The Future of the Non-Timber Forest Product Industry

Luc C. Duchesne[1], Iain Davidson-Hunt[2], and John C. Zasada[3]

The boreal and northern forests of North America cover a vast area and have low population density with many inhabitants living in small communities. The inhabitants of these communities as well as those from urban areas are dependent on the forest resource for many commodity and non-commodity values. Although the socio-cultural outlook is changing somewhat, past and current development has been mainly geared toward the extraction of wood and fiber products and their manufacturing. Indeed, there is a rich history of gathering many plant materials for food, technological, medicinal, and spiritual values among the First Nations peoples and Europeans that migrated to and settled these lands. But commercial development of the non-timber forest products (NTFPs) industry, with a few exceptions (e.g., Christmas trees, blueberries, mushrooms), is in its infancy. The purpose of the first international conference on non-timber forest products in cold temperate and boreal forests was to bring together people from different walks of life and with varying views on NTFPs in this vast region that spans the entire continent from east to west and more than 25 degrees of latitude.

[1] *Research Scientist, Canadian Forest Service, 1219 Queen Street, Sault Ste. Marie, Ontario, Canada, P6A 5N7; Phone: 705-949-9461 ext. 2173; e-mail: luduches@nrcan.gc.can.*

[2] *Ph.D. Student, Natural Resources Institute, University of Manitoba, and a founding member, The Taiga Institute for Land, Culture and Economy, Suite A, 150 Main Street South, Kenora, Ontario, Canada, P9N 1S9; Phone: 807-468-9607; e-mail: dhunt@cc.UManitoba.CA.*

[3] *Project Leader and Research Forester, U.S. Department of Agriculture, Forest Service, North Central Research Station, 1831 Highway 169 E., Grand Rapids, Minnesota, 55744, USA; Phone: 218-326-7109; e-mail: jzasada@fs.fed.us.*

To our knowledge, this was the first widely publicized international forum to focus on the development of an NTFP industry in this northern region. Many people from a variety of organizations, e.g., universities, federal governments, First Nations organizations, and private enterprise helped to plan this conference and they each deserve credit for their efforts. Moreover, this conference was successful because of the insights, caliber, and charisma of the presenters and participants, along with everyone's willingness to share their valuable experience and expertise. Many participants made new friendships and found kindred spirits with whom to collaborate and move the NTFP industry forward.

The Kenora meeting illustrated the growing interest in the NTFP industry and its potential for socioeconomic development, biodiversity conservation, and the reinforcement of cultural identities. It also demonstrated the concerns of many from First Nations and other heritages about the fast-paced economic development that can occur with little account for traditional and personal use of NTFPs. Many entrepreneurs, academics, scientists, and policymakers have demonstrated that there is a growing NTFP industry worldwide. Speakers described how the NTFP industry is fueled by large international, national, and regional demands for NTFPs. Although this recognition is critical, it is also a cause for concern among those who have a more traditional view of NTFPs. This international forum demonstrated that cultural barriers that prevent the consumption of a particular NTFP at the local level may not exist in other countries. Although there is no doubt that development at the global scale is critical for the expansion of an economically viable industry, concerns for regional and local use must be seriously considered.

Although we are satisfied that our conference presented the growth potential of the NTFP industry at the global level, we are also mindful that the sustainability of this new industry, along with biodiversity conservation, depends

on various types of research and political efforts. History is replete with many examples of plants and animals that are commercially extinct because of overharvesting. In practice, the growing success of the NTFP industry may deplete natural stocks and reduce the sustainability of this resource. Therefore, promoters of the NTFP industry must recognize that they also carry the responsibility to preserve this natural resource. In this proceedings, several authors emphasized specific research needs dealing with domestication, ecological, and economic research that must be addressed. We advocate that such research activities be conducted now in support of the growing industry. Particularly, we wish to see research activities conducted at the international level.

Certification of NTFP is important and should also be undertaken and recognized at the international level. Certification has three roles. First, it must ensure that the harvesting of NTFPs is sustainable while biodiversity is conserved. NTFP harvesting is largely unregulated in temperate and northern ecosystems. As such, this situation may lead to difficulties in generating a sustainable harvest of products that are in high demand or are highly valued and may be conducive to losses of biodiversity at regional levels. Second, because many NTFPs are food products as well as medicines, consumers must be guaranteed that the NTFPs they consume are free of pesticides or environmental contaminants in a way that is similar to the organic certification of agricultural products. Certification will also be necessary for domesticated NTFPs that are grown in agricultural settings. Finally, certification must also address a concern for the socioeconomic status of the people who depend on NTFPs for their livelihood or for supplementing their income. During the conference we were challenged with the notion that by promoting the NTFP industry, we may be creating a new class of poorly paid migrant workers who spend backbreaking days harvesting in harsh conditions for the benefit of others. While we recognize that there is potential for this kind of labor malpractice, we see an exception in the current NTFP industry. In practice, there are several acceptable models for the development of an equitable NTFP industry, including the cooperative approach.

One important task to come is the creation of an NTFP culture that will support this industry as NTFPs start competing with mainstream consumer products. On the one hand, people in remote areas must be made aware that there are international markets for NTFPs that are found in their vicinity. For this, we need to diffuse this information in an acceptable format to potential entrepreneurs and harvesters and to present them with data showing the economic feasibility of NTFP harvesting and processing. As well, there is a strong need for societies at large to develop respect for the NTFP culture. In turn, such respect will elicit pride in a way of living that is often consistent with ancestral values, especially for Aboriginal people, but that has been neglected in favor of industrial and post-industrial cultural values. Also, NTFP harvesting is often seen as an activity conducted by entire families, and as such, can enhance family values.

Governments need to invest money in NTFP research to promote the NTFP industry. To date there has been little organized NTFP research, presumably because the bulk of the past research was conducted to target specific commercial needs and was supported by private agencies. In addition to the paucity of information about NTFPs, some valuable findings are held exclusively by private industries. Governments and their agencies should increase the level of funding to provide public research that is undertaken in cooperation with NTFP entrepreneurs and enterprises and that responds to the research topics they identify as priorities. The full-scale development of a sustainable NTFP industry requires several steps. The first step is to make entrepreneurs and governments alike understand the potentials of the NTFP industry. The next stage is to implement pilot studies that will demonstrate how NTFPs can be harvested and processed while generating adequate income. A third step involves conducting research on the domestication of NTFPs to create a sustainable industry. Representatives of large commercial buyers demonstrated that the supply of an NTFP often cannot meet the international demand for such a product. At times it will be necessary to domesticate certain species to meet commercial demand. However, local users of NTFPs often find that they are no longer able to find certain species due to both the pressures of commercial harvesting and/or habitat

conversion. These situations may not require the domestication of a product but may benefit from increasing the abundance of a product through semi-domestication or new cultural practices (e.g., "seeding a forest" - woods-grown ginseng in New Brunswick). Other people may prefer to look at the restoration of habitat or species so that they can continue their personal use of an NTFP.

First Nation participants spoke eloquently about their long relationship with the many inhabitants of the boreal and cold temperate forests. First Nation people reinforced their interest in defining an approach to NTFPs through specific pilot cases that would not focus solely on commercialization but could include a variety of topics of concern to different First Nations.

In summary, we present six recommendations for the development of the NTFP industry in the boreal and cold temperate forest regions:

1. **Increase the knowledge held by local, provincial/state, and national governments**, along with capital providers (i.e., private banks, public lenders, economical development agencies, etc.), about the potential and structure of the NTFP industry. In particular, stress how this potential can serve the residents of forest communities in socioeconomic development and as a means to address poverty and family issues.
2. **Governments and their agencies need to support forest communities, local institutions, and entrepreneurs in the research and development of NTFP opportunities.** Several NTFP entrepreneurs demonstrated that successful NTFP enterprises, cooperative or private, could emerge as successful small businesses based in forest communities.
3. **Governments should support local resource stewardship to ensure biodiversity conservation in accordance with the needs of forest communities and national and international laws.** As commercialization of NTFP occurs, it is imperative that NTFP enterprises are able to adequately monitor and assess the impact of harvest levels. This is an area where the cooperation between state agencies, local NTFP enterprises, and international buyers is critical to the success of a sustainable NTFP industry. Presenters from the United States Forest Service provided examples of research projects that focus on inventory and monitoring of NTFPs in cooperation with NTFP enterprises to ensure that harvests are sustainable. NTFP certification was also a possibility raised by the Forest Stewardship Council as an area that needs further clarification.
4. **Implement pilot studies** that will bring together public sector researchers, NTFP enterprises, and local institutions to facilitate the growth of sustainable NTFPs. As was made clear in this conference, too often NTFP studies are considerably weakened through a narrow treatment of marketable products or species biology. The development of the NTFP industry draws on several fields of expertise, so there is a need to integrate different types of information by dealing simultaneously with both the marketing (demand) and the ecology of NTFPs (supply).
5. **Investigate the domestication, semi-domestication, or restoration of NTFPs with significant commercial, or use value, for those species that are under harvest pressure or threat from habitat conversion.**
6. **Work cooperatively with First Nations** to investigate topics such as the use of plants in healing practices of First Nations; tenure; commercialization; threat analysis; restoration; domestication; education; natural and cultural heritage tourism and other issues identified by Aboriginal people and peoples for NTFPs.

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Contains a wide variety of papers given at the first international conference on non-timber forest products (NTFP) in cold temperate and boreal forests. Focuses on many facets of NTFPs: economics, society, biology, resource management, business development, and others.

KEY WORDS: Non-timber forest products, NTFP, traditional ecological knowledge, Aboriginal culture, forestry harvesting, use of northern forests.

Our job at the North Central Research Station is discovering and creating new knowledge and technology in the field of natural resources and conveying this information to the people who can use it. As a new generation of forests emerges in our region, managers are confronted with two unique challenges: (1) Dealing with the great diversity in composition, quality, and ownership of the forests, and (2) Reconciling the conflicting demands of the people who use them. Helping the forest manager meet these challenges while protecting the environment is what research at North Central is all about.