Commercialisation of Non-Timber Forest Products: What Determines Success?

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Commercialisation of non-timber forest products (NTFPs) has been widely promoted as an approach to rural development in tropical forest areas. However, donor investments in the development of NTFP resources have often failed to deliver the expected benefits in terms of poverty alleviation and improved conservation of natural resources. This briefing paper discusses different conceptions of what constitutes successful commercialisation and examines the key factors that influence the outcome of NTFP commercialisation initiatives.

Policy Conclusions

Useful government-level interventions to promote successful NTFP commercialisation include:

- Rural livelihood support policies which go beyond a narrow focus on one product or sector and support NTFP activities as part of a diversified livelihood strategy;
- Clarification of the legal and regulatory frameworks governing NTFP commercialisation, and the institutional delivery structures;
- Promotion of local regulatory mechanisms for resource access and management, which may be the most effective in ensuring equitable access to NTFPs and sustainable supplies.
- Recognition of the commercial potential of NTFP enterprises and support to credit provision that is accessible to the rural poor and small-scale entrepreneurs;
- Policy interventions which improve access to education and information, thereby increasing opportunities for more people to take on an entrepreneurial role;
- General improvements to transport and communications infrastructure that will facilitate market access.

Key options for direct assistance to communities by government, NGOs or private sector include:

- Enhancing community organisation to increase the market power of NTFP producers and processors and decrease their vulnerability to external shocks;
- Provision of opportunities for greater involvement of women in NTFP activities that accommodate the constraints of traditional domestic duties;
- Building the business capacity of potential entrepreneurs;
- Provision of technical know-how and organisational skills to ensure sustainable resource management and harvesting, domestication where appropriate, and product processing.
- Support for collaboration between producer communities and the development of mechanisms (e.g. certification) which value the origin and identity of the product.

Introduction: Why the interest in NTFP commercialisation?

Brought to public attention by Ben and Jerry’s rainforest crunch ice cream and the Body Shop’s range of exotic moisturisers, non-timber forest products have – for the last two decades – been widely promoted as a contribution to the sustainable development of tropical forest resources (de Beer and McDermott, 1989; Nepstad and Schwartzman, 1992; Arnold and Ruiz Pérez, 1998)*. This interest is based on earlier perceptions that forest exploitation for NTFPs can be more benign than for timber (Myers, 1988), together with a growing recognition of the subsistence and income generation contribution made by many NTFPs to rural livelihoods (Ruiz Pérez et al, 2004). Within the context of new international commitments to address rural poverty, such as the United Nations Millennium Development Goals, NTFP commercialisation is recognised as having the potential to achieve dual conservation and development goals by increasing the value of forest resources to local communities (Wollenberg and Ingles, 1998; Neumann and Hirsch, 2000).

Reviews of experience gained during the past 15 years indicate that approaches to NTFP commercialisation have not been universally successful, neither fulfilling expectations of local income generation nor leading to improved conservation of resources (Godoy and Bawa, 1993; Sheil and Wunder, 2002). This has led to calls for further research to determine the circumstances under which NTFP commercialisation might indeed meet the objectives of contributing to improving the livelihoods of the rural poor at the same time as ensuring the sustainable management of forest resources.

This briefing paper presents the findings of the CEPFOR project (Commercialisation of non-timber forest products in Mexico and Bolivia: factors influencing success), a multi-disciplinary research initiative involving partners drawn from the UK, Mexico and Bolivia. Between 2000 and 2005, the CEPFOR project investigated the structure and functioning of 16 different NTFP value chains and assessed their impact on poverty reduction, women’s livelihoods, natural resources, and the rights and access of the poor to these resources. In this brief, we begin by defining an NTFP value chain and the many ways in which it can be considered successful, highlight the main

* Note we use NTFP in the usual sense of plant NTFPs rather than animal NTFPs, which have rather different characteristics.
impacts of commercialisation on the poor and on the resource, and illustrate the key factors underpinning success.

How do you assess commercialisation? Introducing value chains

A value chain describes the range of activities required to bring a product from the producer to the consumer, emphasising the value that is realised and how it is communicated. The terms ‘supply’ or ‘marketing chain’ and ‘production-to-consumption system’ are also used. NTFP value chains may include a number of different activities from harvesting of the wild resource to cultivation of the resource, various degrees of processing, storage and accumulation of the product at different points in the chain, transport, marketing (identifying and developing good market niches) and sale.

In addition there are more tangential but no less critical activities which form part of value chains, such as information gathering and provision, and capacity building. It would be a misconception to think of value chains as simple linear sequences of activities. This is only true of the shortest chains, in which single harvesters sell directly to individual consumers. Most value chains more closely resemble networks in which many of the activities, such as storage and transport, are repeated several times by different people and at different locations before the final product reaches the end-consumer. This intricacy greatly complicates the analysis. However, the fact that the same raw material may be sold through a range of different value chains (see Box 1) enables comparison of some of the key factors underpinning success.

What is the definition of ‘success’ in NTFP commercialisation?

There has been very little discussion about what constitutes success with respect to NTFP commercialisation (Marshall et al, 2003) – yet an understanding of how people define success under different circumstances is an essential prerequisite for the development of appropriate policy interventions. Traders, for example, may be interested primarily in profit margins, whereas producers also cite compatibility with other livelihood activities, or involvement of rural women in income generating activities. Broadly speaking, value chains can be successful in terms of:

- Volumes or values traded via different routes and incomes generated – both overall as a contribution to local and national economies, and for the individual actors concerned;
- Governance of the chain – the rules governing the relationships (preferably transparent) between different actors and the sharing of benefits (preferably equitable) between them;
- Sustainability of the chain, or the ability to deliver a consistent supply to meet demand over the long term.

Box 1: Wild mushroom value chains in Oaxaca, Mexico (After Rushton et al, 2004)

Neighbouring communities in Oaxaca, Mexico collect and sell a range of mushrooms. Some collect fresh mushrooms and sell them to a trader at Oaxaca market or to a community-based trader with a temporary stall at Oaxaca market. San Antonio Cuajimoloyas is part of a group of communities, which owns a drying facility, which sells dried mushrooms to the national market. Santa Martha Latuvi has access to Matsutake mushrooms which are exported fresh, via an entrepreneur, to consumers in Japan.
Aspects of success: Impacts of commercialisation on the poor

The importance of NTFPs in sustaining people's livelihoods is widely accepted (Falconer, 1990; Scoones et al, 1992) and is one of the two main driving forces behind donor support to NTFP commercialisation initiatives, the other being resource conservation. The increasing focus of development policy on poverty reduction has, however, brought with it a need for unequivocal evidence about whether and how much NTFP commercialisation can contribute to poverty reduction (Wunder, 2001; Arnold, 2002).

NTFP activities are often considered to be attractive to resource-poor people, and particularly women, despite the fact that they are characteristically labour intensive, because they generally have low technical entry requirements, can provide instant cash in times of need and the resource is often freely accessible (Neumann and Hirsch, 2000). Paradoxically, it has been suggested that the same characteristics that make NTFP activities attractive to poor people also make them economically inferior activities (Angelsen and Wunder, 2003). Not only do they yield low returns and offer little prospect for accumulating sufficient capital assets to escape poverty, but the arduous nature of the work may mean that people will not engage in them if there are alternatives. Likewise, they may be vulnerable to substitution by cheaper synthetic or industrial alternatives, and ease of entry may lead to excessive competition and inability to generate a surplus from production and sale. This has led to NTFP activities being labelled a potential 'poverty trap' that keeps people in chronic poverty. The CEPFOR project found no such poverty traps, but did distinguish three types of NTFP activity with respect to poverty reduction:

- ‘Safety nets’ prevent people from falling into greater poverty by reducing their vulnerability to risk. They are particularly important in times of crisis and unusual need, with many families only engaging in NTFP activities when subsistence agriculture or cash crops fail, or when illness hits the family. It is particularly true of products that are available all year round because, as one Bolivian incense collector explained: ‘the knowledge that incense is available to be harvested and traded acts as a guarantee that, no matter what, some income can be earned’.
- ‘Gap-filling’ NTFP activities provide an income that is supplementary to more important farm and off-farm income-generating activities. These activities are carried out on a regular basis, often in the non-agricultural season and contribute between 7 and 95% of cash income to the household. The proportion of income contributed depends on the seasonal availability of the product (those that are available for longer periods of time often contribute more to the household economy) and on the other economic opportunities available to families. Although many NTFP-based activities generate only small amounts of income, the timing of this income may increase its relative importance (Box 2). They play a key role in income-spreading and generally make poverty more bearable through improved nutrition or higher income but do not necessarily make people less poor.
- ‘Stepping stone’ activities help to make people less poor. Ruiz Pérez et al (2004) suggest that it is only in areas that are well integrated into the cash economy that some NTFP producers are able to pursue a ‘specialised’ strategy in which the NTFP contributes more than 50 per cent of total household income and collectors and producers tend to be better off than their peers. In the CEPFOR cases, no single NTFP activity could be classed as a ‘stepping stone’. Nevertheless, depending on the degree of intensity with which a household engaged in them, several activities

Box 2: Combining NTFPs with other activities in Bolivia and Mexico

A characteristic of all the products studied is their ability to be combined with other livelihood activities. For producers, the NTFP must fit in well with the agricultural cycle and not require them to choose between alternative activities. Soyate palm fibre, for example, is plaited into long strips by community members in Guerrero, Mexico, at the same time as they go about their other activities. If carried out on its own, the returns to labour would be so low as to make it not worthwhile. In Oaxaca, Mexico, collection of Camedora palm fronds, which are available all year round, occurs predominantly in the April dry season and again in August-September, when there is little agricultural activity, and peaks in October to provide money for the Day of the Dead celebrations. Some NTFPs combine with each other. In Bolivia, for example, the relatively rare incense is collected on special expeditions which would not be worthwhile if it were not for the assured availability of the more common resin, copal. In addition, incense collectors may also benefit from these expeditions to hunt wildlife for food.

For traders, the NTFP must complement other products being traded in terms of seasonality or be of sufficiently high value to warrant sole trading. Fresh mushrooms, for example, are only available for two months and are taken to market by a trader who travels to town every week to sell the bread that she makes and other farm produce that she buys from households in the community. In one Bolivian community, organic cocoa beans and dried fish are bought by the same traders, with cocoa dominating from December to February when dried fish is not available. This case also illustrates the risk associated with combinable activities, namely that NTFP activities may be dependent on their ‘partner’ activities for success. Thus the cocoa trade is both dependent on the dried fish trade and vulnerable to any changes that may occur in it.
Innovation typically occurs as a response to: shocks and a great ability to adapt to changing contexts. Traders showing a remarkable degree of resilience to external shocks and a great ability to adapt to changing contexts. Even some of the shortest value chains were found to be highly dynamic, with producers, processors and traders showing a remarkable degree of resilience to external shocks and a great ability to adapt to changing contexts. Even some of the shortest value chains were found to be highly dynamic, with producers, processors and traders showing a remarkable degree of resilience to external shocks and a great ability to adapt to changing contexts.

Successful commercialisation: At what cost to the resource? Early interest in NTFPs was encouraged by the belief that NTFP commercialisation that added sufficient value to forest products could contribute to forest conservation (Nepstad and Schwartzman, 1992). However, baseline ecological data on many NTFP species is limited and other areas critical to sustainable management remain poorly understood, including harvesting techniques, sustainable yields and monitoring (Shanley et al., 2002).

Homma’s (1992) widely cited theory proposes that increasing commercialisation will inevitably result in overexploitation of the wild population and this was indeed the initial outcome of increased commercialisation in 75% of the CEPFOR cases. Homma proposes two possible scenarios: domestication or synthesis/substitution of the product. Domestication involves cultivation, and was found in 45% of the CEPFOR cases. It typically occurs where land is held privately and where plants are easily propagated, as in two cases in Oaxaca, Mexico: the bromeliad, pita, from which a fine thread is produced, and the Camedora palm, which provides leaves for the floral industry. Domestication consists predominantly of planting seeds or seedlings from the wild with the aim of establishing a resource closer to home rather than improving its quality. Cultivation on an industrial scale can put small-scale producers at a disadvantage. Such substitution has occurred for two of the products studied – wild rubber and wild cocoa – both of which have been forced into a speciality niche by large scale plantation production, as well as petroleum-derived synthesis in the case of rubber. A third possible scenario resulting from resource depletion is improved resource management, which was found in 35% of the case studies. In the case of mushrooms, for example, an improved understanding of the biology of the fungi has led the communities to institute a land-use zoning system in which part of their forest is designated for NTFP harvesting, particularly of mushrooms, and protected from destructive activities such as timber extraction. Harvesters are also trained in best-practice collection methods. In the case of Maguey, a member of the Agave family, enrichment planting has helped communities in Guerrero, Mexico, to sustain production of their traditional alcohol, Mezcal. The existence of indigenous knowledge about the resource can be an important factor in ensuring sustainable NTFP extraction.

Factors promoting success

Key factor 1: Innovation

Innovation enables producers and traders to deal with risk and vulnerability, and overcome key constraints to NTFP commercialisation. Even some of the shortest value chains were found to be highly dynamic, with producers, processors and traders showing a remarkable degree of resilience to external shocks and a great ability to adapt to changing contexts. Innovation typically occurs as a response to:

(a) Resource scarcity. This can lead to innovation in improved resource management and/or domestication (as in the examples above). Both activities can be initiated by communities themselves, but benefit from external provision of ecological knowledge and organisational support.

(b) Market competition. Depending on the kind of competition, value chains can be upgraded or improved in different ways (Kaplinsky and Morris, 2001):

• Process upgrading increases the efficiency of production processes within or between stages of the value chain. It typically includes accumulation of larger quantities of the product, the introduction of new technology (e.g. improved fermentation for cocoa beans), and decisions by traders to reduce transport costs by combining NTFP trade with that of other products;
• Product upgrading – or the improvement of product quality and the introduction of new products – is particularly common among NTFP value chains, e.g. jipi japa weavers who produce a range of new products for the tourist market (Box 3). Improving product quality can provide access to a more specialised market niche and protect against substitution;
• Functional upgrading involves changing the mix of activities carried out within a value chain or by an individual actor, e.g. a cooperative of producers may take on new roles of credit provision, capacity building and marketing;
• Chain upgrading means moving to a new value chain, as occurred in the case of the dried mushroom chain, which is a new venture for a community with an existing

Box 3. Jipi Japa artefacts – support for indigenous women by a socially minded entrepreneur

The company Rural Art was established by a social entrepreneur in Santa Cruz, Bolivia, with the aim of helping local people by selling a range of handicrafts made by different underprivileged groups in the company’s shops around the country. An associated NGO specifically supports indigenous people from the Santa Cruz region in an attempt to counter the high proportion of bilateral aid that has been directed at immigrants from the altiplano. To this end, Rural Art has established and supports an association of women weavers of jipi japa palm fibre from several indigenous communities, providing them with training to supply its tourist shops with artefacts woven to specified designs and qualities.

Association members see the concentration of market power in the hands of Rural Art as being mostly positive. Benefits include higher prices paid for goods, a social fund that pays health bills, and a rotating fund that occasionally provides financial capital for investments. In addition, affiliation with Rural Art helps weavers overcome market barriers: through the organisation, their products reach otherwise inaccessible tourist markets that are demanding in terms of quality but pay higher prices. Trade is direct and in the form of cash for all the communities, but Rural Art defers some of the payment for merchandise, placing it into a compulsory savings account. A proportion of each seller’s profit is held back for health services and year-end gifts for the members.

For women weavers, this is a rare opportunity to earn a cash income and provides them with increased confidence and status within the community.
Key Factor 2: Collaboration

Community-level organisation was important in 60% of the CEPFOR cases, though fewer than 15% had achieved real horizontal integration with all producers (or processors) working together. NTFP activities are often taken on by other organisations in a community (e.g. water committees, women’s groups, church groups). The existence of traditional knowledge of a product (and the resource), as well as of marketing other agricultural products, can be very important in determining a community’s interest and capacity to successfully commercialise an NTFP. Activities often follow a similar path:

- Initial focus on ensuring quantity and quality of product meets trader requirements;
- Depending on the constraints, focus on resource management, processing and/or arranging for more cost-effective transport;
- Finally, work on improving relationships (or negotiating power) with traders.

Many community-based producer organisations also provide additional benefits by contributing funds to community projects.

Key Factor 3: Entrepreneurs

Entrepreneurs or intermediaries are undoubtedly the most maligned actors in the value chain, frequently accused of exploiting producers. Yet, one or more entrepreneurs were key to establishing or sustaining almost every one of the CEPFOR value chains (te Velde et al, in press). Typically entrepreneurs are private individuals acting as intermediary traders, but they may also be presidents of producer associations or NGO staff members. Their essential roles are to achieve one or more of the following:

- Bridge information gaps – lack of market information (on price, quality and quantity) is the key barrier for poor people to enter the NTFP trade: many producers have little idea of the ultimate destination of the products they sell;
- Identify new market niches – this role is best played by people who have a foot in both the producer and the consumer environment. Thus, export of fresh Matsutake mushrooms to Japan was initiated by a Mexican of Japanese descent, while community members who have moved to the capital, La Paz, are the key go-betweens in the Bolivian incense trade;
- Provide training and information to ensure product quality, and to help organise communities. Some entrepreneurs have social motives (see Box 3) and wish to help particular groups of people in addition to achieving commercial success;
- Help gain physical access to markets;
- Advance capital to ensure consistent product supply. Access to credit is almost non-existent for most rural NTFP producers so traders may also provide credit to cover the costs of inputs.

There is always a concern that intermediaries may exploit their position of power, leading – in the worst case – to debt peonage, as in the well-documented case of wild rubber harvesters in the Brazilian Amazon (Schwartzmann, 1992). But this was not evident in any of the CEPFOR cases. Nevertheless, the ability to negotiate prices and define the rules of trade, is vital in determining the satisfaction levels of poor producers, processors and traders in NTFP value chains.

Key factor 4: A conducive legislative and policy environment

In Bolivia, as in many other countries, there is very little policy or legislation specific to NTFPs. In Mexico, there is over-regulation with NTFPs mentioned in a great many different laws. Both scenarios lead to confusion about which laws apply and who is responsible for implementing them. Therefore producers in the informal sector, where much NTFP trade takes place, rarely consider the legislative and policy context to be a great constraint. Nevertheless, communities are often obliged to remain in the informal sector because they lack the capacity to fulfil the legal requirements for formal-sector NTFP commercialisation. In Mexico, for example, harvesting permits for some products, like wild mushrooms which are on the national protected species list, require environmental impact assessments that are beyond the technical or financial reach of small-scale producers. This is also true of certification schemes for specialty (e.g. organic or community-traded) products. These were only in place for three of the CEPFOR products although they could equally have applied to all the other products studied. NGO support can be important to overcome such constraints, particularly if it is coordinated with relevant government programmes, such as grants or subsidies for specific permit or certification requirements. Some non-sector specific policies have an important role to play in improving informal sector NTFP trade. Thus, better transport and communications infrastructure are essential for facilitating access to markets and market information, while higher education levels increase opportunities for more people to take on entrepreneurial roles. In the formal sector, which particularly concerns internationally traded products, a major constraint for exporters is the paperwork required, including phytosanitary certification – for which easily measurable standards have yet to be defined for many NTFPs.

Conclusion

NTFP commercialisation can be defined as being successful if it is a transparent, equitable and sustainable activity that has a positive impact on poverty reduction, gender equality and resource access, tenure and management. This may seem a tall order but it is achievable, as demonstrated by several of the CEPFOR case studies. It is more likely if producers and/or processors collaborate with one another and with socially-minded entrepreneurs, if there is a realisation of the need for continuous innovation, and if there is external support to enable producers and traders overcome various barriers to entry including legislative constraints, inconsistent quality and quantity of products and lack of market information.

References


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The book on which this briefing is based can be downloaded from the project website: www.unep-wcmc.org/forest/ntfp, together with other project outputs including a decision-support tool and user guide, a methods manual for field/market based research, and reports on the individual products investigated in this study.

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