

CONNECTIONS

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OUR VISION

To support, through model forests, the management of the world's forest resources in a sustainable manner, reflecting environmental and socio-economic issues from the perspective of local needs and global concerns.

Non-Timber Forest Products and the IMFN

Non-timber forest products (NTFPs) are typically defined as all goods derived from forests of both plant and animal origin other than timber and firewood. The establishment of local and successful NTFP enterprises can contribute the sustainable generation of income for forest-based communities, thus illustrating that the pursuit of economic opportunity is not always incompatible with environmental conservation. For these reasons, NTFPs have recently sparked a global interest that is rapidly increasing.

However, making informed choices about appropriate economic activity is not always easy. Access to information about sustainable economic alternatives, the environmental impacts of resource extraction, market access, and so on is needed to make knowledgeable decisions. Here lies the added value of model forests.

Most model forests are involved with NTFP initiatives and have been particularly successful at promoting non-traditional resource uses and more sustainable natural resource extraction processes. This is why the IMFN Secretariat is developing an e-directory of model forest products that would include NTFPs. In this issue of Connections we focus on NTFP activities in model forests around the world – from honey production in Chile to

a national NTFP initiative in Canada model forests are demonstrating that by increasing awareness of these products, their management and market potential NTFP activities can also complement priorities related to conservation, sustainable community development, education and capacity building.



*Paper making,
Ngao Model Forest, Thailand*

Model Forests— Fertile Ground for Growing NTFP Opportunities

Brian Belcher,¹

Director, Centre for Non-Timber Resources, Royal Roads University and Research Associate with the Centre for International Forestry Research (CIFOR) Forests and Livelihoods Program

The Centre for Non-Timber Resources (CNTR) is a research unit at Royal Roads University (RRU) dedicated to strategic and applied research on forest resources and rural economy. The work is organized in three main programs. In the **Socio-Economics and Policy Program** the main research thrust is on defining and assessing livelihood status and change as a way to learn from experience about what works, what doesn't work, and why in natural-resource-based development efforts. We are also trying to better identify, articulate and communicate local values and aspirations about sustainable forest management.

The **Ecology and Management Program** aims to encourage the integration of non-timber resources in other management regimes. As part of this, the program has a series of innovative research projects that work to incorporate traditional indigenous ecological knowledge and values in models and inventory tools. The intention is to better recognize and appreciate local values attributed to forest resources, including use values and spiritual and other values associated with NTFPs, and to manage appropriately for those values. The third Program, on **Training, Extension and Sector Support** supports information exchange, develops and delivers training material, and encourages networking among stakeholders to increase coordination and voice.

Historically, a big part of the work of anyone involved with NTFPs has been to help raise awareness about the issues and the opportunities in the sector. Now though we see increasing interest in and demand for NTFP-based opportunities. The markets for natural, wild and organic products are expanding rapidly, as are markets for ecosystem services. There has also been a marked shift toward increased rights and responsibilities for local resource managers, which open many new opportunities.

“A recent survey...revealed that model forests have made significant contributions in developing many small forest-based enterprises. The challenge now is to support the growth and success of these kinds of enterprises.”

A recent survey conducted by the IMFN Secretariat revealed that model forests have made significant contributions in developing many small forest-based enterprises. The challenge now is to support the growth and success of these kinds of enterprises. A recent review of NTFP initiatives within the Canadian Model Forest Network (CMFN) found a high level of interest in NTFPs, a range of practical experience, and a need for support, particularly in terms of market development, information to support small- and medium-scale enterprise development, and appropriate training, especially at the harvester/resource manager level. This has led to discussions with CMFN and the larger IMFN toward developing: 1. An electronic directory, to support the promotion and marketing of model-forest-based products and enterprises; 2. A knowledge centre to develop and disseminate appropriate enterprise development material; 3. Training material and curricula, especially focusing on the needs of small scale resource harvesters and managers. These are priority areas for CNTR work and we look forward to increasing our links with the IMFN.

For more information about the Centre for Non Timber Resources please visit <http://cntr.royalroads.ca/>.

¹ The overall focus of Brian's work is on understanding and improving the role and potential of natural resources to meet development and environmental objectives. Brian joined Royal Roads University (RRU) as Director of the Centre for Non-Timber Resources (CNTR) in September 2007. Previously he was at the Centre for International Forestry Research (CIFOR) in Indonesia.

Strategic Initiative: the Canadian Model Forest Network and NTFPs

David Sutherland, Nova Forest Alliance, Canada

Assisting forest-based communities in their quest for sustainability has resulted in the Canadian Model Forest Network (CMFN) short-listing a number of Strategic Initiatives that have excellent future potential.

During a February 2008 conference in Winnipeg MB, CMFN members were tasked with identifying a suite of Strategic Initiatives (SIs) that were of primary importance to their members. Not surprisingly, non-timber forest products (NTFPs) was one of the chosen initiatives, and was championed by the Nova Forest Alliance (NFA).



Maple syrup, Nova Forest Alliance, Canada

During autumn 2008 the Centre for Non-Timber Resources (CNTR) in Victoria, British Columbia, was contracted to survey Canadian model forests and compile a report on the results. Directed by Darcy Mitchell at CNTR, the survey asked questions relating to past, present and future NTFP activities in each model forest. It also queried members about the challenges and opportunities they encountered, and what support was required by them to move ahead in their planning. The survey also searched for potential case studies that would help researchers better understand which approaches can be successful, including examples of NTFP marketing strategies, knowledge transfer programs and training requirements.

Surveyed members indicated that potential roles for the CMFN could include education and training, support for community NTFP enterprises, and serving as a hub for information and communication.

Most notably however, is the potential for CMFN connectivity with the International Model Forest Network in NTFP opportunities. The advanced state of NTFP activities in model forests around the world makes this relationship an obvious one, with exceptional potential for program traction and success. Collaborative projects could include a global e-directory of NTFP products and services, and an online NTFP knowledge centre.

The issue of sustainability, especially in regard to forest-dependent communities, is of particular importance to Canadian model forests. While many resource industries are in decline, new challenges have arisen that will demand unique approaches to sustainability. As has been proven in other parts of the world, non-timber forest products can be one effective and successful approach.

Honey Creating a Buzz in Cachapoal Model Forest

Luis Gianelli González, Cachapoal Model Forest Manager, Chile

Beekeeping has become a genuine alternative for small landowners to generate income in the Cachapoal Model Forest in Chile. With the support of public services that promote productive development, these landowners have organized and successfully established permanent commercial ties with the country's exporting industries, making honey a product of prime importance and significance for the region's rural family economy.

“ [P]ositive spin-off effects of beekeeping, such as creating value for the owners and the need to guarantee production, help conserve native flora. It will be a priority for the Cachapoal Model Forest and its stakeholders [then]...to concretely contribute to the preeminent task of conserving existing biodiversity in the area. ”

Among the state services that work with the producers and have contributed to consolidating the product include agencies such as the Instituto de Desarrollo Agropecuario (INDAP) [Agricultural Development Institute], the Fundación para la promoción y desarrollo de la mujer (PRODEMU) [Status of Women Foundation], the Fondo de Solidaridad e Inversión Social (FOSIS) [Fund for Solidarity and Social Investment], the Corporación Nacional Forestal (CONAF) [National Forests Corporation] and the municipalities of Doñihue, Coltauco and Las Cabras. These agencies have partnered with the Cachapoal Model Forest to increase its influence in the area and take advantage of the close ties the initiative has with the community. This alliance should enable significant progress in the overall task of developing the honey production field, which requires the Model Forest and honey producers address new production requirements and price fluctuations reflected in the instability of international markets.

Cachapoal Model Forest has primarily entered into the promotion of this activity by organizing women's groups for apiculture production, incorporating new technology with existing producers, encouraging the planting of native species, and supporting the development of initiatives that provide added value and create job opportunities in the sector, the most prominent being the production of monofloral honey, apitherapy and the extraction of propoleo, to name a few.



*Honey producers,
Cachapoal Model Forest, Chile*

At the same time, positive spin-off effects of beekeeping, such as creating value for the owners and the need to guarantee production, help conserve native flora. It will be a priority for the Cachapoal Model Forest and its stakeholders, not only to create incentives to increase the number of producers and effectively improving the quality of life of farmers, but also to concretely contribute to the preeminent task of conserving existing biodiversity in the area.

Reindeer Herding in Northern Sweden: A Fundamental NTFP

Per Sandström, Swedish University of Agricultural Sciences

Leif Jougda, Swedish Forest Agency

Karin Baer, Chief of Vilhelmina North Sámi village and President of Vilhelmina Model Forest

During the 1950's modern forest industry and practices reached Vilhelmina, a forest community in northern Sweden. Other extraction-based industries such as hydro power and mining were also established during this period, impacting traditional natural resource use. Today non-timber forest products, particularly those based on traditional use, are playing an increasingly important role for our local communities.

For example, the livelihood of the indigenous Sami people is based on a 1000-year-old tradition of reindeer husbandry. Entire Sámi villages still migrate with their more than 20,000 reindeer from the summer ranges in the western highlands to the winter ranges in the coniferous regions on the eastern coast. When the reindeer are slaughtered the entire reindeer is used for many different things based on ancient traditions. To make sure that the meat will not spoil, it is first salted, smoked, cooked or dried. The blood can be dried in the reindeer's stomach, to later be soaked and used to make blood potato dumplings (palt) or sausages. Threads are made from the tendons. The skins are used for cot bedding (kåta), for shoes and for clothing. Hoofs are cooked and eaten while knives and household goods can be made out of antlers.

Recently, forest management practices in old growth areas have reduced the supply of hanging lichen, an important source of food for reindeer during winter. Vilhelmina Model Forest was established in 2004 partly out of a pressing need to address the conflict between land managers and traditional Sami reindeer herding practices. As part of its activities, the Vilhelmina partnership is examining ways to maintain habitat linkages in migration areas, new thinning practices and other methods to reduce damage to hanging as well as ground lichen. The Sami have also partnered with indigenous Cree people of Canada's Prince Albert Model Forest to support and encourage traditional knowledge sharing through youth exchanges.

Vilhelmina is also working to increase market access for local, small NTFP enterprises, such as Wilma's Nature Products, a family-owned enterprise in the southern part of Lapland manufacturing natural products from the Model Forest. Their products are based on traditional, functional NTFPs now being reproduced in new variations. For example, "chewing resin"—a sort of chewing gum that goes back to ancient times—as well as a resin ointment, "Beckloja" (a tar oil) and Nordic Summer, two effective Scandinavian insect repellants.



*Reindeer herding,
Vilhelmina Model Forest,
Sweden*

A few statistics - Global harvest in 2004

Boletes = \$250 M
 Chanterelles = \$1.25 M
 Matsutake = \$500 M
 Morels = \$100 M

Annual harvest in British Columbia = \$54 M

In Quebec, in 2006 = 5 tonnes harvested
 in 2007 = 15 tonnes harvested
 Potential of at least \$10 M at Lac-Saint-Jean
 in 2006 = \$200,000 in morels

Potential of 100,000 to 200,000 jobs in Canada
 (Canadian Forest Service)

Chanterelle, horn of plenty,
 sweet tooth, morel...\$15/kilo
 King bolete and other bolete...\$12/kilo
 Lobster mushroom...\$11-\$13/kilo
 (prices paid by Gourmet Sauvage in Gaspé)

Community Forest Microbusiness: Mubala Oil

Patrice Pa'ah, Executive Secretary, Dja et Mpomo Model Forest, Cameroon

The Dja et Mpomo Model Forest (FOMOD in French) abounds with non-timber forest products—stalks of young shrubs, bark, roots, fruit, sap, leaves, flowers, pollen, nectar and more. The use of some of these products can require specific knowledge and cultural history. Yet, in general, there has been a loss in knowledge of the virtues of these NTFPs—some have been neglected while others have considerable importance in a traditional context, such as *Pentaclethra macrophylla*, a tree commonly called Mubala. The value of Mubala among small- and medium-sized enterprises in Nigeria in particular has been significant, becoming the number one NTFP sold there in one year. Its primary values relate to the considerable amount of essential vegetable oil extracted from the seeds while its oil meal is extremely nourishing for pigs.

“Due to its high potential and to current socioeconomic impacts seen elsewhere, FOMOD views Mubala as an NTFP with special significance to Model Forest stakeholders...”

Within Cameroon, and FOMOD specifically, Mubala has a very high capacity for benefit redistribution because of its abundance and ease of harvesting (it essentially involves collection). Due to its high potential and to current socio-economic impacts seen elsewhere, FOMOD views Mubala as an NTFP with special significance to Model Forest stakeholders and is working to evaluate the possibility of a Mubala oil and oil meal production microbusiness in the area.



Dja et Mpomo Model Forest, Cameroon

Harvesting Forest Gold

*Marie-France Gévry, biologist, and
Guillaume Roy, Communications Officer, Lac-Saint-Jean Model Forest, Canada*

The rainy summer of 2008 in Quebec did not bother everyone—forest mycology enthusiasts had a mountain of fungi for their palates. In this record year, research led by the Lac-Saint-Jean Model Forest (LSJMF) has proven one thing: the forest holds a small gold mine.

According to Marie-France Gévry, the biologist in charge of the resource inventory project in LSJMF's vast territory, "Approximately 10 fungi of gourmet value have a very high potential for commercialization in Lac-Saint-Jean. Observations made to date north of Lac-Saint-Jean indicate an abundance of potential habitats and a large variety of species, among other things."

In fact, the stands of mossy jack pine and black spruce have revealed average overall productivities of 33.85 kg/ha and 45.70 kg/ha, respectively, whereas 77.84 kg/ha of fungal biomass has been harvested in white pine stands, representing a potential that could reach more than \$500 a hectare in the best sites.

Generally, a harvester can expect to be paid between \$5 and \$12/kilo for gourmet value fungi when selling the harvest to a wholesaler, but the price can reach over \$20/kilo for other species. Harvesters can also sell directly to the consumer at a higher price, from which stems LSJMF's interest in creating a market niche in the form of a harvester's cooperative, a project that could be implemented later this year.

The LSJMF team is currently working on an identification guide that will facilitate the collection of species of interest in the forest. The team also collaborated with the Girardville Development Committee to find «black gold» in the depths of the boreal forest: the morel.

Given the current trend for Lac-Saint-Jean forest fungi, the LSJMF has noted that it was right to develop this abundant and diverse resource. Several training programs are being planned throughout the territory.



Morel mushrooms, Lac-Saint Jean Model Forest, Canada

Overview of NTFP Activity in Model Forests

Model Forest	NTFP Activity
Atlántida Model Forest, Honduras	Production, certification and marketing of local handicrafts
Araucarias del Alto Malleco Model Forest, Chile	Harvesting of mushrooms, araucaria nuts and a wild rose whose seeds produce an oil good for cellular regeneration
Cachapoal Model Forest, Chile	Production of honey in native soapbark plantations (Quillaja saponoria)
Chiloé Model Forest, Chile	Production of organic-fibre textiles
Chiquitano Model Forest, Bolivia	Production of almonds, oils, fruits, soaps and honey
Canadian Model Forest Network	National NTFP strategic initiative
Dja et Mpomo Model Forest, Cameroon	Organization of women's groups and micro-enterprises
Eastern Ontario Model Forest, Canada	FSC certified maple syrup production; Bioenergy
Futalefú Model Forest, Argentina	Development of wooden toys; Sustainable harvesting and marketing of mushrooms; Certified honey production
IMFN Secretariat	International NTFP initiative (e-directory)
Kodagu Model Forest, India	Promotion of bamboo cultivation
Komi Model Forest, Russia	Socio-economic research of non-timber product importance for the survival of populations in remote villages
Kovdozersky Model Forest, Russia	Mushrooms, berries, hunting and fishing
Lac-Saint-Jean-Model Forest, Canada	Inventory and collection of forest mushrooms, birch sap and blueberries
Margowitan Model Forest, Indonesia	Resin tapping
Model Forest of Newfoundland and Labrador, Canada	Establishing wood yards of domestic and commercial clients
Ngao Model Forest, Thailand	Sustainable management of wild bamboo forest; Handmade paper
Pandeiros Model Forest, Brazil	Production of charcoal from babaçu plant residue
Panguipulli Model Forest, Chile	Production of organic honey and honey by-products; Indigenous wooden handicrafts and textiles
Resources North, Canada	Regional profile of NTFPs
Tierras Adjuntas Model Forest, Puerto Rico	Establishment of a butterfly farm
Urbión Model Forest, Spain	Promotion of alternative energy sources (biofuels), hunting lodges and etho-cultural tourism; Support to local entrepreneurs
Vilhemina Model Forest, Sweden	Reindeer meat processing

For more information, please visit our activities and contacts databases at www.imfn.net



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