

“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)



BIODIVERSITY AND THE DIETS AND HEALTH OF FOREST DWELLERS

Most societies recognize that food, medicine and health are interrelated. Food is typically associated with cultural identity and social well-being. Indigenous peoples' foods form part of rich knowledge systems. Traditional food systems typically draw on local biodiversity and are based on local production and management of land and specific environments.

Ethnobiological literature documents the historical and current importance of an array of resources consumed by communities living in and around the world's forests. It also demonstrates the richness of the traditional knowledge of indigenous and local communities related to the gathering and hunting of plant and animal foods and the medicinal value of forest species. From a wide range of ecosystems, some 7 000 of the earth's plant species have been documented as gathered or grown for food, and thousands more have medicinal properties.

From a nutritional perspective, forest environments offer ample sources of animal (vertebrate and invertebrate) protein and fat, complemented by plant-derived carbohydrates from fruits and tubers and they provide diverse options for obtaining a balance of essential vitamins and minerals from leafy vegetables, fruits, nuts and other plant parts. Although many forest types have scant wild sources of carbohydrates, this lack can be overcome

through forest-based agricultural production of cereals (such as maize), roots and tubers (such as cassava and yams) or bananas. Similarly, traditional cultivation systems drawing on agrobiodiversity can make adequate food available in spite of potential intermittent and seasonal shortages of many forest foods. Thus forest food resources can provide a valuable safety net when there is a shortage of food crops. Undoubtedly forest biodiversity is the basis of nutritional sufficiency for some populations. Forest products such as the fruits of *Mauritia vinifera* and other Brazilian palms rich in provitamin A (beta-carotene and other carotenoids), are recognized as exceptional nutrient sources. However, the nutrient composition of most wild species and minor crops has been poorly studied.

Links between food and health are increasingly understood in terms of the functional benefits provided by phytochemicals, including numerous carotenoids and phenolics, apart from their value as essential nutrients. Stimulants of immunity and antioxidant, glycaemic and lipidaemic agents can moderate communicable and non-communicable diseases such as diabetes, cancer and cardiovascular illness. Guava, for example, is rich in the antioxidant lycopene, which has recognized anticancer properties. Many nuts have a high content of specific oils such as omega-3 fatty acids (walnuts) and mono-unsaturated fatty acids (almonds, macadamias, pistachios, hazelnuts) that reduce the risk of cardiovascular and other diseases. Argan nuts (*Argania spinosa*) from the southwestern part of Morocco offer similar benefits, but many forest species with commercial potential have not been characterized for their specific fatty acid composition. The leaves of many forest species are rich sources of xanthophylls that contribute to optimal eye function. Examples include leaves of *Gnetum* spp. and *Adansonia digitata* (baobab), which are widely eaten in sub-Saharan Africa, and *Cnidioscolus acontifolius*, which is locally important as a vegetable in Central America.

While these kinds of functional properties of foods are seldom recognized by local communities without the benefit of scientific analyses, people often attribute value in treating or preventing disease to particular foods. Indeed the distinction between food and medicine that

characterizes scientific perspectives stands in contrast with traditional concepts of health that recognize the therapeutic and sustaining values of food more holistically.

The widespread use of roots, barks and other forest plant parts as medicines appears to offer public health benefits, but these are difficult to validate scientifically. Ethnobotanical studies in tropical forest areas typically document knowledge of hundreds of species within local communities and the widespread use of plants in primary health care. Much of the recorded data on the use of medicinal plants are anecdotal and idiosyncratic, and their specific contribution to the health of individuals cannot be effectively evaluated without controlled investigations. Ethnopharmacological research, including clinical studies, demonstrates the efficacy of many traditional remedies while failing to substantiate the pharmacological value of many others. Long-term epidemiological studies would be needed to confirm the contribution of specific remedies, phytomedicines or foods to the health of populations. Even these remain inadequate to measure the efficacy and contributions of traditional healing practices to physical and mental health.

Nonetheless, for forest-based societies that draw on traditional knowledge for most of their subsistence needs, the use of a diversity of resources can be expected to contribute to health. Although many traditional subsistence systems depend on one or more staples such as cassava, sago, rice or maize, these diets are kept diverse and balanced through small but complementary amounts of animal-source foods including birds, fish, insects and molluscs, as well as sauces, condiments, snacks and beverages obtained from plants. (Source: *Unasylva*, 57(224): 34–36.)



Adansonia digitata

BIOPROSPECTING/ BENEFIT SHARING OR BIOPIRACY?

Brazil regains açai trademark from Japan

Açai once again belongs to Brazil. This typical fruit from Amazonia was registered in Japan in 2003 as a trademark of the K.K. Eyla Corporation. Early this month, the Genetic Heritage Department of the Ministry of the Environment stated that the açai trademark had been cancelled by order of the Japan Patent Office, the agency responsible for trademarks in Japan. The decision is not final – the company still has 30 days in which it can file an appeal. If the company fails to counterclaim the trademark, the case is closed.

The Government has produced a long list of 3 000 scientific names of plants of Brazilian biodiversity, together with their common names, which swells the list to 5 000 names, and has distributed it to trademark registrars throughout the world in order to prevent another case like this one appearing. [Source: *O Estado de São Paulo*, 21 February 2007.]

Es hora de registrar los conocimientos tradicionales de Bolivia para enfrentar a la biopiratería

El Servicio Nacional de Propiedad Intelectual (SENAPI) se ha propuesto sistematizar y registrar los conocimientos tradicionales, las expresiones del folklore, los ritos y rituales e inclusive la artesanía boliviana con el fin de proteger estos aportes históricos de las comunidades indígenas que corren el riesgo de fragmentarse, desaparecer o hasta sucumbir ante la biopiratería.

En su milenaria convivencia con sus hábitats, los pueblos indígenas y campesinos han ido desarrollado experiencias sostenibles de manejo de los recursos naturales, y sobre todo han aprendido a dar varios usos a las especies de animales y vegetales. Los conocimientos tradicionales están estrechamente vinculados a la noción de territorio.

El consultor de la Organización Mundial de Propiedad Intelectual (OMPI) Javier Corro fue contratado por el SENAPI para realizar un diagnóstico sobre la protección de este tipo de conocimientos en Bolivia con el objetivo de crear, a mediano y largo plazo, una Unidad de Registro de Conocimientos Tradicionales.

Se trata de una titánica labor tomando en cuenta que en Bolivia habitan más de 30

grupos étnicos, los cuales poseen identidades culturales diversas y varias formas de relación con el territorio y la biodiversidad. En términos biológicos, Bolivia es un país megadiverso. Existen más de 14 mil especies catalogadas sólo en plantas vasculares, es decir plantas superiores y no se sabe cuántas de éstas plantas tienen relación cultural con poblaciones humanas.

Fuente: Bolpress, La Paz, 27 de febrero 2007.



“Riches of the forest: for health, life and spirit in Africa”

Hands off our genes, say Pacific islanders

Pacific islanders are demanding the power to restrict patenting of their human, plant and animal genes, even if they run foul of international patent laws. A new book documents 16 “acrimonious” encounters between scientific researchers and indigenous communities and calls for Pacific states to take a united approach to gaining control over such patents in the region.

The book, *Pacific genes and life patents*, is published by the international indigenous activist group Call of the Earth and the United Nations University in Tokyo. Coeditor of the book, Aroha Mead of the Victoria University of Wellington in New Zealand, says that lack of regulation and knowledge about the latest genetic technologies and intellectual patent law has made the region a major target for commercial gene hunters. The book says a major problem is that communities involved in research often do not give informed consent.

Scientific research and patenting may offend deeply held cultural values, says coeditor Dr Steven Ratuva, of the University of the South Pacific in Fiji. He says that patents on genes in medicinal plants conflict with the traditional view that these plants are common property, available for

all. While fair compensation for exploiting indigenous knowledge can be important, there are other issues at stake, says Ratuva. “It’s not only a matter of money,” he says. “There are certain aspects of the culture which a lot of communities think cannot be bought or sold.” He says that recognition of local people’s world view must be part of the process in working out any patent or bioprospecting agreements.

Pacific genes and life patents can be downloaded from: www.earthcall.org/en/publications/index.html [Source: ABC Science Online, 20 March 2007.]

China moves to protect traditional knowledge

Legislators in southwest China’s Guizhou province are mulling a regulation aimed at protecting property rights for traditional knowledge, especially that relating to biological resources.

For centuries the Miao ethnic group in southwestern China extracted herbal remedies to combat colds, coughs and pneumonia from a type of grass called *guanyin cao*. But their failure to patent their traditional knowledge has seen them deprived of the chance to profit from it, said An Shouhai, vice-head of the Guizhou provincial bureau of intellectual property rights. The case of the Miao is an example of biopiracy, said An. A foreign company preempted the Miao by patenting the remedies derived from *guanyin cao* and is now making a fortune from it.

The forthcoming regulation is an effort to fight against biopiracy. China currently has no laws and regulations to protect traditional knowledge or species such as *guanyin cao*. [Source: Xinhua [China], 3 March 2007.]

Peru creates online biodiversity register

Peru has created an online system with full public access to regulate biodiversity research. The measure should ensure Peru’s authority over its native genetic heritage, according to a press release from the National Institute of Natural Resources (INRENA), which will run the system.

INRENA is already working on implementing the system, which should be completely operational in two months. It includes a database showing in real time the national and international research being done with genetic resources native to Peru.

The system will include a register of researchers who have applied for a permit to work in protected sites, forests and wildlife habitats. Both local and

international researchers will be asked to provide a research proposal and a letter of authority from their supporting institution. If the application is accepted, a permit will be automatically issued within two weeks. INRENA will work with the relevant authorities to decide what information will be requested from researchers. This system will enable the tracking of scientific collection activities both inside and outside protected areas. And by centralizing information about research on genetic resources, it should also allow authorities to prioritize proposed research.

Brazil announced a similar system earlier this month. [Source: *SciDev.Net*, 22 March 2007.]

BIRCH DISTILLATE HELPS IN CONTROLLING AGRICULTURAL WEEDS AND PESTS

MTT Agrifood Research Finland is studying the possibilities of distillate made of birch in controlling agricultural weeds and pests.

Originally birch distillate was a by-product in charcoal production. The first idea of using the distillate in controlling pests was found in national traditions. For Charcoal Finland, birch distillate is no longer only a by-product but is a very good product for preventing the smell of compost. Moreover, painting a paddock fence with birch distillate stops horses from gnawing the fence. Farmers who have trouble with elks have found it useful to moisten wood pellets with birch distillate and hang them from the branches of trees. However, it is not possible to claim publicly that elks or other animals can be controlled with birch distillate, because its actual composition is not known. This is what MTT Agrifood Research Finland plans to discover.

The amount of birch distillate produced in connection with charcoal production is not negligible: 1 000 litres of distillate from 20 m³ of birch used. MTT Agrifood Research Finland is working on the best ways of using birch distillate. Judging by the tests it has made, both in greenhouses and on open fields, birch distillate has a wide scope. It destroys weeds found with carrots with no detriment to the carrot. It also repels pests, such as molluscs, gastropods and snails.

There are almost no negative effects found in birch distillate. Living organisms in the soil are not harmed by it, but instead



may actually benefit in one way or another. The chemical alternatives of birch distillate are much more harmful, for example, for water insects and plants, as well as for fish. It is harmless for humans.

It will take about three years to analyse the composition of birch distillate and to register it as a pesticide will take a few more years. Only after registration can it be marketed as a pesticide. [Source: Hannes Mäntyranta, forest.fi, 10 January 2007.]

CHEWING GUM

Chewing gum market

Gum is big business – and it is getting bigger. The global chewing and bubble gum market is now worth around UK£10 billion, according to Cadbury Schweppes's director of global gum.

It is growing at 8 percent per year – double the rate of the sweets market and significantly higher than chocolate's 5 percent. In most countries, sales are surging, driven by gum's popularity as a preferable alternative to high-calorie snacks and cigarettes, as well as improved gum recipes and packaging.

That is why Cadbury, which entered the gum business after buying Adams, the American confectionery group, for £2.7 billion in 2003, is so keen to expand its chewing gum activities. This month it entered the United Kingdom with the launch of Trident, taking the fight to Wrigley, the market leader. [Source: Times Online, 2 April 2007.]

Chewing gum timeline

The ancient Greeks chewed *mastiche* – a chewing gum made from the resin of the mastic tree. The ancient Mayans chewed *chicle* which is the sap from the sapodilla tree. North American Indians chewed the sap from spruce trees and passed the habit along to the settlers. Early American

settlers made a chewing gum from spruce sap and beeswax.

In 1848, John B. Curtis made and sold the first commercial chewing gum called the State of Maine Pure Spruce Gum. In 1850, Curtis started selling flavoured paraffin gums that became more popular than spruce gums. On 28 December 1869, William Finley Semple became the first person to patent a chewing gum – US patent no. 98 304.

In 1871, Thomas Adams patented a machine for the manufacture of gum. In 1880, John Colgan invented a way to make chewing gum taste better for a longer period of time while being chewed. By 1888, an Adams' chewing gum called Tutti-Frutti became the first to be sold in a vending machine. [Source: <http://inventors.about.com/od/gstartinventions/a/gum.htm>]

Chewing gum in prehistoric times

It is quite difficult to imagine that chewing gum is one of the oldest types of sweet in the world. Archaeologists have actually found evidence that prehistoric men and women used to chew on tree resin because of its flavour. This was more than a thousand years ago. It was also discovered that many cultures chewed on some form of gum. The ancient Greeks called tree resin *mastiche* and chewed it to clean their teeth and freshen their breath. [Source: Business Portal 24 [press release], 30 March 2007.]

Chicle: how gum works

Americans spend something like US\$2 billion a year on gum. The average American munches more than a pound (0.45 kg) of it every year.

The original chewing gum is a natural product. It is made from a rubbery compound called chicle that comes from the sapodilla tree. A cut into its bark produces a rubbery sap, which is the base for natural chewing gum. In the same way that one could chew on a rubber band all day long without it disappearing, you can chew on chicle all day long. Chicle is a natural rubber.

In the late 1800s, people discovered that you can flavour chicle. You take a chunk of chicle, heat it up a bit to melt it, and then start mixing sugar and flavours into it.

The only problem with chicle is that there is not enough of it to go around. There are not nearly enough sapodilla trees to

supply the world with gum base. Today just about every piece of chewing gum on the market contains an artificial gum base instead of chicle. The gum base is just like any other plastic or synthetic rubber in use today. The goal is to create a tasteless, artificial rubber that has the same kind of temperature profile and consistency as natural chicle. [Source: HowStuffWorks.com [*in* Belleville News-Democrat, United States of America], 27 March 2007.]

ENTREPRENEURS DON'T GROW ON TREES

Entrepreneurs don't grow on trees – but with a little help from FAO, poor families around the world are starting their own small forest businesses.

An innovative new approach from FAO is helping poor people around the world to turn trees into cash income, without felling trees. "It's not just timber companies that benefit from forests – about 1.6 billion people worldwide depend on them for all or part of their livelihoods," says Sophie Grouwels of FAO's Forestry Department. "And they often do so in ways that don't always involve cutting down trees, but through harvesting of renewable, non-wood forest products."

Fruits, nuts, herbs and spices, resins, gums, fibres – all these non-wood forest products provide poor families around the world with food, nutrition and income. Indeed, some 80 percent of the population of developing countries use such products in one way or another to meet health and nutritional needs.

"We believe that people could do even more with these renewable resources in order to fight hunger and poverty," says Grouwels. "Perhaps there are more efficient ways to harvest them. Maybe they could be processed into a product that sells for more in local markets, or even marketed overseas."

That is why FAO's Forestry Department established its Community-based Tree and Forest Enterprise Development (CBED) Programme with funding from the Norwegian Government. The project helps poor communities set up and sustain small businesses while giving them incentives to manage and protect their resource base better, allowing them to tap the wealth of nearby forest resources without depleting them.

In CBED projects, FAO teams up with government extension agents and NGOs to

work with forest communities and learn how they are making use of available forest products. Using a participatory learning process, detailed surveys of local forest resources are conducted, studies of local and regional markets are undertaken and new product, manufacturing and marketing opportunities are identified. At the same time, the communities draw up management plans for the sustainable use of the targeted natural resources and develop business plans for pilot enterprises, which run from harvesting, production and processing to marketing.

FAO recently collaborated with the Government of the Lao People's Democratic Republic to implement a CBED project in that country, where 41 percent of the national territory is covered by forests and 80 percent of the population live in rural areas. Six pilot projects were established in the poorest part of the country, where annual household incomes average from US\$200 to \$800. The project's results so far have been extremely encouraging. In Ban Lack village, where a grassroots cooperative was already engaged in manufacturing rattan table and chair sets, project participants learned new designs and bettered their production techniques in order to improve product quality and lower production costs. Now they are earning 20 percent more on each set that they sell, and are earning more thanks to a new roadside sales point. A group of women in the nearby Ban Nathong village have identified a new market for mushrooms, established a growing house, made connections with retailers and boosted their monthly incomes by US\$108.

All in all, ten community-level businesses employing 239 people were established. Increases in the incomes of participating households ranged from US\$5 to \$70 per month – 15 to 50 percent more than they were making before. At the same time, small village development funds were established using the profits as a way to provide locals with access to the credit needed to create new or scale-up existing operations. Grouwels hopes that these ten pilot projects will be the inspiration for many more.

Helping forest communities to help themselves is only part of the solution, according to Grouwels. Governments need to make a more explicit link between antipoverty efforts, forest resource management and economic development programmes. This is why FAO's CBED project brings national and local officials into the process early on, to educate them and

provide them with the awareness and knowledge needed to continue providing communities with the necessary support. Once pilot projects have been established, FAO meets with policy-makers and planners to talk about larger structural and legal bottlenecks that inhibit small-scale forest enterprise development, with a view to effecting reforms.

[Source: FAO Newsroom, 13 February 2007.]

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"Riches of the forest: for health, life and spirit in Africa"

FEMALE ENTREPRENEURS IN THE NWFP WORLD

Israel's Bedouin women turn desert plants into skin remedies

The Bedouin town of Tel Sheva in the Negev desert was founded in 1968 as part of a government project to settle Bedouins in permanent communities. Unemployment among the town's 30 000 inhabitants is running high and there is little urban or industrial infrastructure. So why has this settlement been attracting so many visitors? The reason is a new project to help Bedouin women turn native plants and flowers into skin remedies.

Set up two years ago, Asala Desert Nature is nearing its commercial launch, with a range of unique skin care products based on traditional Bedouin herbal lore, due to reach the Israeli market in the next four to six months. Sales to Europe will begin hopefully next year.

The Asala project was founded when the local community centre in Tel Sheva approached the Center for Jewish-Arab Economic Development (CJAED), a non-profit organization founded in 1988 to promote economic cooperation between Israel's Jews and Arabs, with the idea of setting up a training programme for women using desert plants found in the Negev.

The CJAED's Women's Empowerment Unit trained women from scratch, teaching them everything they might need to know in order to run a successful business in the field. To learn more about the plants and their role in Bedouin life, the women interviewed their mothers, grandmothers and other elderly female relatives. To strengthen this folk knowledge, the women also underwent a training programme in medicinal plants.

Though the group plans eventually to create a line of medicinal, nutritional and skin care products, they decided to focus at first on skin care. "If you live in the Negev desert, the conditions are very harsh on your skin and you have to look after it," explains Kiram Baloum, the director of the Women's Unit. "That's their niche."

Originally the women of Asala planned to build their own laboratory, but they discovered it was going to be too expensive. Instead they contacted Hlavin, an international cosmetics manufacturer and exporter, which agreed to let Asala use its laboratories in Ra'anana. Hlavin carried out a feasibility study of its own, which showed a promising market for Asala products in Europe.

The goal now is for the women to grow the plants and condense them into a formula of either olive oil or alcohol. Hlavin will take these formulas and turn them into a range of products that Asala will then market under its own name.

Most of the women involved in the project are married with children and all have the support of their husbands. (Source: Israel 21C, 19 February 2007.)

Jagriti

Jagriti is a community-based women's organization in Kullu, Himachal Pradesh, India. It consists of over 900 poor hill women organized into savings and credit groups. One of the areas of activity and interest is value addition to the fruits of wild apricot, peach and walnut. The organization is now making cold pressed oil from the kernels of these wild species. The women members are engaged in this process and are



Dioscorea deltoidea

encouraged to plant these trees in their marginal lands with a view to boosting production of wild or semi-wild fruits.

In addition, the organization is growing nurseries of medicinal plants that are threatened in the wild, such as *Picrorhiza kurrooa*, *Dioscorea deltoidea*, aconites and valerians of two species.

We feel that women's economic situations can be vastly improved through systematic conservation and value addition

to NWFPs. (Contributed by: Mamta Chandar, Director, Jagriti, # 341, Ward 12, Shishamati, Kullu 175101, HP, India. Tel./fax: 91-1902-226537.

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Using knowledge handed down from generations to produce commercial products

Knowledge and skills handed down from generation to generation have found a new lease of life in the production of marketable goods to provide much-needed cash for local producers.

During the Committee on Forestry (COFO), which took place at FAO headquarters from 13 to 16 March 2007, FAO distributed folders and other materials made by villagers in the Lao People's Democratic Republic and Guatemala using local handicrafts.

Weaving bamboo to produce mats is a traditional knowledge in the Lao People's Democratic Republic, handed down from generation to generation by women. It is a valuable tangible national heritage that the government is making efforts to preserve.

Tapping into this knowledge, FAO asked the villagers of Ban Lak 62 to produce folders for COFO made of bamboo sheets. The initiative is part of an FAO project launched in 2004 to help local communities develop businesses and market their products to obtain greater profit for artisans themselves. Thongdeuane Keomany, who has studied bamboo handicrafts for more than ten years, taught the women in the village of Ban Lak 62 the basics of bamboo weaving – a tradition that was in danger of being lost. She then helped the women to produce not only simple items but also more complex products of a quality that would be good enough to meet international market requirements.

At the same time, FAO has helped the women to establish links with national and regional markets to buy the products. The result has been that the weavers have been able to increase their incomes from 40 to 50 percent. Another positive outcome is that the villagers have started to pay more attention to how they manage bamboo as a valuable natural resource on a sustainable basis.

Symbolically, a woven mat is synonymous to a "council" in pre-Columbian Maya culture, where dignitaries discussed public matters while squatting on a woven mat.

AFRICAN WOMEN'S DEVELOPMENT FUND

The African Women's Development Fund (AWDF) funds local, national, subregional and regional organizations in Africa working towards women's empowerment. It is an institutional capacity-building and programme development fund, which aims to help build a culture of learning and partnerships within the African women's movement. In addition to awarding grants, the AWDF attempts to strengthen the organizational capacities of its grantees. It funds work in five thematic areas: women's human rights; political participation; peace building; health and reproductive rights; and HIV/AIDS economic empowerment. The AWDF gives grants in three cycles every year. Applications can be sent in at any time.

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Similarly, FAO involved a local village in Guatemala in the production of cords for building passes for participants attending COFO using local skills, with the help of Maya Republic, a local NGO.

Hand weaving, using waist looms, is a traditional practice of Mayan women in Guatemala. Originally, this was done to create fine traditional cloth. However, the beauty, high quality of the textile and tourism have helped to diversify and open markets for products made using this ancient technique. For the production of the cords, 80 women from the village of San Antonio Aguacalientes worked in their spare time. The colours used to make the cords came from natural ingredients found in the woods: green and blue were extracted from tree bark, fruits, leaves and herbs; and red, orange and brown were extracted from an insect that lives in a local cactus.

Beyond their use at this international committee meeting, the cords are being marketed as a new product introduced to the local market to enhance further the preservation and use of Mayan traditional knowledge and culture. (Source: FAO Forestry Newsroom, 5 March 2007.)

Shea butter sales change African women's plight

Little do buyers of cosmetics containing shea butter realize that sales of this age-old beauty-boosting nut are helping legions of African women to feed their children and send them to school.

Off a dirt track in the shanty town of Gounghin, on the edge of the capital of Burkina Faso, Evelyne Kabole and Honorine Ilboudo haul heavy buckets of water and knead shea paste in large plastic basins. Both are widows with six mouths to feed. They belong to the Songtaab-Yalgre Association, which in the language of the local Mossi people means "help each other".

Set up in 1990 to teach women to read and write, the association is now dedicated to shea butter production. It has 1 174 members, 60 of whom live in Gounghin and the others in villages outside the capital Ouagadougou.

Shea butter, commonly known as karité, derives from a fruit that grows on the shea nut tree (*Butyrospermum parkii*) found only in Africa's dry Sahel belt from Cape Verde to Chad. The tall sacred trees scattered around villages cannot be planted. They grow alone, bearing fruit only after 25 years and then only once every three seasons, but their lifespan is about two hundred years.

For as long as anyone can remember, African women have been using butter made from the seed found inside the shea nut for cooking, healing and moisturizing skin and hair. Rich in vitamins A, E and F, all antiwrinkle, moisturizing and skin regeneration agents, the seed also contains latex, which is good for skin elasticity, as well as steroids for muscles and it protects against the sun.

Promoted by cosmetics brands such as L'Oréal, the Body Shop and L'Occitane, the popularity of shea butter products has increased considerably over the years, with Nigeria, Mali and Burkina Faso as the top producers. For Burkina Faso, shea butter is the second export item after cotton.

"Women in villages across the country harvest the nuts," Kassoum Soudre, the finance officer for the country's Project Karité, said. "We try to organize them in groups, provide them with equipment or credits and help them improve production."



"Riches of the forest: for health, life and spirit in Africa"

In the Gounghin women's self-help cooperative, the nuts, once shaken off the trees and dried in the sun, are pounded in electric grinders to separate the seeds from the shells. They are then ground into a paste. Bent in two, women workers beat the paste by hand for 20 minutes until it becomes butter. Once separated, it is heated, filtered, cooled and either sold as butter or made into soaps and creams.

Most of the work is done by hand; profits are shared and the association is run by the women themselves. With no intermediaries involved, domestic and foreign sales comply with fair trade conditions.

The initiative is in line with the tenets upheld on International Women's Day, celebrated each year on 8 March. In developing countries the day has focused notably on empowering women to take part in the economic as well as the political life of their countries. (Source: The Peninsula online, Qatar, 7 March 2007.) (See page 36 for information on female entrepreneurs in Honduras.)

HISTORY OF FORESTRY AS IT DEVELOPED IN CENTRAL EUROPE

For the first time, FAO has displayed a historical collection of rare forestry books dating back to the eighteenth century that provide a snapshot in time of the state of forest research as it first developed in Central Europe and evolved through the beginning of the twentieth century.

Acquired from the International Center of Silviculture (CIS), the first permanent international forestry organization founded in Berlin in 1939, the collection is the first ever attempt to document worldwide all publications related to forestry by scientists. The goal of the library was to establish annual updated bibliographies of forest-related literature from European countries.

With a considerable number of valuable books, mostly in German, dating back to the eighteenth century, the collection offers a unique glimpse into the beginnings of forestry as a science as it first developed in Central Europe.

The collection is also special in that it survived the Second World War. Scientists made arduous efforts to protect it from the war by asking extraterritorial rights for the library and the protection of the Swedish embassy. In 1944, with the assistance of the centre's Secretary General, scientists themselves drove and moved the books in lorries at their own risk, from Berlin to Salzburg. When fighting seemed imminent in Salzburg in 1945, the scientists moved the books again to a castle, a mine and some to Ramsau in Austria, to keep them protected. Most of the collection therefore remained intact throughout the war. Eventually in 1951, at the end of the war, the collection was transferred to the FAO premises in Rome, which succeeded the CIS.

The collection is significant for its historical and scientific value. It includes books authored by renowned scientists who established forestry as a science, such as Humboldt, Brehm, Cotta, Hartig, Pfeil, Pressler and Brandis. It also covers botany, zoology, silviculture, growth and yield, and forest engineering.

"No other such collection exists in any other library worldwide," said Elizabeth Johann, an expert in forestry history, who reviewed and assessed the collection and organized the exhibit. "It demonstrates that sustainable forest management dates back to the eighteenth century and that international collaboration within the

scientific community continued even in times of war and national disagreements." (Source: FAO Forestry Newsroom, 5 March 2007.)

MAN FINDS WAY TO GROW FAMED FRENCH TRUFFLE

The legendary French Périgord truffle (*Tuber melanosporum*) has found its way to East Tennessee (United States of America), the first in the state. Thomas Michaels, a botanist with a Ph.D. and a plant pathologist, has figured out how to grow the famed fungi in the tree root system of hazel nut and oak trees. He has harvested his first crop. Knoxville chefs were his first customers, paying about \$800 per pound (0.45 kg), which is cheap considering the world market price is more than \$2 000 per pound.

The Périgord truffle, also known as the Black Diamond, is hard to grow, requiring the right soil, climate and tree root for colonizing. *T. melanosporum* varies in size from a pea to a chicken egg. It will only grow in loose, humid, sun-drenched soil and needs cool wet nights, where its mycelium (tiny hair-like filaments) nestle and find nourishment in tree roots.

Michaels says his harvesting season (January to end February) has just ended. By March, the odd-looking, knobbly, coal-black mushrooms have faded and are in their tree root homes.

The smelly but celestial-tasting fungi were once prevalent in southern France and were harvested in tonnes. Today, the yield is down to 10–50 tonnes per year worldwide.

Michaels planted his trees in 2000, starting with plants that were about 16 inches (40.6 cm) tall. The hazel nuts are now 10–12 feet (approximately 3–3.6 m) tall, and the soil around them bubbles with birth. According to Michaels, a good orchard can produce maybe 50 pounds (22.7 kg) per acre (0.4 ha). A normal yield, he says, is 10–20 pounds (approximately 4.5–9.0 kg) per acre. (Source: *Knoxville News Sentinel* [United States of America], 25 March 2007.)

MANGROVE FORESTS, SEA ALGAE AND CORALS HELP TO COMBAT TSUNAMIS

All the coastal regions in the Pacific, Arabian Sea and Bay of Bengal are vulnerable to a tsunami disaster. Mangroves (the vegetation found in and

along the coast) function as a natural shield in lowering the intensity of sea tides, as well as providing a variety of economic uses. Sea algae and coral reefs also play an important role in averting the severity of natural disasters. These mangroves, sea algae and coral reefs are valuable non-timber forest resources (NTFRs) occurring along the seashore.

Mangrove forests have a symbiotic relationship with all creatures. Mangrove plant species have multiple economic uses and based on these the tree species yield very useful industrial timber, wood fuel and charcoal of high calorific value. Most of the tree and shrub species are also sources of NTFRs, such as edible fruits and leaves, indigenous medicines, tannin, seed fatty oils, thatching materials and sedges fencing material, fibres from palms and grasses, honey, fodder and manure. In addition to these uses and the fact that they can provide protective walls against tidal waves, they act as another conservation mechanism for ecological balance.

It is therefore essential to conserve these NTFRs. A list of plant species that occur naturally in and around the sea is available from the author to help scientists to propagate them sustainably, manage and harvest NTFRs for the uses given above, avoid their extinction through scientific and environmentally sound harvesting practices and replenish the dwindling resources to obtain multiple uses. (Contributed by: Ms Alka Shiva, President and Managing Director, Centre of Minor Forest Products (COMFORPTS), HIG - 2, No. 8, Indirapuram, GMS Road, PO Majra, Dehra Dun - 248 171, India. E-mail : shivamfp@nde.vsnl.net.in; <http://www.angelfire.com/ma/MinorForestProducts>)

MEDICINAL USES OF NWFPS

Medicinal products from forests

Many forest plants and animals produce poisons, fungicides, antibiotics and other biologically active compounds as defence mechanisms, and many of these have medicinal uses. Compounds that have common medicinal uses such as cola nuts, caffeine, chocolate, chilli peppers and cocaine are found in forest areas. Many western pharmaceutical products derive from tropical forest species, e.g. quinine from *Cinchona* spp.; cancer-treating drugs



Cinchona calisaya

from rosy periwinkle (*Catharanthus roseus*); treatments for enlarged prostate glands from *Prunus africana*; forskolin, which has a variety of medicinal uses, from the root of *Coleus forskohlii*; medicines for treating diabetes from *Dioscorea dumetorum* and *Harungana vismia*; and several medicines based on leaves of the succulents of the Mesembryanthemaceae family. Some of these products are now synthesized, but others are still collected from the wild. The economic value of traditional medicines is considerable, with reports that the bark of *Prunus africana* alone is worth US\$220 million annually for the pharmaceutical industry.

Traditional health care systems are based on significant local knowledge of medicinal plants in all major tropical areas. These systems are important, particularly where formal health care services are absent. The market for traditional medicines is large and expanding, and much of it is in the hands of women, particularly that involving less commercially valuable medicinal plants. There is also growing scientific evidence of the efficacy of some of these widely used traditional remedies.

At the same time, medicinal plants are threatened globally. Some of the threats include slow growth patterns of desirable species, loss of traditional mechanisms that contributed to sustainable use and competing uses of the same species, in tandem with growing commercialization and global markets. Certification of medicinal plants and better forest management techniques offer two possible partial solutions.

Pharmaceutical companies have sometimes been charged with reaping unacceptably large benefits from forest peoples' knowledge, given the widespread poverty in forested areas. Attempts to establish collaboration between the pharmaceutical industry and local communities in bioprospecting have had mixed results. [Source: *Unasylva*, 57[224]: 7.]

Aussie bee honey – an antibiotic in the United Kingdom

A British hospital is using honey from Australian bees to combat superbug Methicillin-resistant *Staphylococcus aureus* (MRSA), a bacteria that is resistant to conventional antibiotics. The James Cook University Hospital in Middlesbrough has been using honey from a colony of bees only found in Queensland to clean infected wounds, along with dressings that contain gum extracted from seaweed. The honey seals the injury and the seaweed extract draws and absorbs the harmful bacteria. [Source: *Ninemsn* [Australia], 27 February 2007.]

Boswellia serrata extract scores well in COX-2 comparison

Boswellia serrata extract performed as well as a selective COX-2 inhibitor in a controlled clinical study to assess its effect on relieving osteoarthritis pain, researchers report in the February issue of the *Indian Journal of Pharmacology*, 39(1): 27-29.

Boswellia serrata has a long history of use in Ayurvedic medicine, popular in India, and its gum resin is reputed to have anti-inflammatory, antiarthritic and analgesic properties. [Source: *Nutralngredients-usa.com* [France], 20 March 2007.]

Cinnamon may help fight against Type 2 diabetes

Research studies have shown that cinnamon has been linked to lower blood sugar and total cholesterol levels. The research has focused on people with Type 2 diabetes. The main ingredient in cinnamon that helps people with this diabetes is proanthocyanidin. "For people who have Type 2 diabetes, insulin doesn't seem to be getting enough sugar into the cells and this is where cinnamon comes in. Cinnamon helps the cells absorb more sugar," said Robert Cullen, assistant professor of food nutrition and dietetics in Family and Consumer Sciences, who has been monitoring research studies such as these for many years.

Two types of cinnamon are used in food: *Cinnamomum verum*, which is used in many sweet baked goods and *Cinnamomum cassia*, which is a stronger spice used in foods. There is no clear answer to which cinnamon can help fight high blood sugar levels, cholesterol, Type 2 diabetes or even heart disease. There is no true answer if cinnamon at all can help with these problems, but Cullen says things look promising. [Source: *Daily Vidette* [Illinois, United States of America], 7 March 2007.]



Cinnamomum cassia

Research into medicinal value of fungi

Scientists at the University of Western Sydney, Australia, are working to see whether the medicinal fungi *Ganoderma lucidum* can reduce high blood pressure, glucose and cholesterol. When coupled with insulin resistance, these conditions bring about metabolic syndrome, a precursor to Type 2 diabetes which affects an increasing number of Australians. Also known as *reishi*, *G. lucidum* has been used as a cure for a wide range of diseases for 2 000 years.

Cultivation has increased over the last 30 years, and preliminary animal and human pilot studies seem to suggest that it can have a positive effect on blood sugar levels, cholesterol levels and blood fats.

The mushroom – an inedible fungi typically the size of a bread and butter plate – contains about 200 active chemical compounds, but researchers believe that a group called the polysaccharides are the most effective. Traditional users believe it is most potent when taken in combination with another medicinal mushroom called *Cordyceps sinensis*.

The researchers will put this theory to the test when they enlist 170 people with metabolic syndrome symptoms for a four-month trial. Participants will have either capsules of powdered reishi alone, a combination of the two mushrooms, or a placebo capsule.

If successful, this could become the first single treatment for the metabolic syndrome. [Source: *The Age* [Australia], 7 February 2007.] (See page 60 for information on medicinal fungi in Alaska.)

Tree bark molecule may combat malaria

A compound derived from tree bark has potential as a preventive treatment for malaria, according to a study published in the journal *PLoS Medicine*. The treatment targets the early stages of malaria infection, which would make it difficult for the parasite to develop the kind of drug resistance that hampers conventional malaria treatment programmes.

Scientists have isolated a new molecule, tazopsine, from bark collected in Madagascar's eastern rain forest. They found that N-cyclopentyl-tazopsine, a less toxic compound derived from the molecule, was effective against early liver-stage malaria parasites in animal tests. However, the compound is ineffective once infection has reached the red blood cells.

Tazopsine comes from the stem bark of the plant *Strychnopsis thouarsii* and is the sole ingredient in a traditional tea used as a treatment for malaria infection. The authors of the study hope that variants of tazopsine-related molecules can be tested to find one of low toxicity, suitable for clinical trials.

A resurgence of malaria since the 1980s, combined with a shortage of conventional drugs, has forced many Madagascans to rely on medicines from more than 200 plants to fight the disease. This has triggered scientific interest, as Madagascar's long isolation from neighbouring countries has resulted in a unique mix of plants and animals.

Tests on chimpanzees are due to begin this year in Gabon, while tests on Rhesus monkeys will be carried out in Thailand before the end of the year. [Source: *PLoS Medicine*, 2 January 2007 [in *SciDev.Net Weekly Update*].]



Rain forest bark could destroy rare child cancer

The bark of a rain forest tree could destroy a rare childhood cancer, scientists have found.

The South American *Lapacho colorado* contains a natural plant product that shrinks eye tumours by causing cancerous cells to die. Laboratory tests show that the compound, called beta-lapachone, works at low doses, making it an ideal treatment for child patients with retinoblastoma, a malignant tumour of the retina.

The uncommon disease accounts for about 3 percent of cancers in children and remains fatal in the developing world although it is one of the most curable cancers in developed countries. But one problem that exists with the traditional approach of radiotherapy is the association of long-term ill health and even death in some cases.

Researchers at California University in the United States of America found that beta-lapachone was effective in inhibiting the growth and spread of retinoblastoma cells and actively induced their destruction. Their findings, published in the medical journal *Eye*, are consistent with those from studies of the effect of the product in other human cancers, including breast, colon and lung tumours.

L. colorado or red lapacho, so called because of its scarlet flowers, grows in the warmer parts of South America such as Brazil, northern Argentina, Paraguay and Bolivia. It was commonly used by the medicine people of the Indian tribes long before the advent of the Spanish in the New World. The natives use the wood to make bows for archery. [Source: national news in *Life Style Extra* [United Kingdom], 16 March 2007.]

NON-PROFIT ORGANIZATIONS AND NGOS

Centre for Indian Bamboo Resource and Technology (CIBART)

CIBART is a non-profit networked organization dedicated to the development of the bamboo sector in India. Its establishment was facilitated by INBAR (the International Network for Bamboo and Rattan).

CIBART serves as a catalyst for the bamboo industry in India, undertaking various collaborative livelihood development projects. It brings together

state and district level bamboo organizations and enterprises in a federating mode. It also provides project development and implementation, technical consultancy and turnkey services on all aspects of bamboo sector development in collaboration with its partners.

CIBART's main area of focus is to achieve livelihood development, ecological security and economic development through the sustainable use of bamboo and rattan. Its primary focus is to benefit poor rural communities.

Currently, CIBART has four community-owned organizations in the states of Tripura, Manipur, Maharashtra (Konkan area) and Himachal Pradesh that are not for profit companies. Within each state, the local organizations set up by CIBART have extension linkages in each village, backed up by field technical resource centres at the subdistrict level. (Contributed by: Manu Mayank, Chief Executive Officer, I-4, Jangpura – B, New Delhi – 110014, India. Fax: +91-11-24374802; www.cibart.org.)



Fundación Zoobreviven, Ecuador

Fundación Zoobreviven is a private Ecuadorian, non-profit organization created in 1997 and recognized by the Ecuadorian Ministry for the Environment.

Its objective is to conserve the biodiversity of Ecuador through responsible use of natural resources, scientific research, environmental education, wildlife, plant and tree conservation and development of economic alternatives for local communities.

Three reserves are managed in northern Ecuador, including the 2 500-ha Alto Choco Reserve and the nearby 7 500-ha Chontal Reserve, both in the Choco bioregion. The work is to preserve these important environments through wildlife, plant and

tree conservation, community education, environmental management, volunteer projects, community ecotourism and scientific research on the flora and fauna of the region.

In addition to managing the three reserves, the foundation is currently developing management plans for the areas surrounding all three cloud forest reserves, reforestation Alto Choco and conducting environmental education in the surrounding communities.

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FOR MORE INFORMATION, PLEASE CONTACT:
Fundación Zoobreviven, 6 de Diciembre N32-36 y Whymper, Quito, Ecuador, South America.
E-mail: info@zoobreviven.org;
www.zoobreviven.org/

The Finnish Nature-based Entrepreneurship Association

The Finnish Nature-based Entrepreneurship Association was founded in 2001. It is a non-governmental national organization formed by entrepreneurs and development organizations. The association collects together actors in nature-based entrepreneurship for cross-sectoral cooperation (nature tourism, handicrafts and food products) in order to integrate entrepreneurship, education, development activities and research in the sector. There are approximately 300 entrepreneurs and 100 expert organizations in the sector at the moment.



One of the main interests of the association has been to increase the ecologically friendly business culture, since the sustainable use of nature is one of the main values and marketing arguments in the sector. The association has been a partner in several project activities, both national and international. All of its activities are based on close cooperation between entrepreneurs and other actors.

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FOR MORE INFORMATION, PLEASE CONTACT:
Katri Kranni (chair of the association), The Finnish Nature-based Entrepreneurship Association, Kampusranta 9 60320, Seinäjoki, Finland. Fax: +358 (0)6 421 3301;
e-mail: katri.kranni@vilman.fi;www.luontoyrittaja.net. (See page 15 of Non-Wood News 14 for more information on nature-based entrepreneurship.)

NTFP CURRICULUM DEVELOPMENT

Dr Eric T. Jones of the Institute for Culture and Ecology (IFCAE) is offering an online course on non-timber forest products culture and management through Oregon State University (United States of America). The course is geared to upper division students as well as professionals interested in training on NTFPs. International participants are encouraged. The course is taught twice a year in the spring and autumn. In addition to readings, videos, and engaging online discussions participants conduct a project identifying NTFPs in their local community. Results of these projects will be made available through the IFCAE Web site.

FOR MORE INFORMATION, PLEASE CONTACT:

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PO Box 6688, Portland, Oregon 97228-6688,
United States of America.
E-mail: etjones@ifcae.org; [www.ifcae.org/
projects/osuntfpcourse/index.html](http://www.ifcae.org/projects/osuntfpcourse/index.html)**

NWFP CERTIFICATION

The harvest of NWFPs plays an important role in the sustainable management of community agriculture and forest resources worldwide. NWFPs present many new challenges and opportunities in certification because of their wide range of management practices and difficulties in monitoring harvest and processing.

The PEFC Council (Programme for the Endorsement of Forest Certification schemes) issued a technical document with specifications for the origin for the purposes of the PEFC label and declarations for NWFPs. This document is Appendix 8 to the standard that rules the traceability of certified products, from forest to the market (Annex 4 to PEFC Council Technical Document). The document is normative when the organization establishes a chain of custody for the certification of NWFPs in order to use the PEFC logo and/or declarations on NWFPs. The appendix was approved by the PEFC Council General Assembly on 27 October 2006.



At the moment, given the fact that NWFPs have only been able to be PEFC certified since November 2006, there are very few examples among the PEFC accredited schemes, even though the potential is high. These examples include:

- Cork – certified in Spain and Portugal
- Essential oil – certified in Italy
- Honey, chestnut and berries: soon to be certified in a certified Italian forest
- Truffles and mushrooms: soon to be certified in already certified forests of Italy, France and Spain
- Animal meat – there are plans for this to be certified in Italy and Spain (and possibly other countries) where there are hunting plans and fenced forests

PEFC's aim is to ensure that the world's forests are managed sustainably and that their functions are protected for present and future generations.

PEFC certified timber, non-wood and paper products are an independently verified assurance to consumers and companies that they are buying forest products from sustainably managed forests. By choosing PEFC, buyers can help combat illegal logging.

PEFC's role as an independent, non-profit NGO is to secure that the same high standards are applied by all its endorsed certification systems globally and thus by forest managers, paper and timber companies and their external certifiers. (Contributed by: Antonio Brunori, PEFC Council ASBL, 2ème étage, 17 Rue des Girondins, Merl-Hollerich, L - 1626 Luxembourg. Fax: +352 26 25 92 58; e-mail: info@pefc.org; www.pefc.org) (See page 52 for information on NWFP certification in Nepal.)

OLEORESINS ADD FLAVOUR TO FOOD

From mere extraction, the Rs500 crore oleoresin industry has now gone beyond diversifying into nutraceuticals and cosmeceuticals to enter the dietary supplement area, becoming a producer of food ingredients in savoury and sweet flavour items. The industry is now turning into a one-stop food and flavour solution.

India accounts for 70 percent of world oleoresin production with competition from China, the United States of America, Sri Lanka, South Africa and Latin American countries. Brazil, India and China are the market leaders, with South Africa catching

up. India has an advantage in its proximity to spice farms, with Kochi the hub of oleoresin activity, according to Synthite Industry Chemicals, which accounts for nearly half of the Indian oleoresin and spice oil extract exports.

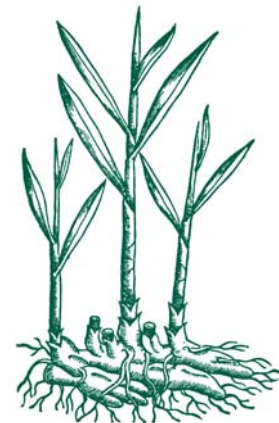
In the last fiscal year, India exported 6 225 tonnes of oleoresins and spice oils, worth Rs500 crore. According to spice board figures, within threequarters of this period, 5 010 tonnes worth Rs402 crore were shipped out and the industry is sure to improve even more.

High costs in the West have forced the industry there to outsource from India and flavour houses across the globe look to the country to source their products. The industry's major breakthrough came in the mid-1980s with the development of oleoresin paprika, followed by oleoresin chilli. The list of oleoresins from spices includes turmeric, celery, ginger, nutmeg, mace, cumin, fennel, mustard, garlic, coriander, cassia/cinnamon, clove and Mediterranean herbs such as rosemary.

Some products such as light pepper berries, not available in India, have forced the industry to import from Viet Nam. While earlier Sri Lanka was the main source for the pepper, the shift to Viet Nam was due to the price advantage.

Vanilla is the latest entrant to the industry with the development of a nature-identical vanillin oleoresin. Oleoresins from cassia/cinnamon are being consumed by the beverage industry and mustard oleoresin is another item that is making big inroads into the global market.

The process of isolating the active principle has helped in the manufacture of lutein from marigold flowers as a colouring agent. [Source: *Financial Express* (India), 25 February 2007.]



Zingiber officinalis



PARTENARIAT POUR LES FORÊTS DU BASSIN DU CONGO

Le Partenariat pour les forêts du Bassin du Congo (PFBC) est une association regroupant une trentaine d'organisations gouvernementales et non gouvernementales. Il a été créé en septembre 2002, lors du Sommet mondial sur le développement durable (Johannesburg, Afrique du Sud).

Le PFBC a pour objectifs d'améliorer la communication entre ses membres et la coordination entre leurs projets, programmes et politiques afin de promouvoir une gestion durable des forêts du Bassin du Congo et d'améliorer la qualité de vie des habitants de la région. (*Contribution de:* Christophe Besacier, Conseiller régional forêt environnement Afrique centrale, Ministère français des affaires étrangères, Gabon; courriel: Christophe.Besacier@diplomatie.gouv.fr; cbfpinfo@cbfp.org; www.cbfp.org)



RAIN FOREST SILK COOPERATIVE

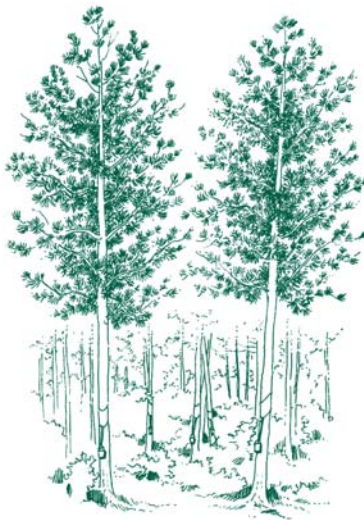
The Rain Forest Silk Cooperative™ is a newly organized consortium of four producers of wild silk products on four continents: India, Indonesia, Madagascar and Namibia. It produces high-quality silk textiles, yarns and decorative objects from wild silk cocoons. Each member of the cooperative uses a unique species of silk moth to make the products.

The cooperative's products come from impoverished rural farmers, and primarily women. Its long-term goal is to provide new means of income generation while implementing enterprises that focus on maintaining native forests instead of cutting them down.

Current members of the cooperative include: Appropriate Technology India (atindia); the Royal Silk Project of Indonesia; the Kalahari Wild Silk, Namibia; the Ny Tanintsika silk project in Madagascar; and Conservation through Poverty Alleviation International (CPALI). The Rain Forest Silk Cooperative is a member of the Fair Trade Federation.

FOR MORE INFORMATION, PLEASE CONTACT:

The Rain Forest Silk Cooperative, 221 Lincoln Road, Lincoln, MA 01773, United States of America.
www.rainforestsilk.org/index.html



"Riches of the forest: fruits, remedies and handicrafts in Latin America"



SYNERGISTIC SUPERFRUIT: SEA BUCKTHORN

Sea buckthorn (*Hippophae rhamnoides* L.), named a "superfruit" for its robust nutritional properties, is poised to outrun many other functional foods. It has recently been rated second of ten potential superfruits, based upon four criteria including nutrient density and potential for disease impact (www.berrydoctor.com).

In studying the superfood and superfruit phenomena, nutritional science is recognizing that nature is capable of providing, in such varied single foods as wheatgrass juice, garlic, blueberries and now sea buckthorn, a foodborne inoculation against ill-health that laboratories cannot match.

While the nourishing and healing properties of sea buckthorn are relatively new to the West, they have been well known in the East for hundreds of years.

Almost the entire plant is suitable for consumption and topical application. The fruit pulp, rich in such antioxidants as vitamins C and E, beta-carotene and numerous flavonoids (complementary micronutrients that work in concert with more familiar vitamins), plus the rare and valuable palmitoleic acid (known to support wound healing and cell health), can be pressed for juice, freeze dried and packaged as a supplement, and incorporated into topical skin preparations. The fruit oil can be extracted separately and taken internally or externally.

Oil from the seeds is high in several fatty acids, including omegas 3 and 6 in a critical 1:1 ratio; applied topically, the seed oil

heals radiation burns, reduces scarring, heals or improves psoriasis and a host of other skin conditions and, taken internally, has been proved to improve heart health and gastrointestinal disorders.

The leaves, high in vitamins, minerals, proteins and other natural anti-inflammatory compounds, can be dried for tea, powdered as an ingredient in soaps and creams, and steeped to make a soothing rinse for irritated skin. Studies are ongoing to determine the healing and nutritive possibilities of sea buckthorn bark.

All told, this superfruit, known to ease and soften scar tissue and arteriosclerosis, reduce inflammation and cell death and reverse burn damage, has over 191 known bioactive compounds for topical and internal applications.

While Asia and Europe have used sea buckthorn commercially for several decades, the industry is new in North America. The health and supplement industries are just starting to pay attention (and draw attention) to this plant. (*Source:* Press release, SBT Sea buckthorn International Inc., 16 April 2007.)



TEA TREE OIL (*MELALEUCA ALTERNIFOLIA*) AND ITS RISKS

Tea tree oil, an ingredient found in many beauty products, has been named unsafe by the European Union (EU) and could be banned after research discovered that it may cause skin irritation and reduce the effectiveness of antibiotics.

Regular usage of tea tree oil, which is sometimes used undiluted to help get rid of spots, acne and insect bites, could increase the user's risk of contracting superbug infections such as methicillin-resistant *Staphylococcus aureus* (MRSA), according to research claims. Tea tree oil makes these infections more resistant to antibiotics. In addition, the EU has warned against using tea tree oil undiluted, as even small doses can cause skin rashes. However, it has said that beauty products such as shampoo, which use the oil in minute quantities, are safe.

The EU said it may ban the oil from being used in the undiluted form later this year if manufacturers fail to convince EU scientists that it is safe for human use. (*Source: Pharmaceutical Business Review* [United States of America], 19 February 2007.)

“VOICES FROM THE FOREST”



A recent film available from the NTFP Exchange Programme “Voices from the forest –balancing forest use and conservation in Southeast Asia” provides introductory material to the lesser-known group of NTFPs, stressing the interrelations of land rights, traditional management of resources and marketing of these various forest-derived products.

The film captures the stories of indigenous peoples living in or near tropical forests in Southeast Asia, and their dependence on NTFPs for their survival. Through their voices as well as of some of their supporters, we can share in their dreams and aspirations, together with their fears as the rapidly changing world poses new challenges to their indigenous lifestyles.

We are offered a rare insight into:

- the nomadic Penan people’s reliance on sago palm in the face of threats from a large logging company (Malaysia);
- traditional and sustainable harvesting, production and marketing of wild honey in Danau Sentarum (Indonesia);
- the Ikalahan tribe’s struggle to protect their traditional forest by transforming fruits of the forest into jams and jellies for the high-end niche market (the Philippines);
- the Higaonon tribe’s indigenous fabric, the *hinabol*, tied to traditional management of abaca (manila hemp) and the fast-disappearing art of *hinabol* weaving (the Philippines); and
- the crucial market links provided by the Upland Marketing Foundation and the CustomMade Crafts Center, and their tireless efforts at aiding local communities to develop marketable handicrafts and food products.

(Produced by: Riak Bumi, Telapak and the NTFP Exchange Programme for South and Southeast Asia, 2005. DVD [43 minutes]. Available in English and Khmer.)

VOICES FROM THE FOREST NEWSLETTER

Voices from the forest is the bulletin of the NTFP Exchange Programme for South and Southeast Asia. Now published twice yearly, it highlights activities and pressing issues related to NTFPs in the region. It is available in print and online from: <http://ntfp.org/sub.php?gosub=info-vftf&iid=>

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(See page 26 for information on another DVD from the NTFP Exchange Programme.)



WEAVERS USE DYES OF WILD FLOWERS TO COLOUR HANDSPUN CLOTH

The palash flower (*Butea monosperma*), known as the “flame of the forest”, remained unnoticed until Orissa’s Sonepur district farmers discovered its commercial value: locals found these flowers with their red petals to be an ideal source to prepare dye for colouring fabrics.

Sambalpuri saris from western Orissa, bed sheets and mats dyed with the colours of palash flowers have become extremely popular and are in great demand.

In Birmaharajpur, Orissa, people collect these odourless flowers that grow in abundance in the countryside and earn their livelihoods by selling them to weavers. Children also help in flower collecting. “Palash blossoms in the *chaitra* (spring season). We give them to the weavers and get two to five rupees per kg,” said one flower collector.

The flowers are dried (since palash is a seasonal flower it is dried for use all year round) and the colours are extracted to dye cotton, silk cloths and natural fibres;

synthetic fibres do not respond well to the dye.

Jharna, a producer of natural colours, said that saris and other fabrics coloured in palash-based dyes are not only lasting and good-looking but also safe to use.

Although the process of preparing dye from palash is quite lengthy, the weavers of Sambalpuri textiles in the Sonepur district now use it as it is more economical compared with chemical dyes.

The palash tree has many uses. The dried flowers are used as a diuretic. The gum obtained from the tree contains tannin and is used in the treatment of diarrhoea.

Locals say that the seeds have deworming properties. The wood of the tree is soft and durable and is used for making boats.

According to one local, “All the parts of this tree are useful. Its seeds, flowers and even the stems have medicinal value. If only this was better known, then we could conserve it and grow more to make it a trading commodity to sell to other states.” (Source: DailyIndia.com [United States of America], 28 March 2007.) ♣



He that plants trees loves others besides himself.

English proverb