremonies, as gifts, for medicine and as payment for labour and in exchange for goods. The nutritional benefits of honey are appreciated and beekeepers reported that their families consume 10–25 percent of all honey harvested. Since the advent of the cash economy, honey is increasingly valued as a cash commodity and sold to traders and lorry drivers who know there is a large demand for honey beyond the immediate area.

During the survey, Dr Mogga visited four communities in four counties. In three of them, honey was considered the most important source of cash. In many societies, beekeeping is seen as a sideline activity and it is not always the case that beekeepers rank honey as their main source of income. This result is therefore significant.

Honey hunting is still common, but beekeeping is more important. In all the areas visited, beekeepers described leaving brood and unripe honeycombs, and they explained how they tried not to disturb the queen when harvesting. When beekeepers report yields of honey harvested, they tend to combine the volumes they harvest from beekeeping and honey hunting. The results show that honey is valued as a source of income and that beekeeping is an important farm activity.

One purpose of the study was to understand the potential for beekeeping as the basis of a successful industry. Therefore, Dr Mogga and the Bees for Development team considered the honey also from a commercial perspective. Local people appreciated that honey was a commodity with significant potential, citing the clear demand for Sudanese honey outside the local area. Lorry drivers from Kenya and Uganda are always quick to buy, and traders recognize the demand for honey also in northern Sudan. Transport costs are very high in the area because the war has devastated the road network, but honey is considered more cost-effective to transport than many other agricultural crops such as maize and sorghum, because of its high value per

volume. It is non-perishable and needs little further processing, thus increasing its marketability.

There are great challenges: no organized marketing channels exist and this means that during the honey harvest season, traders will bargain hard to pay low prices. This is a cause of frustration for beekeepers. The lack of adequate storage containers is a constraint for trade. A beekeeper who has filled all available jerry cans cannot harvest more until the honey is sold. Traders have the same limitations. Building a higher-value industry will require selling into markets with different quality expectations, and current harvesting and handling methods are not consistent with these markets.

Bees for Development plans to work further with Dr Mogga to address some of these problems. Our focus will be to help beekeepers overcome the constraints associated with storage and bulking, as well as training beekeepers in improved harvesting and handling processes. As development planners create a vision for a streamlined, commercial honey industry, it is important not to lose sight of the current benefits of beekeeping. Rural communities valued honey for its economic benefits long before supermarkets were invented. Bees have played an important role in preventing these war-torn communities from even greater depths of suffering, by providing food and a tradable commodity. The beekeepers from Bogori explained that a tribal fight in 2006 resulted in the loss of their cattle. Against this loss, the resilience of beekeeping emerged – it remains and continues to give benefits, much appreciated by the communities of southern Sudan.

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Biodiversity in the Sudan's forests: its impact on the diversity of NWFPs

Given below is the executive summary of a book by Talaat Dafalla Abdel Magid that was published in Arabic in 2001. This is the first time it has been translated into English. The book is intended to promote and encourage public education and raise awareness on the importance of the diversity of Sudanese flora. It will also satisfy the needs of different target groups working in the field of natural resources, as well as policy-makers.

The overall objective of the study was to analyse the literature, and authenticate and disseminate information related to the importance of the diversity of NWFPs and their contribution to food security, fodder, traditional medicine and the national economy. It is an attempt to enrich the existing knowledge on NWFPs in the Sudan and elsewhere in Africa.

The methodology adopted included an extensive survey of relevant literature from local government departments, NGOs, and regional and international agencies involved in forest biological diversity. This was supplemented by the author's experience and short field visits to some states. The study could not have been written without the great help of FAO's Wood and Non-Wood Products Utilization Branch.

The book is structured into nine chapters.

Chapter One. Biodiversity, includes information on (a) the forest ecosystem; (b) the Sudan country study on biological diversity developed by the Higher Council of Environment and Natural Resources; (c) diversity of forest trees and shrubs in the Sudan; (d) plant studies in the Sudan, which include published and non-published studies on regional flora; and (e) the Sudan's current forest reserves, area and status of forests as well as the different types of forests.

Chapter Two. Forest foods, includes (a) mangrove forest ecosystems; (b) dom palm forests and their contribution to food security and as emergency food during famine periods; (c) forest food contribution to human and animal diets; and (d) the nutritive and food values of the following species: *Mangifera indica* L., *Moringa oleifera* Lam., *Ziziphus mauritania* Lam., *Tamarindus indica* L., *Balanites aegyptiaca* L., *Adansonia digitata* L., *Boscia senegalensis* (Pers.) Lam. ex Poir., *Carica papaya* L., *Prosopis juliflora* (Swartz.) DC, *Vitellaria paradoxa* (Gaertn. F.) and *Phoenix dactylifera* L.

Chapter Three. The contribution of forests in traditional medicine, includes studies of medicinal values of trees and shrubs used by rural as well as urban dwellers. The following are examples of trees used by healers and villagers to treat a multitude of diseases: *Acacia nilotica* (L.) Willd. ex Del., *Acacia tortilis* (Forsk.) Hayne, *Adansonia digitata*, *Azadirachta indica* A. Juss., *Balanites aegyptiaca*, *Bridelia micrantha*, *Calotropis procera* (Ait.), *Capparis decidua* (Forsk.), *Chlorophora excelsa*, *Entada abyssinica*, *Khaya senegalensis* (Desr.) A. Juss., *Kigelia africana* (Lam.) Benth., *Sclerocarya birrea* (A. Rich.) Hochst., *Eucalypts*, *Ziziphus spina-*

christi (L.) Willd., *Salvadora persica* L., *Vitellaria paradoxa*, *Hyoscyamus muticus* L., *Grewia tenax* (Forsk.) Fiori and *Ficus sycomorus* L.

Chapter Four. Forests and wildlife, includes (a) the current status of wildlife in the Sudan; (b) the contribution of wildlife in the national economy; (c) ecological distribution of wildlife; and (d) the consumption of bushmeat in some African forests.

Chapter Five. Contribution of forest resources in animal diets, discusses the contribution of forests as grazing habitat for livestock. The study focuses on Rawashda and Wadkaba forests in eastern Sudan.

Chapter Six. Trees and bees, includes (a) the potential value of honey produced from forest areas and its impact in food security; (b) trees that produce good nectar in the Sudan; and (c) a review of studies and projects related to the development of beekeeping in the Sudan.

Chapter Seven. NWFPs of the Sudan's forests, includes (a) review of previous studies related to NWFPs in the Sudan; (b) international trade in NWFPs and trade restrictions; (c) gum arabic and other gums, including factors contributing to the decline of gum production and export; (d) production relationships of other gums and statistics of local trade in NWFPs; and (e) NWFPs in local, regional and international policies and regulation of forestry and the environment (68 conventions, protocols, laws and orders have been cited).

Chapter Eight. Human activities leading to deterioration of forests and biological diversity, provides an in-depth analysis of the factors contributing to the destruction of forest resources and biodiversity loss.

Chapter Nine. Conclusions and recommendations, includes (a) an overview on forest biodiversity and its contribution to food production and security in the Sudan and elsewhere in Africa; and (b) the important contribution of NWFPs and services provided by trees in different ecological zones of the Sudan and other African countries.

The study aims to bring to the attention of scientists and researchers the role of NWFPs and services provided by trees, which is often ignored or underestimated by policy-makers, finance authorities, planners and extension services, and offers a number of recommendations related to the conservation and sustainable use of forest resources. (Source: English summary of *Biodiversity in forests: its impact on the diversity of Non-Wood Forest Products* (published only in Arabic by the Forests National Corporation, 2001.)

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Jendouba region provides 90 percent of Tunisia's cork production

With some 70 000 quintals produced each year – about 90 percent of Tunisia's overall cork production – the Jendouba Governorate is the country's main provider of cork. The region (Kroumiria and Mogod heights), which is known for its vast expanses of cork oak forest (45 000 ha), also boasts one of the best ecosystem protection plans in the Mediterranean region.

The cork sector in Jendouba employs some 4 800 people and provides 150 000 workdays/year. Most of the harvested cork is processed at the Tabarka cork factory in northern Tunisia.

Ninety percent of Tunisia's cork production is exported to several European countries, especially Portugal.

It usually takes a cycle of ten years for a 35-year-old cork oak to regenerate its precious skin, hence the need to set up an effective conservation system.

Cork exports account for 50 percent of Tunisia's total forestry production; the rest is provided by wood, fodder and essential oils, as well as a wide variety of mushrooms. (Source: allafrica.com/stories/200902230788.html [Tunisia], 21 February 2009.)



Wild harvest reaps big rewards in foraging rush

Wild harvesting has quietly become something of a green gold rush. In woods and forests across the United Kingdom, wild garlic is being harvested for soup makers, wood sorrel gathered for Michelin-starred

chefs and spruce needles picked to infuse handmade chocolates.

Harvesting "wild food" – the seasonal salad leaves, nuts, fruit and fungi that grow abundantly across the United Kingdom – has led to a new industry in professional foraging for restaurants and a sharp surge in public interest.

People are harvesting, for free, nearly 200 ingredients throughout the year, from common crops such as hazelnuts, brambles and wild strawberries to dozens of different fungi, through to specialist crops such as elm and lime leaves, or sweet cicely. Chefs are now paying up to £50/kg for wood sorrel, with its sharp lemony tang, and £40/kg for elusive morel mushrooms, hand-picked from the forest floor.

In Scotland alone, where the wild food movement is thought to be strongest, the Forestry Commission estimates that wild harvesting, including harvesting lichens and mosses for natural remedies and horticulture, is worth as much as £21 million/year. Roger Coppock, the Forestry Commission's Head of Business Policy Development, said one recent survey suggested that well over a million people in Scotland had foraged at least once in the past two years. The rapid growth of wild harvesting – by as much as 38 percent since 2001 – has led the Commission to launch a campaign to promote wild foods with a code of good practice, to ensure that the increasing number of foragers harvest carefully and, where needed, with the landowner's permission.

Wild harvesting is no longer a niche cottage industry. [Source: guardian.co.uk, 27 April 2009.]



Traditional practices contribute to conservation of medicinal plants

Traditional practices contribute to the conservation of medicinal plants in the West Usambara Mountains, United Republic of Tanzania, report Tuli S. Msuya and Jafari R. Kideghesho in the March issue of the open-access journal *Tropical Conservation Science*.

These practices include domestication; beliefs on sacredness of trees; beliefs on sacred forests; respect of cultural forests; protection of plants at burial sites; selective harvesting; secrecy; collection of dead wood for firewood; and use of energy-saving traditional stoves. But medicinal plants are

increasingly vanishing, not only because they are in high demand for primary health care, but also because they cater for several other purposes such as trade, food, timber, firewood and building poles. Land clearing (for agriculture, settlements and other developments) and accidental and deliberate fires also contribute to loss of these species.

Msuya and Kideghesho conclude by underscoring the role of traditional management practices in enhancing the conservation of biodiversity and as a tool for ensuring primary health care in rural communities. [Source: Mongabay.com [United Republic of Tanzania], 23 March 2009.]

Forests in the United Republic of Tanzania under threat

The United Republic of Tanzania is facing a serious threat from deforestation amid reports that the country is losing an average of 420 000 ha of forests annually through rampant tree felling.

The Minister for Natural Resources and Tourism, Ms Shamsa Mwangunga, said yesterday that the situation posed a serious threat to the country's economic development. Mwangunga made the revelations in Dar-es-Salaam while launching the National Forest Resources Monitoring and Assessment project.

On the same occasion, Finland's ambassador to the United Republic of Tanzania, Mr Juhani Toivonen, said the rate at which deforestation is taking place in the country was "alarming". He urged the Government to seek ways of protecting natural forests, adding that the launched project would provide a basis for intervention measures. "It [the project] will provide the necessary tools to identify the means to stop forest degradation at regional, district and village levels, and promote sustainable use of forest resources," he said.

FAO has been selected to coordinate the implementation of the project, working in collaboration with the Forest and Beekeeping Division of the Forestry Ministry.

Dr Louise Setshwaelo, FAO's country representative, said: "The project will provide valuable information on forest resources and how to improve their management. It symbolizes the key role that forest resource monitoring and assessment play in providing relevant and timely information," she added.

The new US\$3.07 million (TSh3.9 billion) project is being funded by the Government of Finland. [Source: *The Citizen Daily* [United Republic of Tanzania], 13 May 2009.]



USDA issues final rule governing NTFPs

The United States Department of Agriculture (USDA) is issuing a final rule governing the disposal of special forest products and forest botanical products from National Forest System land. The final rule was published in the Federal Register on 29 December 2008; the directives will become effective 28 January 2009.

Special forest products are products collected from National Forest System lands and include, but are not limited to, mosses, fungi (including mushrooms), bryophytes, liverworts, roots, bulbs, berries, seeds, wildflowers, forbs, sedges, grasses, nuts, ferns, tree sap, boughs, bark cones, burls, transplants, pine straw, Christmas trees, firewood, posts and poles, shingle and shake bolts, mine props, rails, bow staves and fence material.

Forest botanical products are naturally occurring and a subset of special forest products but exclude timber products such as, but not limited to, Christmas trees, firewood and fence materials.

These regulations will allow the Forest Service to manage its special forest products programme better: (i) through commercial harvest and sale; (ii) through free use; and (iii) through implementing a pilot programme to charge, collect and retain fees for forest botanical products, pursuant to the pilot programme law under Public Law 108–108, Title III, Section 335, 117 Stat. 1312 (16 U.S.C. 528 Note).

The rule addresses fees, bidding, sustainability and other issues with commercial harvest and sale of special forest products and forest botanical products. The new rule reflects existing procedures and practices.

In the past, the Forest Service has used its timber sale regulations and certain parts of the *Forest Service Manual* and *Handbook* to sell special forest products. Public demand for both timber and non-timber special forest products has increased. Current regulations do not adequately address the selling of NTFPs. Given the growing demand and the need to ensure sustainability, the Forest Service feels that it is impractical to continue to rely on timber sale regulations for special forest products. Therefore, the agency has developed regulations that specifically apply to special forest products.

Historically, the Forest Service has granted limited free use of special forest products to

individuals and tribes with treaty and other reserved rights. In addition to honouring the treaty and reserved rights retained by tribes, the Forest Service is committed to meeting their trust responsibilities with tribes. This rule continues to recognize these rights and responsibilities. It allows for and encourages the use of memorandums of understanding and memorandums of agreement with regional and local Forest Service offices to maintain traditional cultural practices and culturally important places.

Traditional gatherers who may not be members of federally recognized tribes will have full access to special forest products as they have in the past. Permits will be required, however.

The rule establishes a pilot programme for disposing of forest botanical products from National Forest System lands. The Forest Service's treatment of forest botanical products and special forest products differs only in the segregation of fees and different "personal use" and "free use" practices. The pilot programme allows limited free use of forest botanical products and establishes a "personal use harvest level" for each product. If an individual's gathering is below the "personal harvest use level," he or she does not have to pay fees. (Source: USDA, 9 January 2009.)

Honey laundering

The international honey trade has become increasingly rife with crime and intrigue. In the United States of America, where bee colonies are dying off and demand for imported honey is soaring, honey traders are resorting to elaborate schemes to dodge tariffs and health safeguards in order to dump cheap honey on the market.

Large shipments of contaminated honey are frequently laundered in other countries – an illegal practice called "transshipping" – in order to avoid United States import fees, protective tariffs or taxes imposed on foreign products that are in place to prevent undercutting domestic prices. In a series of shipments in the past year, numerous tonnes of honey produced in China passed through the ports of Tacoma and Long Beach, California, after being fraudulently marked as a tariff-free product of the Russian Federation.

Viet Nam is now the No. 2 honey exporter to the United States of America, second only to Canada. But Vietnamese honey officials say that a great deal of Chinese honey is being transhipped through their country, citing 24 containers that arrived in Los Angeles earlier this month.

Falsifying records to get honey illegally into the United States of America is a common practice, said a former Shanghai honey shipper. "In Hai Phong [Viet Nam], the Chinese honey became Vietnamese and in Pusan [Republic of Korea] the papers were changed to say it came from the Russian Federation," said the former shipper, who asked not to be identified. (Source: Seattle PI [United States of America], 30 December 2008.)

VIET NAM

Nearly 4 000 new medicinal plants found

Ho Chi Minh City. Scientists have identified 3 948 species of plants and mushrooms in Viet Nam that have medicinal and nutritional value, a conference announced. The Ministry of Health and the Ministry of Science and Technology of Viet Nam held the conference in the northern Vinh Phuc Province last week to review the past 20 years of medicinal herbs research in Viet Nam. Of the total number of species, there are 52 species of seaweed, 22 mushrooms, four kinds of moss and 3 870 species of higher plants

In the past 20 years, research has mostly been carried out in botanical gardens, national parks and natural preservation zones. From 2009 to 2019, government agencies will focus on preserving rare plants that are at risk of extinction. (Source: Viet Nam News, 12, May 2009.)

ZAMBIA

Zambia plans to increase honey production

Over 20 000 bee farmers in Zambia are expected to double their annual production once the country's "Beekeeping and Honey Policy" is in place. Bee farmers earn slightly more than US\$3 000 for a tonne of honey or beeswax on the international market. The Center for International Forestry Research (CIFOR) is collaborating with African governments to come up with policies to guide the production, packaging and marketing of honey-related products. The Zambian Government believes that raising bees will help pull hundreds, if not thousands, out of poverty.

Honey and beeswax are among the country's major non-traditional products that are exported to the United Republic of Tanzania, South Africa, Germany, the Libyan Arab Jamahariya, the United Kingdom, Botswana, Japan, Canada and the United States of America.

Dr Crispen Marunda is CIFOR's regional coordinator for eastern and southern Africa. He says the present-day beekeeping industry is loosely organized and that there are no legal or legislative structures to monitor or control it.

Marunda explains that monitoring mechanisms will help farmers and the Government to negotiate fair prices and markets for honey-related products. He says an official policy will have a meaningful effect on forest communities that raise bees and related products.

"By coming up with a beekeeping industry policy, the Government will have a structure in terms of how it can support the different institutions that are producing, exporting or buying honey. [The beekeeping policy] will also assist some communities into some kind of beekeeping communities. The communities can have an institution at a local level, they can market their honey as a group, they can lobby for better prices, they can export their honey as a group rather than them working as individuals," he says.

Another project supported by USAID is also trying to develop Zambia's honey sector. It involves support for the Zambia Agribusiness Technical Assistance Centre (ZATAC), which provides assistance to the Smallholder Export Organic Honey Project in Mwinilunga, 500 km from Lusaka.

A USAID report indicates that ZATAC's approach of providing marketing, technical and financial linkages between producers and agribusinesses is slowly paying off. Approximately 3 000 honey farmers have been trained to harvest, handle and package certified organic honey for export. The training is expected to help the farmers take advantage of new export opportunities under the United States-backed African Growth and Opportunity Act (AGOA) and new trade initiatives of the European Union.

There are reportedly about 20 000 beekeepers in Zambia, producing an average 600 tonnes of marketed honey annually. Seventy percent of Zambia's beekeepers – both women and men – are located in the northwest. (Source: VOA News [Zambia], 7 April 2009.) ♣

A man may fall many times but he won't be a failure until he says someone pushed him.

Elmer G. Letterman