

"Non-Wood Forest Products (NWFPs) consist of goods of biological origin other than wood, derived from forests, other wooded land and trees outside forests."

«Les produits forestiers non ligneux sont des biens d'origine biologique autres que le bois, dérivés des forêts, des autres terres boisées, et des arbres hors forêts.»

«Productos forestales no madereros son los bienes de origen biológico distintos de la madera derivados de los bosques, de otras tierras boscosas y de los árboles fuera de los bosques.»

(FAO's working definition)



making its own gum using only chicle gum base and natural flavourings and sweeteners. (Source: CNN [United Kingdom], 3 April 2009.)

BIOPROSPECTING/ BENEFIT-SHARING OR BIOPIRACY?

Bioprospecting: "The Green Gold Rush"

The Green Gold Rush is the name of a video documentary about bioprospecting and indigenous peoples that was produced in October–November 2008 in Geneva, Switzerland. This project is the result of collaboration between the Swiss NGO Group of Volunteers Overseas (GVOM) and the Vice-presidency of the Plurinational State of Bolivia.

The objective of the project is to stimulate the debate about the protection and valorization of traditional knowledge and biological resources in the Plurinational State of Bolivia. It is articulated in two phases. During the first two months in Geneva, a video documentary was produced and information about international experiences and strategies was collected. During the next six months in La Paz, Plurinational State of Bolivia (January–June 2009), various public presentations of the video documentary and debates, weekly meeting of experts, seven workshops with more than 700 delegates of indigenous peoples and a national encounter of 50 delegates of indigenous peoples, were being organized.

The national encounter was to take place in La Paz over three days during the first week of June 2009 in coordination with a regional encounter of 180 indigenous peoples' delegates on "intellectual property and traditional knowledge", organized by COINCABOL. It is also expected that various international experts, intellectuals and activists will be able to participate. (Source: TheGreenGoldRush.org)

BIODEGRADABLE CHEWING GUM

United Kingdom authorities and environmental groups were welcoming the launch this week of the world's first biodegradable chewing gum, which they say could help save some of the millions spent on clearing up the mess that ordinary gum creates.

The new gum becomes non-adhesive when dry and decomposes to dust within six weeks, a spokesman for Mexico's Chicza Mayan Rainforest Chewing Gum told CNN. Unlike other gums that contain petrochemicals, the natural gum is produced from the sap of the chicozapote tree (*Manilkara zapota*) found in the Mexican rain forest.

A spokesman for campaign group Keep Britain Tidy told CNN they welcome any product that can help eradicate the staining on pavements caused by dropped chewing gum. According to the Local Government Association, removing chewing gum litter costs local authorities £150 million a year.

The producer of the new gum is Consorcio Chiclero, which comprises 46 cooperatives with around 2 000 chicleros farmers, working in an area of 1.3 million ha of rain forest. Locals have been extracting the natural chicle gum base from the bark of the chicozapote trees for a century, a spokesman for Chicza told CNN.

After years of exporting the gum base to be used as an ingredient in the manufacture of regular chewing gum, the cooperative recently decided to start

India moves to protect traditional medicines from foreign patents

In the first step by a developing country to stop multinational companies from patenting traditional remedies from local plants and animals, the Indian Government has effectively licensed 200 000 local treatments as "public property", free for anyone to use but no one to sell as a "brand".

The move comes after scientists in Delhi noticed an alarming trend – the "bioprospecting" of natural remedies by companies abroad. After trawling through the records of the global trademark offices, officials found 5 000 patents had been issued – at a cost of at least US\$150 million – for "medical plants and traditional systems".

"More than 2 000 of these belong to the Indian systems of medicine ... We began to ask why multinational companies were spending millions of dollars to patent treatments that so many lobbies in Europe deny work at all," said Dr Vinod Kumar Gupta, who heads the Traditional Knowledge Digital Library (TKDL), which lists in encyclopaedic detail the 200 000 treatments. The database, which took 200 researchers eight years to compile by meticulously translating ancient Indian texts, will now be used by the European Patent Office to check against bioprospectors. (TKDL can be found at: www.tkdl.res.in/tkdl/langdefault/common/home.asp?GL=Eng)

Gupta points out that in Brussels alone there had been 285 patents for medicinal plants whose uses had long been known in the three principal Indian systems: Ayurveda, India's traditional medical treatment; Unani, a system believed to have come to India via ancient Greece; and Siddha, one of India's oldest health therapies, from the south.

In the past, India has had to go to court to get patents revoked. Officials say that to lift patents from medicines created from turmeric and neem, an Indian tree, it spent more than US\$5 million. In the case of the neem patent, the legal battle took almost ten years. "We won because we proved these were part of traditional Indian knowledge. There was no innovation and therefore no patent should be granted," said Gupta.

India's battle to protect its traditional treatments is rooted in the belief that the developing world's rich biodiversity is a potential treasure trove of starting material for new drugs and crops. Gupta said that it

costs the West US\$15 billion and 15 years to produce a "blockbuster drug". A patent lasts for 20 years, so a pharmaceutical company has just five years to recover its costs – which makes conventional treatments expensive.

"If you can take a natural remedy and isolate the active ingredient then you just need drug trials and the marketing. Traditional medicine could herald a new age of cheap drugs." (Source: guardian.co.uk, 22 February 2009.)

Rural communities in Kenya to benefit from plan to market natural plants

Rural communities are set to benefit from research firms and the University of Nairobi's plan to market natural plants. The move is aimed at boosting the living standards of rural communities and preserving the environment.

The initiative involves looking for special genes or plants that can be used to manufacture medicine, industrial products and food supplements for commercial purposes.

Kenya has not tapped into this market, which now stands at about US\$600 billion globally, despite its richness in biodiversity. International researchers and multinational drug manufacturing companies are now looking for ways to exploit the country's biodiversity, bearing in mind its potential to contribute to the discovery of medicine extracts. However, the strain used to manufacture a drug known as Acarbose used for treating diabetes came from Ruiru, although the community around there has not benefited much from its discovery.

Bioprospecting is not common in Kenya because of lack of research and product development, poor technology, uncoordinated gathering of information, and lack of skills and awareness. Dr Wilbur Lwande, a researcher at the International Centre for Insect Physiology and Ecology, says bioprospecting can be a tool of economic development, but only if products are developed and proceeds from the sale of the products shared among locals and some used for natural resources conservation. (Source: *Business Daily* [Nairobi], 16 January 2009.)

Biopiracy in the Cuzco region, Peru

A session workshop on "Biopiracy in the Cuzco region" was held during the international workshop "Implementation of the Biosafety Protocol and the Regional

Order 010-2007-CR/GRC.CUSCO" that took place from 21 to 23 April 2009 in Cuzco, Peru. This session analysed the impacts and challenges of biopiracy in Peru, and its relevance to the recently promulgated Order 048-2008-CR/GRC.CUSCO.

This regional legal benchmark seeks to regulate the activities of access to genetic resources and associated traditional knowledge, practices and innovations within the traditional territories of indigenous and native communities of the Cuzco region, as well as aspects related to the protection and promotion of the biocultural heritage of indigenous communities in Peru.

The workshop sought to advance the design and implementation of tools, such as local biocultural registers, customary law-based protocols and intercommunity agreements that will protect and defend the region's biocultural heritage and promote tools that foment creative economies based on solidarity, as well as protect the traditional institutions and customary laws within the respective Andean-Amazonian communities. (Source: www.andes.org.pe/php=left_en05.php)

(Please also see page 20 for more information on the NGO ANDES.)

BIRD FLU ANTIVIRUS SOURCED FROM INDIAN TREES

A team of scientists in Bangalore (India) reported in *Current Science* last week (25 March) that they have identified several tree species that contain shikimic acid, a crucial component in the production of Tamiflu, the only drug used against bird flu caused by the H5N1 virus.

Plants meet two-thirds of the requirements for shikimic acid and the remaining one-third is met by engineering the bacterium *Escherichia coli* to produce the chemical – which is not cost-effective.

The researchers screened 210 tree species in the Western Ghats region for shikimic acid content and shortlisted seven trees that contain 1–5 percent shikimic acid by dry weight.

The acid is mostly present in the leaves of these trees. This is an advantage, the scientists report, as the sheer volume of leaves present on trees – compared with fruits – will make extraction cheaper.

"Industries have existing technologies for isolation of shikimic acid from *Illicium vernum* [the Chinese plant]. The same could

be applied to these [Western Ghats] plants as well, with minor modifications," says Uma Shaanker, a researcher at the University of Agricultural Sciences in Bangalore, and one of the authors of the paper. The process is relatively simple as shikimic acid is highly water soluble, he says.

Besides isolation, commercialization would require bulk extraction on a large scale and validation of the shikimic acid content.

Shaanker's laboratory now plans to demonstrate the feasibility of bulk extraction – in tens of kilograms compared with milligrams in the laboratory – in the two species, *Araucaria excelsa* and *Calophyllum apetalum*, with the highest shikimic acid content. (Source: *SciDev.Net* Weekly Update [31 March to 5 April 2009].)



"CORK REHARVEST"

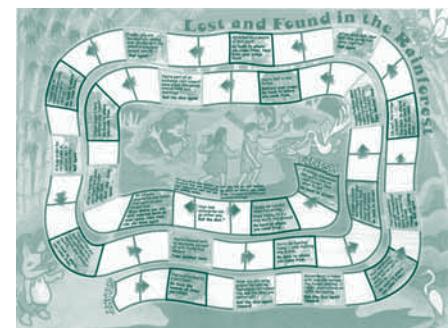
The Willamette Valley Vineyards in Oregon, United States of America – the world's first winery to earn Forest Stewardship Council/Rainforest Alliance certification for using cork stoppers harvested from responsibly managed forestlands – has launched a new cork recycling programme: "Cork ReHarvest".

A first for Oregon and a model for wineries around the globe, the programme has two aims: to collect and recycle used corks; and to educate the public about the importance of sustaining the cork forests of the Mediterranean. (Source: *Rainforest Matters*, March 2009.)



EDUCATIONAL TOOL WITH A DIFFERENCE

Are you a NTFP gamer? Watch out for this fun game called "Lost and Found in the Rainforest!" This board game popularizes the various issues surrounding NTFP management in an easily accessible form



for youth and adults alike. It is hoped that playing the game will initiate deeper discussions on the issues and threats related to NTFPs and managing forests. (Source: *Voices from the Forest*, 15, September 2008.)

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FORESTS, HUMAN HEALTH AND THE IMPACTS OF CLIMATE CHANGE

The World Health Organization dedicated the focus of this year's World Health Day, on 14 April 2008, to "Protecting health from the adverse effects of climate change". Although one may not readily see a connection between climate change and health, the two are inextricably linked. Studies from around the world, including those by Carol Colfer of the Center for International Forestry Research (CIFOR), demonstrate that climate and weather have a powerful impact on human life and health, especially the health of vulnerable forest-dependent people.

However, according to CIFOR scientist Patricia Shanley, who has spent over five years studying the complex relationship between forests and health, "at present, people living in forests deal with much more immediate problems than climate change, like children dying of dysentery and malaria and other diseases caused by the indirect effects of forest degradation. Add to this the fact that many of their medicinal plants and other Non-Timber Forest Products (NTFPs) are being destroyed through logging."

Climate change is likely to exacerbate these problems by influencing the

biodiversity assets and ecosystem services of tropical forests. This will lead to indirect impacts such as a decrease in water supply and quality, which in turn will lead to an increase in water-related diseases, especially water-borne diseases following extreme rainfall. (Source: *CIFOR News* 46, November 2008.)

the latter are often simply thrown away. If we can improve this process and the packaging, the kernels can be a very good product for export."

In an important development for the export potential of dried baobab fruit, the EU has recently categorized it as a novel food (see *Non-Wood News* 18), opening up a whole new export market. "And the baobab is prominent throughout Africa, so this product can be very valuable for poor African farmers." (Source: *Resource Weekly for Wageningen UR*, 29 January 2009.)

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HOPE FOR AFRICA IN BAOBAB

The baobab tree produces fruit that is rich in vitamin C, antioxidants and minerals. "The pulp of the fruit has the most vitamin C of all the natural foods in the world," says Flora Chadare in *Critical Reviews in Food Science and Nutrition*. "The baobab is a very rich tree. Its edible products are the fruit pulp, the seed and kernels, and the leaves."

Chadare carried out a literature study of the macro- and micronutrients, amino acids and fatty acids in the pulp, leaves, seeds and kernels of the baobab tree. "The pulp has a high antioxidant level as well as a lot of vitamin C, and the link between these is also strong. The leaves have a high mineral content, mainly calcium and iron. They also contain antioxidants. Baobab seeds and kernels are oily and fatty." Chadare found very varied results in the literature, probably because several different measuring methods were used, and because the origin of the samples was variable. No conclusions can yet be drawn about biological variation either. Chadare's follow-up research looks into how available and digestible the minerals in the leaves are.

Chadare was recently awarded a grant by the Storm-van der Chijs Fund for promoting the careers of women scientists at Wageningen UR. But her interest goes beyond the nutritional value of baobab products. She has already published articles about the various baobab food products processed by the people of Benin. "For example, they use fermented foods that are unknown in the literature. People in Benin also use the fresh leaves, which are only available during the rainy season, to make a sauce. The leaves are slimy, just like okra. In dried powder form, the leaves are eaten in the dry season as well. The baobab fruit is eaten too, and the surplus is often sold at the market."

There are some problems to be addressed, as Chadare explains: "The kernels are good for selling and eating, but it is difficult to get them out of the seeds, so

JAPAN'S DENSO DEVELOPS "ORGANIC" RADIATOR TANK

Denso says it has developed a plant-derived resin radiator tank using an organic compound derived from the castor oil tree (*Ricinus communis*). The company says it will start mass-producing this new product in the spring of 2009 for vehicles sold worldwide.

The plant-derived resin, which Denso jointly developed with DuPont Kabushiki Kaisha, is produced by a chemical reaction between two organic compounds that are derived from the castor oil tree and petroleum. An additive, such as glass fibre, is then added to the substance to produce the resin. The plant-derived ingredient comprises about 40 percent of the ecofriendly resin.

Since engine compartment components, such as the radiator tank, need to be extremely heat resistant and durable, it was previously difficult to develop a resin with a high percentage of plant-derived ingredients.

Denso says that, compared with conventional products, the new radiator tank releases fewer carbon dioxide (CO₂) emissions into the atmosphere during its life cycle because it is partially made from material extracted from plants, which absorb CO₂ through the photosynthesis process.

The new product also helps conserve oil and has a cold weather advantage, Denso says. (Source: *just-auto.com* [Japan], 20 February 2009.)



NWFPS – A GLOBAL PERSPECTIVE

NWFPS IN NORTH AMERICA

The North America region, consisting of three countries and two areas, has 7 percent of the world's population, 16 percent of its land area and 17 percent of its forest area (677 million ha). About one-third of the region's land area is forested. The highly varied climate conditions create great diversity in forest ecosystems, ranging from humid tropical to boreal. Some of the world's most productive forests are found in this region.

Rural communities in Mexico depend on NWFPs for subsistence and income, although their use is declining rapidly because of urbanization, changes in employment and availability of cheaper alternatives.

NWFP harvesting in Canada and the United States of America typically takes place as part of forest recreation and cultural traditions, and it is increasing. Production of the few economically important NWFPs with long-established markets – notably maple syrup and Christmas trees – is highly commercialized. Both markets have been stable since 1994 and are expected to remain so. Canada accounts for 85 percent of the world's maple syrup production and the United States produces the rest. Canada produced 3.2 million Christmas trees in 2005. Markets for herbal products, including forest medicinal plants, are expanding as society becomes increasingly health conscious. Large pharmaceutical companies are investing in the production and marketing of herbal plant products, which have become a multibillion-dollar industry in the United States. (Source: *State of the World's Forests 2009*.)

PFNM EN AMÉRICA LATINA

La región de América Latina y el Caribe, formada por 47 países y áreas, contiene el 22 % de la superficie forestal mundial, el 14 % de la superficie de tierra global y el 7 % de la población del mundo. En esta región se encuentra el mayor bloque continuo de bosque

pluvial tropical del mundo: la cuenca del Amazonas.

La mayoría de los PFNM de la región se destinan a un uso de subsistencia local, aunque algunos se venden en mercados nacionales e internacionales como ingredientes para productos sanitarios y de cuidado personal y de fármacos. La nuez del Brasil (*Bertholletia excelsa*) constituye una notable fuente de ingresos para los grupos indígenas de Bolivia, el Brasil y Perú y es, asimismo, el PFNM comercial más importante: la cadena de suministro proporciona empleo directo a 15 000 personas. Este producto representa el 45 % de las exportaciones de Bolivia relacionadas con el bosque, porcentaje superior al de todos los productos madereros, y contribuye en más de 70 millones de USD anuales a la economía nacional.

Con el objeto de reducir los conflictos entre las comunidades indígenas dependientes de los PFNM y los explotadores madereros y los ganaderos del Amazonas, el Brasil ha creado reservas extractivas para la recolección exclusiva de PFNM. Este modelo, que concede derechos a largo plazo en bosques públicos a grupos dedicados a actividades sostenibles, se está extendiendo en toda la región. Las iniciativas apoyadas por las organizaciones de la sociedad civil y los gobiernos han mejorado la recolección de los PFNM, la agregación de valor y la comercialización, con el respaldo de las organizaciones de certificación y de comercio justo.

Se prevé que, a medida que las economías crezcan y se urbanicen, y se disponga de oportunidades de producción de ingresos más lucrativas, disminuya la dependencia de los PFNM para la subsistencia. La elaboración y la comercialización de productos que ya son bien conocidos mejorarán. Las cadenas de valor locales serán sustituidas en gran medida por cadenas nacionales y mundiales, con frecuencia asistidas por iniciativas de comercio justo y de etiquetado orgánico. (Fuente: *Situación de los Bosques del Mundo 2009*.)

NWFPS IN EUROPE

Europe, consisting of 48 countries and areas, accounts for about 17 percent of global land area but has one-quarter of the world's forest resources, approximately 1 billion ha, of which 81 percent is in the Russian Federation. Europe has a long tradition of multiple-use forest management with substantial emphasis on the provision of social and environmental services.

Although not a major activity in Europe, the collection of NWFPs is a common form of recreation. Key commercial products include Christmas trees, game meat, cork, mushrooms (including truffles), honey, nuts and berries. Most of these have limited but well-established (and sometimes highly profitable) markets. Two recent developments include a decline in the viability of cork production (because of substitutes) and increased interest in food from forests as part of the growing consumer demand for organic products.

As with wood, European producers and forest managers have continuously adapted their practices to take advantage of the changing market conditions. For example, cork producers have improved marketing and introduced stricter quality controls, standards and certification to compete against substitutes. Producers of forest food products in Eastern Europe have taken advantage of low labour costs to serve the niche market for organic foods. In Western Europe, forest managers are earning income from NWFPs, for example through permits for recreational collection of mushrooms or sale of Christmas trees. (Source: *State of the World's Forests 2009*.)

PFNL EN AFRIQUE

Le continent africain, composé de 58 pays et zones, possède des écosystèmes très diversifiés. Il regroupe 14 pour cent de la population mondiale. Les forêts en Afrique couvrent 645 millions d'hectares, soit 21,4 pour cent de la surface totale des terres. Les forêts du bassin du Congo constituent le deuxième massif forestier tropical du monde.

Les PFNL africains (gommes et résines, miel sauvage et cire d'abeille, teintures et

tanins, bambou et rotin, gibier, fourrages et un nombre important de plantes médicinales) sont largement utilisés comme produits de subsistance ou échangés de manière informelle. Leur contribution aux moyens d'existence et leur importance au niveau local dépassent de loin ce qui peut être déduit des statistiques officielles.

Du fait du renforcement des possibilités de commerce local, régional et international, des changements considérables se produisent dans le secteur des PFNL en Afrique. Les Gouvernements africains multiplient les politiques et les lois en vue de formaliser des chaînes de valeur de ces produits. Il est important de noter l'émergence de marchés d'«alimentation ethnique», de plantes médicinales et de produits naturels ou biologiques, comme le miel, la cire d'abeille et le beurre de karité. Plusieurs produits échangés aux niveaux national et international couvrent à la fois les secteurs formel et informel. Les activités de récolte des produits sauvages, par exemple, font partie du secteur informel, tandis que leur transformation et leur vente s'inscrivent dans le secteur formel.

Compte tenu du large éventail des produits et de leurs utilisations finales, il est difficile de faire des prévisions applicables aux différents cas, mais on peut anticiper:

- une consommation de subsistance de la majeure partie des produits, accompagnée d'une attention insuffisante accordée à la gestion des ressources;
- une surexploitation et un épuisement de certaines ressources forestières sauvages récoltées à des fins commerciales;
- une pression supplémentaire exercée sur les ressources en gibier, due à l'augmentation de la population;
- une domestication, une culture et une transformation commerciales d'un petit nombre de produits par des entrepreneurs ou des communautés locales;
- une demande croissante émanant des marchés de niche pour des produits certifiés et des produits du commerce équitable.

(Source: *Situation des forêts du monde 2009*.)



NWFPs IN WESTERN AND CENTRAL ASIA

Western and Central Asia, consisting of 25 countries and areas, is the least forested region in the world, with only 4 percent forest cover (1.1 percent of the global forest area). A few countries account for most of the forest area; 19 countries have less than 10 percent forest cover. About 75 percent of the region is arid, with low biomass productivity. Vegetation ranges from desert scrub in Central Asia and the Arabian Peninsula to pockets of mangrove forests on the Persian Gulf coast and alpine meadows in Central Asia. In view of the low forest cover, trees outside forests, especially on farms and in other wooded land, have important productive and protective functions.

As in other regions, the pattern of NWFP use consists of many subsistence products and a few commercially important ones, many of which are domesticated and cultivated systematically. Subsistence use of and trade in NWFPs are particularly significant for low-income rural communities. In many countries, NWFPs provide more income than wood production.

Commercial products include honey, mushrooms, medicinal plants, pine nuts, walnuts, pistachio nuts, bay leaves, thyme and fodder. In the more diversified economies, commercially important NWFPs have been

systematically developed with private-sector involvement. Lebanon's privately owned pine (*Pinus pinea*) plantations are managed primarily for nut production. The production and processing of, and trade in, bay leaves from Turkey have improved largely because of private-sector investments.

No major changes are expected in the pattern of NWFP use. The main challenge will be to improve the production and value addition of less commercialized products, to develop markets and, thus, to enhance income opportunities for low-income households. (Source: *State of the World's Forests 2009*.)

NWFPs IN ASIA AND THE PACIFIC

The Asia and the Pacific region, consisting of 47 countries and areas, is home to more than half of the world's population and has some of the most densely populated countries in the world. It has 18.6 percent of the world's forest area in a wide array of ecosystems, including tropical and temperate forests, coastal mangroves, mountains and deserts. Rapid socio-economic changes in the region are having profound impacts on all sectors, including forestry. While wood products demand is increasing, so is the demand for environmental services of forests.

NWFPs from the region are diverse – food, medicines, fibres, gums, resins, cosmetics and handicrafts. Most are used for subsistence, collected and consumed locally or traded in limited quantities. More than 150 NWFPs from Asia and the Pacific are traded internationally, although apart from bamboo and rattan the quantities are usually small. Increasing interest in "natural products", owing to their perceived health and environmental benefits, is drawing attention to the multitude of NWFPs commonly used by local communities.

The consumption of many subsistence NWFPs is likely to fall in the long term because of:

- declining supply from the wild, largely because of reduction in forest cover and poor management;
- development of synthetic materials and their substitution for NWFPs as a result

of increasing incomes and consumer access;
 • the decreasing attractiveness of NWFP collection relative to more remunerative and less arduous occupations available when incomes rise.

Several NWFPs – especially medicinal plants – have been commercialized and are traded nationally and globally. Increasing demand has led to their intensive collection and to depletion of

wild stock. Products from open-access public forests are particularly vulnerable. In many cases, collection and trade are informal, offering minimal financial benefits to collectors.

Declining supply from the wild has led to substantial investment in the domestication of some NWFP resources. Bamboo, rattan and several medicinal plants are grown on a large scale and, thus, have largely ceased to be forest

products. Cultivation of medicinal plants on farms and in home gardens, often with technical and financial support from pharmaceutical companies, is becoming popular. As with most cultivated crops, periodic demand-supply imbalances create challenges for organized cultivation of NWFPs. (Source: *State of the World's Forests 2009*.) (Please see page 73 for more information.)

NON-PROFIT ORGANIZATIONS AND NGOS

ApiTrade Africa

ApiTrade Africa is a non-profit-making, member-based company with a Secretariat in Kampala, Uganda, and has the aim of promoting African bee products on the world market.

FOR MORE INFORMATION, PLEASE CONTACT:
 ApiTrade Africa/Uganda Export Promotion Board, 5th Floor, Conrad Plaza, Plot 22, Entebbe Road, PO Box 5045, Kampala, Uganda. E-mail: info@apitradeafrica.org; www.apitradeafrica.org

The Association for Nature and Sustainable Development (ANDES), Peru
 ANDES is an indigenous NGO that seeks to defend indigenous rights to genetic resources, traditional knowledge and landscape character in Peru. It was established in 1995 with volunteer staff and no funding, and has grown considerably over the years. It now works with 39 indigenous rural communities, many of which live in conditions of poverty or extreme poverty.

The association has successfully bridged traditional Quechua principles with modern organizational models to assert indigenous rights to heritage in practical terms by establishing a new form of protected areas known as Indigenous Biocultural Heritage Areas (IBCHAs). These are locally and sustainably managed through community associations; form the basis for local enterprise (agricultural and cultural ecotourism); involve and benefit marginalized groups; unite communities; encourage participation by and

negotiation with indigenous people; and create a model for future protection and development.

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Le Centre de développement des forêts communautaires au Cameroun

Le Centre de développement des forêts communautaires, CeDeFCom, est une organisation non gouvernementale (ONG) à but non lucratif. Basé au Cameroun, il travaille dans le domaine de la conservation des écosystèmes forestiers et de la faune sauvage. Crée en 1998, il a été reconnu officiellement en 2001.

Le Centre vise la promotion des initiatives locales de développement en harmonie avec la nature, c'est-à-dire leur organisation et leur consolidation en vue de mettre en place des communautés villageoises fières de leur existence dans un environnement aimé et protégé.

POUR PLUS D'INFORMATIONS, CONTACTER:
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PALM FRONDS: FAIR TRADE AND ECOFRIENDLY

This weekend about 2 500 congregations from every major denomination will use fair-trade palm fronds in their annual celebration of Jesus' arrival in Jerusalem in the days before his crucifixion.

The University of Minnesota's Eco-Palms programme ensures that the leaves were harvested in Mexico and Guatemala in an environmentally sensitive manner by workers getting paid a fair price and organizers say they are getting more orders than ever.

The project grew from a 2001 study on the effects of the North American Free Trade Agreement (NAFTA) to a 2005 pilot project that today has become a US\$4.5 million business.

The project makes sure that workers get a better wage for picking only the highest-quality fronds from palm trees growing wild in the rain forests of northern Guatemala and southern Mexico's Chiapas state, a practice that allows the plants to continue growing.

And communities also benefit through an annual rebate. The programme this year, for example, will send about \$32 000 to ten communities in Guatemala. Money in the past has been used for scholarships for girls and to supplement teacher salaries. (Source: Associated Press in wcco.com [United States of America], 3 April 2009.)

PHOTOVOICES: NEW WAY TO SHARE TRADITIONAL KNOWLEDGE

Photovoices provides cameras and training on the basics of good photography to indigenous people, many of whom cannot read or write. Each project lasts from six months to a year. Facilitators, fluent in local languages and dialects, are assigned to visit the villagers each month to document the stories behind the photos on a computer. The information is then given to scientists and government leaders. (Source: *The New Straits Times* [Malaysia], 17 March 2009.)



SUSTAINABILITY STANDARDS IN WILD PLANTS HARVESTING – FAIRWILD AND ISSC-MAP

Two sustainability standards specialized in wild harvesting of plants – the FairWild (FW) Standard and the International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP) – recently merged into one enterprise, offering a comprehensive framework for ecological, social and economic certification of products and guidelines on sustainable resource use for governments, intergovernmental organizations (IGOs), NGOs and a wide range of other stakeholders.

Joint implementation of FW and ISSC-MAP addresses overall sustainability requirements in a more efficient manner than any of the other existing standards. In October 2008, at the IV IUCN World Conservation Congress in Barcelona, Spain, an agreement was signed between the four founding institutions of ISSC-MAP to endorse global implementation of the standard through the newly established FairWild Foundation. The German Federal Agency for Nature Conservation (BfN), the Medicinal Plant Specialist Group (MPSG) of the International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC), the World Wide Fund for Nature (WWF Germany), Swiss Import Promotion Programme (SIPPO), Forum Essenzia e.V. and the Institute for Marketecology (IMO) are among the organizations involved in activities of standards development since inception.

While ISSC-MAP is primarily an ecological sustainability standard with supporting elements of economic and social sustainability, the FairWild Standard is primarily a social standard with supporting elements of ecological and economic sustainability. Certification is based on resource assessment, the management plan, sustainable collecting practices, cost calculation along the supply chain,

traceability of goods and finances and documented fair-trading practices.

A few wild harvest enterprises, from Europe to Central Asia, have achieved the minimum entrance criteria for FairWild certification, meeting the fair-trade requirements for the social certification component and organic wild-crop certification as the minimum indicator for the ecological component. As a result, certified finished herbal products should begin to appear in the European and North American markets by late 2009. These initial products will be certified on the basis of meeting fair-trade and organic wild requirements. As the checklist for ISSC-MAP compliance is still under development, this module will be gradually implemented in a stepwise approach over a few years.

Countries in which the FairWild and ISSC-MAP Standards are currently being implemented include, among others, Afghanistan, Bosnia and Herzegovina, Brazil, Cambodia, France, India, Lesotho, Macedonia, Nepal, South Africa and Uzbekistan.

Some of the key plant species include liquorice (*Glycyrrhiza glabra*), cardamom (*Amomum ovoideum*), cinnamon (*Cinnamomum cambodianum*), kutki (*Neopicrorhiza scrophulariiflora*), chiraito (*Swertia chirayita*), jhula (*Parmelia* spp.), *Ailanthus triphys*, puxuri (*Licaria puchury-major*), buriti (*Mauritia flexuosa*), preciosa (*Aniba canellilla*), andiroba (*Carapa guianensis*), andirobinha (*Carapa procera*), *Pelargonium sidoides* and wild garlic (*Allium ursinum*).

The FairWild Foundation hopes that the major beneficiaries from the application of the standards will be the wild collection communities, which will be supported and rewarded for implementing these sustainable collection practices in partnership with their trade partners up through the supply chain.



Glycyrrhiza glabra

The marketing of FairWild certified ingredients and finished products will benefit companies that support ecological and social best practice throughout the supply chain from processors and wholesale ingredient distribution companies to finished product marketers and manufacturers, finished product distributors and retailers of certified products.

The FairWild Foundation is looking for partners among businesses, governmental and non-governmental organizations.

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THE ROLE OF NWFPS AND FORESTS IN IMPROVING AND SUSTAINING LIVELIHOODS

Forests sustain livelihoods

Forests play an important role in the livelihoods and welfare of a vast number of people in both developed and developing countries – from urban citizens taking a recreational stroll in a nearby forest to isolated hunter-gatherers who live in and off the forest.

The World Bank has estimated that 1.6 billion people around the world depend to some degree on forests for their livelihoods. Although only an estimate, this clearly indicates that forest dependency is widespread. In developing countries, it is projected that a large number of people will remain at or below the poverty level. In relation to forests, this raises the question of whether forested areas can play a role in poverty alleviation.

A livelihood involves income-generating activities determined by natural, social, human, financial and physical assets and access to these. Trees, shrubs, herbs, game and a wide range of other forest products all constitute important natural assets that are harvested in significant quantities by a large number of households across virtually all forest types. Such assets therefore make an important contribution to livelihoods.

Examples are numerous. Forest-harvested fuelwood is an important source of household energy for heating and cooking in many countries. NTFPs, such as bushmeat, are important to help meet dietary deficits and are a vital source of protein. Medicinal plants from the forest, used in self-medication or in traditional medicine systems, are in many regions the sole or main source of medicinal remedies for maintaining or improving health. Small-scale forest product processing, such as wood carvings or cane furniture, may be an important source of non-farm employment.

Even though forests are often very important to households, there is surprisingly little knowledge on the actual level of household forest income and the role of such income in maintaining livelihoods. Households typically use forest products for subsistence purposes or products are traded in informal markets. Much forest use is therefore not recorded in regular income surveys. However, available evidence indicates that income derived from the forest may constitute 20 percent or more of total household income, with the poor being the most dependent on forests.

There is evidence that forests are often of particular importance for women, children and ethnic minorities. For instance, forest foods are crucial for many children and the involvement of women in NTFP collection and trade improves intrahousehold equity. There are also studies indicating that richer households may be highly forest dependent – although such dependence relates to other sets of products than those extracted by poor households. For instance, fuelwood and the use of dung have been found to decrease as income rises in India, while fodder and the use of wood for construction increase.

The evidence regarding the role of forests in allowing households to move out of poverty is scant and mixed; there are examples such as the above study from India indicating that income from forests allows households to accumulate assets

and escape poverty. However, by way of contrast, figures from Madagascar show that areas there with high forest cover have low densities of people but high poverty rates.

The World Bank and FAO have urged that forests can and must play a far greater role in meeting the United Nations Millennium Development Goals, including the target of halving extreme poverty by 2015. There are also international initiatives aimed at improving our understanding of the relation between forests and livelihoods and the impact of policies on such relations, including the Poverty and Environment Network, the Programme on Forests and the International Forestry Resources and Institutions research programme.

Being able not only to harvest forest products but also to transport and sell such products is important for hundreds of thousands of households in order to exploit the benefits of the forest fully. However, legislation often discriminates against small forest users, typically by heavily regulating their access rights. It also often gives preferential treatment to influential companies and organizations and promotes corruption. Such is the case in Honduras where local communities cannot gain secure rights to the forests in which they live while common, systematic and high-level corruption has characterized the workings of the timber industry. There is thus scope for increasing the contribution of forests to poverty prevention and reduction.

Building upon the emerging evidence of the absolute and relative importance of forests and forest products for livelihoods, governments and other development bodies should take action to make policy reforms in negotiation with small-scale forest users in order to create conducive production conditions, including securing ownership and rights use; and revise legislation in order to remove bias against household-level producers and supporting small-scale commercial units, including community-based forestry. Such initiatives would allow households to use forests actively, enabling them to build up their assets and improve their livelihoods. (Source: *Vital Forest Graphics*, 2009.)

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The role of NWFPs in improving rural livelihoods

NWFPs play many different roles in supporting the rural economy by contributing to subsistence food security; nutrition; medicine; generation of additional employment and income; supply of raw materials; opportunities for processing enterprises; foreign exchange earnings; and the support of biodiversity conservation and other environmental objectives.

In addition, the activities related to the collection and primary processing of NWFPs represent opportunities for rural women to engage in income-generating activities. The degree of processing and value addition varies greatly between NWFPs, and while trade in some products is largely confined to regional markets, others are successfully traded internationally.

Over the past 20 years, there has been a rapid growth of interest in NWFPs among both conservation and development organizations. This is the result of increased recognition of the contribution that these goods make to the livelihoods of large numbers of people in developing countries; however, this potential contribution is not always realized.

When thinking about the contribution of NWFP activities to reduce poverty and vulnerability, and stimulate rural development, three different NWFP-use strategies have been identified. They highlight the fact that people may use NWFPs in different ways at different times, or that the same NWFP may provide a safety net for some and a stepping stone for others.

The three categories of NWFP activity with regard to *poverty reduction* are the following.

- 1) Safety nets to prevent people from falling into greater poverty by reducing their vulnerability to risk. These are particularly important in times of crisis and unusual need (e.g. during natural disasters, such as drought or family illness).
- 2) Gap-filling activities, carried out regularly during the non-agricultural season, allowing for income spread and generally making poverty more bearable through improved nutrition or higher income. There is a large body of evidence suggesting that, although many NWFP-based activities generate only small amounts of income, the timing of this income during the non-agricultural season may increase its relative importance. Such seasonal income can play a key role in reducing the vulnerability



of the poor through a decrease in the variance of their annual revenue.

3) Stepping-stone activities to reduce poverty. Where these can permanently lift people out of poverty, the activity is termed poverty removal or elimination. It is only in areas that are well integrated into the cash economy that some NWFP producers are able to pursue a specialized strategy in which the NWFP contributes more than 50 percent of total household income and collectors and producers tend to be better off than their peers.

Likewise, three *household economic strategies* have been identified with regard to NWFP activities, based roughly on the level of integration into the cash economy and the proportion of household income contributed by the NWFP. They are the following.

1) *Coping strategies*. Households wild harvest a large number of NWFPs from unmanaged or lightly managed forests and, in most cases, resources are in decline.

2) *Diversified strategies*. Households use NWFP-generated income as additional income, earning the bulk of their income from agriculture or non-farm sources.

3) *Specialized strategies*. Households following these strategies tend to get better production per hectare of NWFPs, command higher prices for their products, have higher household incomes and are the most integrated into the cash economy.

Thus, there is a need for those involved in and supporting NWFP activities to be both realistic about objectives and outcomes, and clear and methodical about how the social and ecological impacts will be monitored and managed. (Source: Elaine Marshall and Cherukat Chandrasekharan. 2009. *Non-farm income from non-wood forest products*. Diversification booklet 12. Rural Infrastructure and Agro-Industries Division. Rome, FAO.)

(See also pages 30 and 73 for more information.)

TULSI TO "INSULATE" THE TAJ MAHAL

Tulsi, the well-known medicinal herb *Ocimum sanctum* (also known as holy basil), will now help to protect the Taj Mahal from environmental pollution. One million tulsi saplings will be planted near the marble mausoleum by the Uttar Pradesh Forest Department and the Lucknow-based Organic India.

Tulsi is one of the best plants to purify the environment. It cleanses as it releases high amounts of oxygen, which minimizes the adverse impact of industrial and refinery emission.

(Source: *The Hindu*, 5 February 2009.)



WHO OWNS THE WORLD'S FORESTS?

Who owns the world's forests? When Andy White and Alejandra Martin posed and answered this question in their 2002 report by the same name, they found that 77 percent of forests worldwide were administered by governments. The good news was that the forested area owned and designated for use by local communities and indigenous peoples was rising.

William Sunderlin and colleagues have now updated the numbers in their report, *From exclusion to ownership? Challenges and opportunities in advancing forest tenure reform*. Their findings are sobering for those who hoped to see an upsurge in community control over forests. Sunderlin *et al.* found that only a few of the 30 most forested countries in the tropics had made significant changes in forest tenure since the 2002 study. Most are in Latin America.

Brazil alone is responsible for much of the global progress, with an increase of 56 percent in the forest area designated for use or owned by communities and indigenous peoples. Peru and the Plurinational State of Bolivia recorded significant increases. Colombia also posted a small increase. In Africa, communities made small gains in the United Republic of Tanzania, the Sudan and Cameroon. But Zambia and the countries of the Congo Basin registered virtually no change at all. In Asia, India added more than 5 million ha to the forested area designated for use by communities and indigenous peoples. Indonesia recorded no gains.

Even in the few countries that have reformed forest tenure, the granting of rights has not guaranteed their realization. In Peru, for example, the Government has allocated forested areas for oil, gas and mining exploration in violation of indigenous land titles in the Amazon. In Brazil, the Government has failed to prevent illegal incursions into extractive reserves by loggers, ranchers and miners. Even when there is a will to recognize rights, there is not necessarily a way: meaningful tenure reform requires administrative capacity,

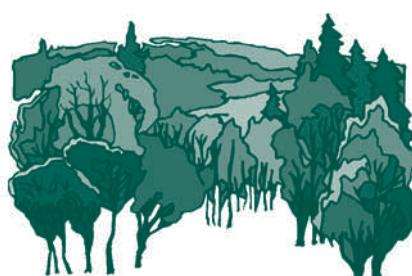
expertise and financial resources to demarcate and enforce community rights.

Are there any reasons for optimism? Sunderlin says yes. Countries ranging from Angola to the Bolivarian Republic of Venezuela have made changes in law and policy to facilitate recognition of indigenous, customary and community rights to forest lands. These recent developments could set the stage for accelerated tenure transitions in the near future. In addition, rising interest in Reducing Emissions from Deforestation and Forest Degradation (REDD) will put a new premium on clarifying forest-related property rights.

But unless the pace of change is quickened and extended to more countries, it could take decades to shift the global balance of forest ownership from governments to rural people. Translating rights on paper into control over what happens on the ground is an equally daunting challenge, and one that will depend on sustained commitment from potential beneficiaries, governments and the international community.

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Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family.

Kofi Annan