



“A Future Beneath the Trees: An International Symposium on Non-Timber Forest Products, Community Economic Development and Forest Conservation”



The Centre for Non-Timber Resources,
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Plenary Session Summaries

Session 1 Topic: *Production and Harvesting*

Speakers in this session explored key points around the production and harvesting of NTFPs including:

- characteristics of NTFP production and harvesting systems;
- similarities and differences in the production and harvesting among different products and regions;
- policies and institutional arrangements that have an impact on production and harvesting; and
- how issues in the production and harvesting of NTFPs affect their contribution to rural livelihoods and to forest conservation.

Characteristics of NTFP production and harvesting

World-wide, non-timber forest products (NTFPs) are harvested under a broad range of management regimens, ranging from strictly wild harvested to semi-domesticated, more intensively managed systems. Although in the North there is a tendency to view NTFPs as wild-harvested, in the South there is less of a strict delineation along the continuum from wild harvested (often but not always with minimal management) through to domestication or near domestication of selected species.

A number of speakers discussed the harvesting issues facing the industry including: poor harvesting methods (such as premature harvesting, over harvesting, poor post-harvest handling), outside encroachment, and the conversion of forest lands. Speakers described the roots of these problems as the lack of secure tenure for many harvesters, the lack of recognition of harvesting activities by forest managers, and fluctuating market demand. The result in some areas is an industry that is unsustainable in its current form, and threatened livelihoods for many harvesters.

Developing and disseminating knowledge

Harvesters and the knowledge they possess are clearly key to ensuring NTFP harvesting is sustainable. Although the importance of harvester knowledge has been recognized by some researchers and resource managers, there is still a need for a wider acceptance of the potential role harvesters can play in determining sustainable harvesting levels and plans, and a more consistent application of this knowledge in decision-making and planning for sustainable NTFP resource management. At the same time, speakers also recognized the importance of *external* knowledge if the potential of NTFPs for rural livelihoods is to be realized. Local harvesters may be unaware of 'new' potential products or potentially superior markets for products they already harvest, or new tools for managing these resources. Improving the communication between harvesters and other experts has the potential to make important contributions to resource management, and to help increase the economic benefits of NTFP harvesting for local communities.

Another issue facing the sector is that in many jurisdictions, little, if any, information is systematically collected on harvesting levels for either commercial or subsistence purposes. A more systematic approach to collecting this information and making it accessible to researchers and others is one of the keys to more effective management of all forest resources, including NTFPs. More information is required on ecosystems (site and stand characteristics) as well as the ecosystem requirements for specific species; this information is critical if we hope to be able to predict the presence and abundance of key species and eventually relate these predictions to product quality.

Access and rights

Much as the tenure regimes under which NTFPs are harvested vary widely, so do the terms under which harvesters access these resources. In many areas, harvester access to NTFP resources is by no means secure. Over the long-term, secure access and tenure rights to NTFPs appear to be extremely important factors in the ability – and interest – of harvesters to invest in and properly manage these resources.

In some areas, Aboriginal people are the original users of NTFPs with a long history of continuous use and management of these resources. NTFPs also often play key roles in the subsistence, cultural, and trading practices of Aboriginal people. The rights of Aboriginal people to manage, use, and benefit from these resources is an important consideration in planning development interventions around these resources; the same consideration should be provided to other local communities where NTFPs play a similarly important role.

The influence of the market

Accessing markets – or accessing markets that pay better prices for product – is almost a universal concern of producers. In general, there is also a perception that market intermediaries are taking excessive profits at the expense of producers. Local harvesters face many barriers in accessing markets, among them understanding and assessing potential markets, an inability to tolerate risk, and the challenge of being able to provide consistent supplies that meet market demands. The questions faced by producers often relate less to resource availability, and more to whether or not they can meet the requirements of an often demanding and dynamic market.

Wild harvesting versus more intensive production systems

The perception or reality that other production systems are more productive, profitable or dependable than wild harvesting have led to pressures to shift to more intensive production systems such as agriculture. Research to make the case that NTFP production – at least under some circumstances – may be the best use of forest lands is lacking, limiting the ability of proponents to argue for the retention or, at minimum, compatible management of forest lands for NTFP harvesting. Presenters and commentators suggested there is a need for more research – following on the work of CIFOR in the South and the CNTR in North America (adapted from CIFOR's methodology) – to determine under what conditions NTFP harvesting is the 'best use' or at least an appropriate complementary use on forest lands.

There is also a perception among some forest resource managers and others that shifting the production of NTFPs from wild harvesting to domesticated production may be desirable because intensive production is perceived as being more profitable with fewer impacts on wild populations. However, this view can be challenged on a number of points. Not all NTFPs may readily lend themselves to domestication, nor is the potential ‘simplification’ of forest ecosystems a desirable result if domestication leads to increased forest clearance. For a variety of reasons – including perceptions of traditional roles dividing harvesters from farmers, as well as access to the necessary capital, land and other resources – harvesters can be left out of the equation in the move towards new production systems.

Not all species will be sustainable under a wild-harvesting regime. It will be essential to carefully assess the resource base and potential harvesting impacts before promoting expanded harvesting of a specific NTFP.

Policy issues, forestry practices and risk

Policies for NTFP management are often only as effective as the institutions in place to implement them. Community-based management approaches show potential; this approach can be based on ‘traditional’ management systems, but much depends on the strength of the traditional customs in a community. The level of community ‘empowerment’ related to NTFP development may have a significant influence on the degree to which a community directly benefits from these initiatives. Policy interventions can turn into a double-edged sword for communities, with the imposition of fees and enforcement mechanisms potentially providing fertile ground for corruption and increased inequity. The risks involved in NTFP development – economic, cultural, political, and environmental – must be understood and to the extent possible, planned for, if effective mitigating policies are to be developed.

Speakers agreed that the standard perception of forests – at least within the industrial forestry paradigm – as sources of fibre needs to evolve towards a more holistic view where NTFPs are fully integrated into forest management practices. Forestry practices i.e., those that involve thinning or opening up the canopy, can play a positive role in enhancing the growth and diversity of some NTFP resources. On the other hand, inappropriate practices can lead to negative impacts on production. By integrating NTFPs more fully into forest management, including timber harvest planning, silviculture, and forest protection strategies, there is a greater likelihood that potentially negative impacts on the resource can be minimized, while the quality and quantity of NTFPs can be enhanced.

As stated earlier, subsistence and cultural uses of these resources are very important for many communities, and care must be taken to minimize negative impacts on non-commercial uses during the development process. Similarly, moving NTFP production into cultivated systems is also not without risk. Those groups previously involved in harvesting and sale may not be the same groups to benefit from a shift towards cultivation, and may in fact be hurt by the process.

Presenters were unanimous in acknowledging the risks involved in promoting the commercial production of NTFPs with the goal of benefiting forest-based communities. However, in the face of poverty, inequality, and environmental degradation, doing nothing also presents risks. It is to be hoped that a clearer understanding of the potential ecological, cultural, political, and economic risks involved will not discourage future attempts, but will instead help in designing strategies for mitigating these risks and ensuring the benefits of NTFP development accrue to forest communities.

Session 2 Topic: *Processing, Marketing and Trade*

Speakers in this session explored key points around the processing, marketing and trade of NTFPs including:

- the characteristics of the processing, marketing and trade systems for NTFPs;
- the similarities and differences in processing, marketing and trade among different products and regions;
- the policies and institutional arrangements that influence the processing, marketing and trade of NTFPs; and
- how issues in processing, marketing and trade of NTFPs affect their contribution to rural livelihoods and to forest conservation.

Characteristics of processing, marketing and trade of NTFPs

Much of the processing of NTFPs occurs at a relatively small-scale, ‘cottage’ level. Although small-scale processing has clearly provided benefits for local people, speakers suggested there is a need for greater collective action at the rural level to more effectively – and beneficially – link rural operators with the market. Shared processing facilities may provide an option for small-scale producers to access technology that would otherwise be unavailable or unaffordable. Emerging technologies such as cell phones and e-mail that are becoming more accessible and common in rural areas could also play an important role in helping small producers link with markets.

One conceptual model for NTFP development proposes a path from expansion in production, to stabilization and then decline as NTFPs move into cultivation or are ‘substituted’ for by less costly/more easily obtained alternatives. Although this path has been followed by some products, it does not appear to reflect the situation for all, nor is it necessarily inevitable. However, it is clear that as the structure of processing and marketing systems change, there can be a significant shift in who derives the benefits from the sale of NTFPs.

Marketing channels for these products are diverse and in some cases, complex. A clear understanding of the commodity chain for specific NTFPs is important if we are to understand where interventions to benefit harvesters would be most successful and productive. The structure of the market may be such that the higher levels in the chain capture the majority of the benefits. The need to accurately trace the commodity chain will likely increase as factors such as certification (products and harvesters), labelling, safety issues, and fair trade increase in importance. Instead of being a burden, these

requirements may help to build the markets for these products in the future. They may also help with moving towards a more sustainable sector if certification requires the incorporation of sustainable harvesting practices and long-term monitoring of the resource.

Common “bottlenecks” in the processing, marketing, and trade of NTFPs include a lack of pricing information and the low bargaining capacity of collectors of NTFPs. Suggested solutions include building the capacity of local-level producers, grading after collection to improve quality, and secondary processing by collector groups or associations.

Capacity-building and awareness-raising

Training is a key requirement if the industry is to be sustainable over the long-term, and if it is to live up to its potential to provide benefits to rural communities. Training and awareness-raising is not just required for industry members, but at all levels, including foresters and policy-makers. Along with the initial training, follow-up training and support is of key importance to the long-term success of small-scale NTFP entrepreneurs. Community-based training is essential if community members most in need are to benefit from training opportunities.

As was raised during session one, the recognition and empowerment of local communities in decision-making on NTFP management and development may be of considerable importance to the success of interventions aimed at providing local-level benefits. The key role of communities in the NTFP development process needs to be recognized by policy-makers and other resource managers. The development or support of community associations may be a useful strategy for ensuring both community participation and the long-term viability of initiatives. Interventions are also required to ensure women can participate fully in decision-making and in sharing the benefits of NTFP development. NTFP harvesting and sale may be one of the few income-generating opportunities for women, and there was a consensus among session participants that there is room to expand the participation of women in the sector.

Objectives

Speakers argued there is a need to both clarify objectives and understand the potential long-term ramifications of interventions in the sector. What starts off as a poverty alleviation program may end up leaving the poor behind as commercialization continues. There may be a rationale for focusing on local and regional markets to help benefits stay local and to help stabilize local economies; in many cases, as resources have become more developed the majority of benefits have flowed outside the community or to national elites.

Speakers stressed the importance of having a long-term vision when it comes to developing the market. The reality of the situation is that NTFP supplies are typically inconsistent and the markets themselves quite dynamic. The long-term vision for market development must reflect these realities.

Defining the sector

Finally, definitions in the sector can be problematic; i.e., what exactly is a NTFP? Definitions determine what is covered under what legislation, and also how and what information is collected. Along with a clear definition, understanding the *value* of these resources is important though not easily obtained given the unregulated, unrecognized, and sometimes ‘hidden’ or underground nature of the trade in NTFPs. A clear understanding of what exactly these resources are and their value, provides better tools for decision-making on their development and management.

Session 3 Topic: *Backward and Forward Linkages – Tropical and Sub-tropical Regions*

Speakers in this session explored issues in tropical and sub-tropical regions surrounding the backward and forward linkages from the production to consumption of NTFPs. More specifically, presentations focused on:

- how linkages backward from markets influence processing or production of NTFPs with respect to *livelihoods*;
- how linkages backward from markets influence processing or production with respect to *conservation*;
- how linkages forward from production influence processing or markets with respect to *livelihoods*; and
- how linkages forward from production influence processing or markets with respect to *conservation*.

The impact of the market on livelihoods and conservation goals

Fluctuations in price for the end product can reduce or increase pressure on the resource. For example, price instability for *Garcinia gummi-gatta* an important NTFP in India, was caused by an unstable international export market due to health concerns about the use of *Garcinia*-derived products in Europe and the USA. Health warnings caused a steep drop in price, leading to a decrease in household income but a significant increase in the quantity of material collected. Pressures to increase the volume of material harvested can have significant negative impacts on forest conservation.

In cases where the demand and/or price factors lead to increased harvesting pressure, the result in open access forests can be inappropriate harvesting (i.e., of immature fruit) or over-harvesting. Where access is assured – as is generally the case on private forest land – harvesting may be more sustainable as the same pressures do not exist to obtain product ahead of competing harvesters. Access and tenure issues appear to have a strong influence on both producer income and resource sustainability.

The long commodity chains that exist for many NTFPs often act to absorb many of the profits (which would otherwise be available to producers), and may have a detrimental effect when the end product can be readily substituted. Large numbers of middlemen, long transportation distances, and an unstable infrastructure can also have a negative impact on the livelihoods of small-scale NTFP producers. In general, local-level producers have an inadequate understanding of the demands of international markets which puts them at a disadvantage in terms of reaping the most benefit from NTFP production.

Technological change, i.e., mechanization, can have significant impacts on the labour force, depending obviously on their location in the production to consumption system. Mechanization may lead to labour being displaced, while different groups (i.e., local elites) benefit from the process of technological change. Policy interventions (see below) may be required to ensure technological change benefits rather than hurts small-scale producers. As noted in the previous session, emerging technologies (i.e., cell phones and e-mail) may play a positive role in helping small producers link with markets.

The role of policy and external support

The process of decentralization in forestry policy is a global phenomenon. This process provides an opportunity for reshaping and developing local institutions, as well as providing a check and balance on State systems of forest management. It is crucial that the impact and effectiveness of these policy changes is monitored over time. Does decentralization lead to more cost effective and equitable policies that are more effective in terms of forest management and conservation?

If the sector is to provide conservation and economic benefits over the long-term, external (including government) support, intervention, and investment will be crucial. It is highly unlikely that marginalized forest communities on their own will be able to institute the changes required to develop a sustainable, equitable sector. Along with state agencies, non-governmental organizations (NGOs) have an important role to play in industry development. Speakers suggested that NGOs play a catalytic or facilitating role in sector development, but only over the short-term; the public sector will likely need to step in to provide support over the medium to long-term.

Partnerships between various stakeholders are important if positive “backwards and forwards” linkages in NTFP development are to be achieved. Achieving these linkages requires partnerships with local level institutions, a conducive policy environment, agencies/institutions that provide support, and, perhaps most importantly, facilitating organizations to bring stakeholders together and resources to bear on the challenge of NTFP development.

Seeking models that work

As was stressed in earlier sessions, being very clear on the objectives of any planned interventions in the sector – and understanding the potential ramifications – is crucial to creating positive benefits for communities. The process of commercialization can undermine the needs of subsistence users and their interests must be protected. If the objectives of commercialization are to benefit the poorest members of society, research suggests that the entrepreneurial corporate model of development is unlikely to be the best approach. There is a need to consider the options and impacts of the various potential models (e.g. corporate, NGO driven, private-corporate partnerships) in terms of sustainability, equity and profit, to determine what is appropriate in which situation. It is also imperative to look at methods for taking local successes and ‘scaling up’ to broaden the impacts and reach of successful programs.

Using participatory methods to involve communities in NTFP management and development appears to be critical in ensuring sustainability as well as financial and social benefits for the community. Working through a participatory process will lead to a diversity of solutions that reflect the diversity of the situations. This process may be time-consuming and ‘messy’ but appears to hold the greatest promise for developing solutions that are more stable, more equitable, and more sustainable both socially and biologically. Similarly, there should be an exchange between local knowledge and scientific knowledge, even though in practice this may not be a simple process.

Ultimately, the entire management system – the ecological, socio-cultural, and political-economic – must be brought together to manage NTFPs sustainably. In the past, the focus has often been on ecological considerations with political/economic considerations as the driver; the socio-cultural area on the other hand, tended to be neglected. Although less easily ‘measured’ and more challenging to incorporate into initiatives, socio-cultural factors play as key a role as any in ensuring the success of NTFP development programs. It also seems clear that to have any hope of meeting the objectives of forest conservation and improved livelihoods, we need to ensure benefits flow to those who most depend on forest resources to meet a broad range of needs.

Session 4 Topic: *Backward and Forward Linkages – Temperate and Boreal Regions*

Speakers in this session explored issues surrounding the backward and forward linkages from the production to consumption of NTFPs in temperate and boreal regions. The same key questions were explored in this session as were explored in session three, but with a focus on backward and forward linkages in the temperate and boreal regions.

Presentations in session four focused on:

- how linkages backward from markets influence processing or production of NTFPs with respect to *livelihoods*;
- how linkages backward from markets influence processing or production with respect to *conservation*;
- how linkages forward from production influence processing or markets with respect to *livelihoods*; and
- how linkages forward from production influence processing or markets with respect to *conservation*.

Contribution to livelihoods

Although generally of less relative importance to over-all livelihoods than is the case in tropical and sub-tropical regions, NTFPs still make an important contribution to income in some communities in temperate and boreal regions. These resources may also create new opportunities in communities where few opportunities exist to generate income. Companies seeking resources (market pull factors) may establish new enterprises in communities where little knowledge previously existed of NTFP opportunities. Although in some cases NTFPs may be the dominant or only source of income, more often they will be a supplemental source of income and/or income that can be obtained during ‘off-periods’ for other activities (i.e., fishing, farming).

For many Aboriginal people, the resources we describe as ‘NTFPs’ are of key importance both for subsistence and as a part of their culture. To maintain their traditional practices and connections to the land, many First Nations have a strong desire to pass on traditional knowledge to their young people. It is imperative that any move to commercialize resources does not negatively impact traditional practices but instead looks for opportunities to maintain and even encourage the continued pursuit of traditional practices based on NTFPs.

Knowledge needs and gaps

As is true in other regions, the difficulty in finding accurate, up-to-date information on harvesting levels, trends, pricing history, participant profiles, etc. presents numerous challenges for the development and management of these resources. Collecting this information can also be challenging given the general reluctance of industry participants to provide it; many fear government agencies will use this information to regulate and restrict access to the resource, as well as a basis for capturing revenue from the sector. A better understanding of the sector would form a stronger basis for targeted interventions in the market chain, including options for value-added activities and the development of appropriate business models to support livelihood and conservation objectives.

As has been stated for previous sessions, education and training are critical at all levels of the sector (e.g. harvesting, marketing, processing, etc.), as is awareness-raising for government, resource managers, and other forest stakeholders. For producers, better communication throughout the commodity chain could lead to new product development as well as new access to markets for existing products. As is the case in other areas, understanding the market and its requirements presents challenges for producers in temperate/boreal regions. Some methods of production (e.g. organic, fair trade, certified salvage, Indigenous producers) may themselves enable access to higher-value markets.

Although still in their early stages, inventory methods are beginning to be developed for NTFPs. Inventories are important for the sustainable management of these resources over the long-term, and as the basis for investments in NTFP-based business development.

Managing for multiple values

Forest management in temperate and boreal regions to date has largely focused on ‘timber management’ often to the detriment of other resources of the forest, including NTFPs. Although some NTFP development is compatible with industrial forestry, other opportunities are negatively effected over the medium to long-term with little recognition of the interests of harvesters utilizing NTFPs for traditional or commercial reasons. More recently, interest is growing in the development of compatible management options for timber, NTFPs and other forest resources. Certification and the need for recognition of other interests has played a role, as has a growing recognition that local community interests in forest management may diverge from those of the large timber companies. Companies are beginning to recognize that managing for multiple values may have only limited negative impacts on their own operations, while providing an opportunity to build positive relationships with local communities. However, a strong potential still exists for conflict where either sector perceives that the activities of the other will have a negative impact on their own ability to pursue their business interests.

Local level rights and responsibilities for resources could lay the basis for investment in business development and value-added activities as well as the design of a sustainable resource management program. Through the use of harvesting permits, the level of harvesting can be tracked to provide inputs into management plans. Permits can play different roles, i.e., to control harvesting levels, or to generate income for resource rights holders. As with other objectives, it is important to be clear on what the permitting process is designed to do, and develop the system accordingly.

Investments in NTFPs

Speakers expressed the view that government has a supporting role to play in the development of the industry. Where the government derives revenues from NTFPs – and this is not the case in a number of jurisdictions – these funds should be re-invested in the sector. Funds could be allocated to sustainable management activities as well as on capacity-building initiatives for harvesters and other stakeholders.

Although NTFP harvesting in temperate and boreal regions remains a predominantly small-scale or commodity-driven (raw material) activity, the potential exists to invest more capital and effort in developing a higher-value business model for selected products. Some products need larger and more complex business models to be a viable opportunity. Investment in infrastructure, marketing, and larger-scale production would help selected products ‘get into the mainstream’ as part of a recognized industry.

What the sector clearly lacks is the networks that are a feature of many other resource sectors. Not only does the industry generally fail to see itself as an industry, but there is a lack of trust that pervades parts of the sector, which acts to greatly limit effective communication and collective action among stakeholders. Building trust – not a simple process – appears to be an important prerequisite in improving the returns from, and sustainability of, NTFP development. There is also a need to build networks and cooperation among the different players involved to ensure the interests of the sector are not over-shadowed. There are a number of potential models under which the sector can develop. More research is required to determine which model – entrepreneurial corporate, community-cooperative, etc. – is the most appropriate under the varying and often unique conditions at play in the NTFP sector.

Session 5 Topic: *Linkages from Production to Consumption and Across Local to Global Scales*

Speakers in this session explored issues surrounding the backward and forward linkages from the production to consumption of NTFPs. More specifically, presentations focused on:

- general conclusions about NTFP production to consumption systems and their economic, social and environmental implications;
- the role of institutions and policies on the impact of NTFPs on rural livelihoods and forest conservation; and
- the changes to institutions and policies that would enhance the social, economic and environmental contribution of NTFPs.

General conclusions about NTFP Production to Consumption systems

Speakers noted some general characteristics of the NTFP sector. Approximately 80% of enterprises in the sector have less than 10 employees and are characterized by:

1. low visibility;
2. ease of displacement (low entry/exit barriers);
3. low capital (in terms of access to, requirements, and retention in enterprise);
4. heavy reliance on casual hiring; and
5. in some areas, a relatively high frequency of unreported income.

The role of institutions and policies

Speakers noted that many development programs are focused on the formal economy (i.e., the number of 'jobs' created) while the reality for the NTFP sector is that most activities occur as part of the informal economy. With less participation in the formal sector, the NTFP industry runs the risk of being 'left out' of policy discussions.

Institutions and policies relating to the NTFP sector need to reflect the current realities of the industry, including full consideration of the economic and social-cultural context. Currently, 50 to 85% of households in North America are engaged in some form and level of participation in the informal economy; other jurisdictions will likely have even higher levels. Evidence suggests that the informal economy is firmly entrenched and growing, and is not necessarily a negative feature for the economy (as one speaker put it "... (participation) in the informal economy does not equal poverty"). Session participants suggested that instead of trying to fit or force the NTFP sector more firmly into the formal economy (and possibly overly constraining it), there was a need to explore options to 'upgrade' the informal NTFP economy without inhibiting its operation. A concern was expressed that attempts to formalize the sector may adversely affect the existing and potential economic and social/cultural benefits of the NTFP industry.

What might an upgrading of the sector look like? A program of incentives could be used to help enterprises develop and become more efficient. Many harvesters don't earn enough money from these activities to even reach the lowest tax bracket; perhaps some form of tax break – over a set phase-in period – would be a useful incentive for small and medium enterprises to enter and contribute to the formal sector. There could also be reduced fees for business licences and possibly some relaxing of the health codes that make sense for a specific scale and operating needs of the business. Although not something that could be mandated, sector participants could be encouraged and supported to form associations, networks, or some form of collective entity that might serve to enhance their power in the market place and in negotiations with other stakeholders.

Finally, with a move towards a higher level of formalization for the sector could come the development of a more sophisticated market for these products. Certification in some form or another holds promise for the marketing of NTFPs, and in any case, is likely to become a more dominant feature of the marketplace for these and other products over the medium to long-term. Certification may involve assurances of quality, environmental sustainability, social equity, or all of these and more. Participants in the session suggested we need to learn to 'tell the story' of these resources including where they are from and who harvested them.