

CERTIFICATION OF NON-TIMBER FOREST PRODUCTS: POTENTIAL PATHWAY TOWARD BALANCING ECONOMIC AND ENVIRONMENTAL GOALS IN SOUTHWEST CHINA

Marco Stark¹, Dong Min², Horst Weyerhaeuser³ and Yang Yongping⁴

- 1: Center for Mountain Ecosystem Studies, c/o Kunming Institute of Botany, 3/F Library and Documentation Building, Heilongtan, Kunming, Yunnan 650204, China, Tel: +86 - (0)871 - 5223052, Fax: +86 - (0)871 - 5216350, Email: m.stark@mail.kib.ac.cn;
2: School of Natural Resources, Southwest Forestry College, Bailongsi, Kunming, Yunnan 650224, China;
3: World Agroforestry Center, ICRAF-China Beijing office, Beijing 100081, China;
4: Kunming Institute of Botany, Heilongtan, Kunming, Yunnan 650204, China.

ABSTRACT

Non-timber forest products, or NTFPs, have attracted considerable interest as a component of sustainable development initiatives in recent years due to their ability to support and improve rural livelihoods while contributing to environmental objectives, including biodiversity conservation. However, systematic understanding of the role and potential of NTFPs in conservation and development remains weak and it has been realized that the utilization of NTFPs requires certain measures of planning and control to be sustainable. While domestication is one way to reduce pressure on the natural resource, certification may provide another option to ensure that wild collection is maintained at a sustainable level. Certification can offer collectors higher prices to compensate for lower harvest levels and help them to secure user rights. This paper discusses in detail the potential and challenges of organic, ecological and Fairtrade certification schemes toward balancing poverty reduction and biodiversity conservation goals in China's Southwestern mountain regions.

Keywords: biodiversity, certification, China, Fairtrade, Forest Stewardship Council, non-timber forest products, Yunnan.

1 INTRODUCTION

Products from natural and planted forests play an important role in the household economy, especially in the more remote mountain areas of Southwest China that lack other business opportunities. With the enforcement of a strict logging ban in 2000 on all natural forests and the gradual conversion of land above 25 degrees of slope from annual into tree crops under the *Sloping Land Conversion Program*, many upland communities have lost a significant income source (from timber). Many upland households have substituted this loss by intensifying the collection of NTFPs from natural and planted forests which has led to a severe decline of some products and, thus, poses an increasing threat to biodiversity. As most collectors of NTFPs lack basic market knowledge and rely on traders to buy their produce, they only earn a small income from NTFPs.

Domestication of NTFPs can be a way to intensify production (through higher yields, improved and/or more consistent quality, and control over timing of harvest), secure producer rights and reduce pressure on wild resources. Its risks are that domestication of

products originally harvested from the wild can lead to genetic homogenization, reduce the economic value of wild systems (up to the point where natural forest land is being cleared to grow domesticated NTFPs on a larger scale) and lead to transfer of benefits from one group of stakeholders to another (Belcher, 2003).

Another potential solution that could benefit and bridge economic and environmental goals is product certification under organic, Fairtrade or sustainable forest management schemes. NTFPs that can be dried, further processed and stored, such as nuts, medicinal plants and mushrooms for example, may be particularly suited since distance to markets poses a serious logistical challenge. At present, the relatively wealthier consumers of certified products are only found in the big cities in the East of the country or abroad.

The objectives of this paper are to present initial development initiatives conducted by the *Center for Mountain Ecosystem Studies* related to the natural resource "NTFP" in mountainous Southwest China. More specifically, the paper evaluates and discusses the potential and constraints of certification for the sustainable management of NTFPs and for improving incomes among some of the poorest upland communities in China.

2 TOWARD IMPROVED NTFP MANAGEMENT IN NORTHWEST YUNNAN

The *Kunming Institute of Botany* (KIB), China's leading institution in the fields of biodiversity and ethno-botany in China, has recently intensified its applied research in partnership with the World Agroforestry Center (ICRAF) through its jointly managed *Center for Mountain Ecosystem Studies* (CMES). The two most important on-going research and development projects of CMES related to NTFP are presented and discussed below. These and the initiatives described in Section 3 represent promising opportunities to successfully address the need for improving rural incomes while maintaining the natural resource base in typical poor upland communities in Southwest China.

Domestication of non-timber forest products: reducing pressure on natural resources

One strategy to reduce pressure on NTFP resources in their natural environment and create more income opportunities for farmers is domesticating them, i.e. growing them on-farm. The *Center for Mountain Ecosystem Studies* has pursued this option together with the *Department of Forestry* in Baoshan prefecture, Northwest Yunnan. An initial participatory survey of potential NTFP in 2003 in the project site, in Yangliu township (Longyang District, 98° 50' eastern longitudes, 25° 15' northern latitude; elevation range: 1500 – 2500 m above sea level) – one of the poorest villages in Yunnan - identified seven valuable medicinal plants species that local farmers were interested to try growing on their land, recently converted to tree crops under the *Sloping Land Conversion Program* (SLCP). Agricultural land converted in China under the SLCP to tree crops (mainly peach and walnut trees) are prohibited from being used for growing annual crops, even during the early establishment stage of the trees when there is ample space between them. To compensate for the income loss farmers receive payment for each hectare of land converted to trees, for up to 8 years. However, medicinal plants are not classified as annual crops and can thus be grown in-between the trees. It is commonly observed that trees in similar agroforestry system benefit from the more intensive land management (weeding, fertilizer application to crops) compared to leaving the land fallow (and simply slashing the weeds).

Starting from spring 2004, six farmer households (all living in the same village) participated in this action research and tried growing the medicinal plants on a total area of

2 ha. Since collection of medicinal plants from wild resource is the responsibility of women, also the action research was done by the female members of the participating households. They intercropped the medicinal plants with the existing young pear and walnut trees and applied mineral fertilizer. After 18 months most species were ready for harvesting.

Initial experience has shown that some medicinal plants have a high potential for domestication and that a major constraint is lack of knowledge among farmers in the management of growing medicinal plants on-farm. Only one species, *Dipsacus daliensis* whose root is commonly used in Chinese medicine, performed well. However, due to the exceptionally good growing conditions (no competition and fertile soil) roots were bigger than commonly found in the market and traders were concerned that these would not sell as well as average-sized roots since buyers might doubt the identity of the species.

As an outcome of the first 18 months of this action research, only three species (*Dipsacus daliensis*, *Foeniculi fructus* and *Pinellia ternata*) are now being tested on-farm by about 40 interested households in two villages (on about 5 ha of land) and the *Forestry Department* pays special attention to working with farmers on improving the management of the crop. Based on the findings from the first phase of the action research the time from planting to harvesting of *D. daliensis* for example, is now being reduced to one year. It is interesting to note that the male household members have also become involved in growing medicinal plants on-farm now, since it is turning out to become a more profitable farming enterprise than simply collecting plants from the wild.

The approach of this action research has also been extended to other parts of mountainous Yunnan. So has CMES started to cooperate with the extension staff of *Southwest Forestry College* in promoting the growing of medicinal plants on SLCP land more widely.

The domestication of wild plant resources requires an iterative process of action research and basic scientific studies. Now that the first medicinal plants have been earmarked as performing well when grown on-farm, as a next step their active chemical ingredients need to be quantified and compared to those plant specimens growing in the wild. If this analysis confirms that the quality of the plants growing on-farm is satisfactory, production on farmers' fields can be confidently promoted. Conducting inventories of wild resources over time will be needed to confirm the claim that domestication is reducing pressure on the natural resource base and, thus, supports biodiversity conservation. Impact of domestication on market prices need to be examined as well.

However, since domestication of medicinal plants and other NTFP is not applicable for the majority of species, equal importance need to be placed on the development of sustainable wild collection systems. Certification of wild collection can be an option to provide incentives for conservation and sustainable use and can strengthen local economies. Yet, the rich diversity of NTFP species (among the group of medicinal plants alone) and complex ecological interactions, make certification of wild resources a far more challenging endeavor than the certification of agricultural crops (see also: <http://www.floraweb.de/map-pro> for more information on this aspect).

The base for improving market access: commodity chain analysis

While agricultural crops have been well researched and promoted by the Chinese government and international research organizations worldwide, non-timber forest products have not yet received the attention they deserve. A better understanding of their value in the household economy as well as in domestic and international markets (including regional cross-border trade) and is needed to demonstrate their importance for rural incomes and

sustainable resource management. Under this premise a Master study is currently being conducted at CMES that focuses on commodity chain analysis of selected commercially important non-timber forest products collected and harvested in two townships in Baoshan prefecture, namely Yangliu and Shuizhai townships. Both townships represent typical upland situations in Southwest China: while the former has little forest area left and large parts of the sloping land has been converted to tree crops under the *Sloping Land Conversion Program*, the latter has a forest cover of more than 80 % in some of its mountain villages (some of which has been planted more than 30 years ago) and thus relatively rich non-timber forest resources.

Objectives of this research are to: (i) identify those NTFPs that are currently the most important commodities for farmers / collectors in Yangliu and Shuizhai or have a high potential to become important commodities in these communities; (ii) document details of the commodity chain from producer to customer for selected NTFPs; and (iii) identify opportunities and associated strategies for improving rural communities' benefits from NTFP management, harvest, processing and marketing while preventing an over-use of the resource base.

The underlying research hypothesis is that a thorough understanding of the commodity chain of NTFPs – from producer/collector, trader and processor up to retailer and consumer – is an essential base for strategic development interventions at the local level as well as a crucial source for sound policy recommendations. Findings of the research will feed into CMES' development efforts to place rural producers/collectors and village-based traders in a better market position and build the base for jointly developing sustainable collection/production methods with the communities. The study uses key informant interviews as the major tool. Target respondents are the main producers/collectors, traders/wholesalers, processors and retailers of the most important NTFPs from the study area, as well as local government staff. Interviews are complemented by the collection of secondary data from government offices, such as information on trade, export and relevant legislation.

Initial results have ...

- **Confirmed the importance of non-timber forest products** in terms of cash income for the majority of smallholder households, as well as the steady market demand for all surveyed products.

In the poorer villages (in Yangliu township), medicinal plants - mostly collected by women and commonly gathered far from the villages (up to four hours walk) - constitute a key income source for most households who can derive up to 75 % of their annual cash income from this activity. Walnuts and pine-nuts (most of which have been planted) are increasingly adding to household income as more of the planted trees start bearing fruits. A single large walnut tree (more than 20 years old) can provide as much as twice the annual average per capita income (of about 105 US \$).

A significant contribution to household income in the wealthier villages (in Shuizhai township) comes from the collection of high-value forest mushrooms, such as the Matsutake mushroom (*Tricholoma matsutake*) that is largely exported to Japan and truffle (*Tuber sinensis*) chiefly sold to Europe. A single household can earn up to ten times the average annual per capita income from collecting and selling Matsutake mushrooms. While most households have access to truffle growing areas (within and outside their own village boundaries), access to

Matsutake is restricted to a smaller number of households, those who have the use rights over the forest parcels where the mushroom can be found.

- **Identified over-harvesting as a threat to biodiversity conservation** and to the sustained supply of NTFPs as a source of cash income. Collectors and traders observed a steady decline for a range of medicinal plant species, resulting in their increased value on the market. While for medicinal plants and truffles it is a resource with free access to everyone (i.e. without any control of over-harvesting), the case is different for Matsutake mushroom. Communal forest areas are subdivided and each household in the village has the use rights to a certain piece of the forest. In those forest parcels where the valuable Matsutake mushroom grows users guard the area well during harvesting time and do not collect the young mushrooms since they fetch a lower price from the trader. The high value of this particular NTFP has made it clear to users that a decline or complete loss of this resource would harm their household economy and an informal system of sustainable management has evolved (through privatized control over the resource).
- **Documented major constraints to maximizing income benefits from NTFP.** In general, producers and collectors do not have access to market knowledge (such as demand and price) and sell their produce individually to local (i.e. from within the village) or outside traders. At least, there are a number of traders for each product and individual households have a certain bargaining power, especially for high value products (such as Matsutake mushroom). The lack of a local production and marketing organization, however, also means that there is no processing (value adding) at the village level. Another issue is that the planting of tree crops, such as pear and walnut (resulting from heavy government promotion), is not based on well-founded knowledge of market development for the products. The large number of mature pear trees have in recent years already lead to an over-supply of fruits on local markets and a decline of prices, to the extent that fruits are not harvested. With the large number of walnut trees planted in recent years it remains to be seen whether an over-supply will result in drop-off in prices in six to eight years from now as well.
- **Pointed to some opportunities and needs for intervention, such as:** (i) building capacity among community members to access market knowledge and explore joint marketing and processing initiatives; (ii) investigating the potential benefits of group certification under organic, Fairtrade or sustainable forest management schemes to access alternative (so-called “niche”) markets and maintain valuable and ecologically important NTFP resources; (iii) building capacity within forestry extension services to promote the planting of a wider range of tree species (based on a thorough survey of market demand and prediction of future market developments) and sound management systems (including domestication of selected NTFP, such as medicinal plants); and (iv) making NTFPs more visible, i.e. draw government attention to the many important commodities that have not yet entered official statistics due to a lack of clear classification and challenges in conducting inventories and in monitoring home-use and informal trade; this would form the basis for improving legislation on sustainable management and the equitable share of revenues from NTFP resources.

Concurrently with the commodity chain analysis described above, CMES has started working with government and NGO partners to build capacity among facilitators (extension

staff and community development workers) and farmer leaders to engage communities in Southwest China in more professional marketing initiatives. Improved quality management and group certification (for organic and Fairtrade labeling) have been key topics in related training activities and workshops (see Section 3 below).

As the applied research and development initiatives initiated by CMES and presented above have identified certification as a potential option for improving upland economies and contributing to sustainable natural resource use, the Center has taken up this topic and is currently exploring this option jointly with other institutions in China. The following Section discusses these initiatives and the associated benefits and challenges in more detail.

3 CERTIFICATION INITIATIVES IN SOUTHWEST CHINA TARGETING SMALLHOLDER FARMERS: POTENTIAL AND CHALLENGES

Certified organic agricultural production began in China around 1990, after the *Rural Ecosystems Division of the Nanjing Institute of Environmental Sciences* (now the *Organic Food Development Center of China* [OFDC] under the *State Environmental Protection Administration*) became China's first member of the *International Federation of International Agricultural Movements* (IFOAM) in late 1988. Since then, organic food production in China has grown rapidly, mainly driven by demand from overseas markets in Europe, Japan and the USA. In recent years demand for organic products on the domestic market is increasing, as the wealthy middle class in China is rapidly growing (mainly in the big cities in the East of the country) and consumers are increasingly becoming aware of the health benefits of eating organic food. China's first supermarket for organic products has opened in 2005 in Shanghai.

Aside from the Chinese certification agencies, namely the Organic Food Development Center of China (OFDC; under the State Environmental Protection Administration) and the China Organic Food Certification Center (COFCC; under the Ministry of Agriculture), a number of international certifiers are now present in China (such as OCIA, ECOCERT, BCS, IMO, JONA and OMIC). The certification of farms growing crops for the overseas organic market by international certifiers has started in 1995.

Unlike in many other countries, where farmers were the drivers behind organic agriculture movements (at least during the early development stage), organic food production initiatives in China were originally organized and managed by the government (state firms). While the government has moved away from direct ownership and private firms have taken over now, smaller companies and smallholder farmers in poorer and remote areas - such as those in mountainous Southwest China - will need more government support to overcome constraints to participation in the growing organic food market in China and abroad. Even today, farmers are not the primary force behind the growth in organic production, but trading companies. These typically initiate, provide technical advice, organize needed input supply, and take care of processing and marketing. This mode of operation also prevails in poorer regions and in wild collection areas. Most of the certified organic wild collection of food and medicinal plant resources is managed / controlled by a few large companies that typically also are engaged in managing a number of organic farms.

The following sections report of three on-going innovative strategies that specifically address the needs related to certification of smallholder producers and collectors of non-timber forest products and that have a direct bearing on biodiversity conservation. These few examples draw a clear picture of the scale of the challenge that most mountain farmers and the supporters of such smallholder initiatives are currently facing.

Creating more opportunities for smallholder producers of organic food products

In 2005, CMES, the *BioFach China Project* and the *Organic Food Development Center of China* (OFDC) have started their cooperation based on the assumption that the development of domestic marketing and distribution business of organic agricultural and non-timber forest products contributes to the improvement of the socio-economic situation of smallholder mountain farmers in Southwest China. Joint capacity building initiatives have specifically targeted smallholder producers and collectors of wild resources and have supported building capacity among communities and development organizations to strengthen related local initiatives, as well as raising awareness among Chinese consumers regarding the benefits of organic food production and Fairtrade.

The *BioFach China Project* is a public-private partnership project coordinated by the *Nuernberg Global Fairs* with support from and in coordination with the *Deutsche Investitions- und Entwicklungsgesellschaft* (DEG, under the KfW banking group) and accompanied by the *International Federation of Organic Agriculture Movements* (IFOAM) as the patron of *BioFach Fair*, the leading annual international product fair for certified organic products. The *BioFach China Project* aims to contribute to the domestic market development for organic and natural products in China. It does this through policy advice, establishing networks for dialogue and exchange, trainings for all actors in the commodity chain, market development, and raising public awareness. *BioFach China* offers an educational program, including a number of training seminars with agricultural producers, private companies and organizations as well as information seminars with consumers. *BioFach China* will also connect the Chinese organic sector with the international markets using the other *BioFach* events in Germany, Japan, United States and Brazil to promote the Chinese organic industry. The first *BioFach-China* conference will be conducted in December 2006 and a yearly annual *BioFach-China* product fair from mid 2007.

Two training seminars for smallholder groups and supporting organizations have been jointly realized by CMES, *BioFach-China* and OFDC, and a third one is under preparation for early 2007.

The first seminar & workshop provided a platform for people from various fields and professions (i.e. research/academe, government, business, NGO sectors) currently involved in promoting or doing organic farming and Fairtrade to exchange views and ideas on opportunities and key challenges in Southwest China. It is obvious from the facts presented and discussed that organic farming and Fairtrade have a great potential in China. Key challenges, especially in the Southwest of China where mountain farmers cultivated remote hilly lands of relatively low productivity (compared to the lowland areas in the middle and east of the country) are: (i) access to knowledge (e.g. in production technology, processing and marketing), (ii) access to markets, and (iii) cost of certification (including those associated with complying to certification requirements). The seminar-workshop also confirmed that organic food production by smallholder farmers (in contrast to large-scale farm enterprises and state-owned farms in the middle and eastern part of the country that largely produce for the export market), and more so Fairtrade, is still a relatively new concept in China. This is especially true for provinces in the southwestern part of the country.

The focus of the second training was based on the conclusion from the first seminar: community facilitators, extension workers and local community/farmer group leaders need more knowledge on the specific requirements rural producer groups need to follow and the skills they need to attain to engage more professionally in the production and marketing of

their farm or non-timber forest produce. Quality awareness, internal control systems and smallholder group certification were key topics during the training. Participants were staff members of government agencies, non-governmental organizations, research institutions, certification agencies and the private business sector directly involved in supporting or collaborating with rural communities.

The IFOAM manual for setting up internal control systems, or ICS, in the context of smallholder group certification has been translated to Chinese language and used for the seminars. In addition the topic "Poverty alleviation and organic agriculture" has been presented during several events in 2005/2006. In December 2006, the topic will be presented during the first *BioFach China* Conference in Shanghai jointly by CMES and OFDC in order to create more awareness and to bring interested companies in contact with small farmer initiatives. One of the core experiences is that no functioning and successful organic smallholder project is existing in China right now. The third training may, therefore, target a small number of facilitators from government extension offices, NGO staff, as well as staff of certifying agencies who are directly responsible and committed to supporting smallholder groups successfully produce and market their products.

While certification under national and international organic labeling schemes has been the major focus of this joint initiative, also alternative ways of marketing agricultural and non-timber forest products on the Chinese market will be explored in the future. Alternative modes to market organic products could be those that forego the need to obtain the label of an accredited certifier (and thus, reduce cost and probably time) by building consumer trust, i.e. develop localized direct-marketing schemes and promote products under a unique brand name. This may build on successful examples in other parts of China, such as Hongkong, and abroad (e.g. Thailand).

Emerging Fairtrade initiatives in China

Unlike certified organic production, Fairtrade certification is a relatively recent concept that contributes to sustainable development by supporting better trading conditions for small-scale farmers in the developing world. Higher prices paid by consumers (mainly) in developed countries for a product that has been produced according to Fairtrade standards means more income for producers and development support for their entire community.

Fairtrade Labelling Organizations International (FLO) is the leading Fairtrade standard setting and certification body. FLO was established in 1997 and is an association of 20 Labelling Initiatives worldwide that promote and market the Fairtrade label in their countries. FLO members currently operate in 15 European countries as well as Australia and New Zealand, Canada, Japan, Mexico and the United States. At present, FLO regularly inspects and certifies about 508 producer organizations in more than 50 countries in Africa, Asia and Latin America. The major strategic intent of FLO is (i) to deliberately work with marginalized producers and workers in order to help them move from a position of vulnerability to security and economic self-sufficiency; (ii) to empower producers and workers as stakeholders in their own organizations; and (iii) to actively play a wider role in the global arena to achieve greater equity in international trade. (URL: www.fairtrade.net)

In China, only two pilot Fairtrade projects exist so far, but many more producer groups have approached FLO to participate in the scheme. Discussions are currently underway at FLO how to best deals with the growing interest from China. Concerns are that FLO may need to work with and train an established certifier (for organic products for example) that has been accredited by the China National Certification and Accreditation Administration and whether all parts of the standards, especially for hired labor in plantations, could be fulfilled in China.

As with organic certification, the motivation to start a Fairtrade producer group has come from a company interested to explore this market niche for Chinese tea. There is no awareness at farmers' level about the existence of a market for Fairtrade products. The export company assisted producers to form an association and develop more technical, managerial and organizational skills. Through the annual inspections and resulting recommendations for improvement given by FLO the tea associations has made great progress in terms of embracing and applying all principles of Fairtrade and their communities have benefited greatly from the extra money (Premium) received from the sale of their FLO-certified tea overseas.

As the two tea associations have been FLO certified since 2002 and have made great progress and demonstrated that the Premium money can have a big positive impact on community development, it may be time for scaling up the concept in China. This will need initiative from FLO to communicate with the Chinese government or an accredited certification agency in the country to increase the scope of operation, as well as support for raising awareness among producers and consumers about the principles and benefits of Fairtrade.

The first seminar organized by CMES, *BioFach-China* and OFDC has already raised considerable interest among NGO groups in Southwest China to know more about the concept and discuss it with the communities they work with. Recently CMES has also been approached by the *Western Academy of Beijing*, an International School, to jointly promote Fairtrade in China's capital.

Sustainable forest and NTFP management: Forest Stewardship Council certification

The Forest Stewardship Council (FSC) is an international network whose mission is to promote environmentally appropriate, socially beneficial, and economically viable management of the world's forest. It provides a system for different stakeholders interested in forest issues to work towards responsible forest management. Through the FSC system, the forest owners, managers, forest product manufacturers, local communities, non-governmental organizations and other interest groups are given equal access and voice. In short: "*FSC brings people together to find solutions to the problems created by bad forestry practices and to reward good forest management*". (URL: www.fsc.org)

In 2001, WWF-China helped establish the *National Working Group on Forest Certification* with 28 representatives from the government, NGOs, enterprises, media, research institutions and trade organizations. The main task of the *FSC Working Group* is to put forward strategies for forest certification development in China. A draft version of *Chinese Forest Certification Standard* has since been completed, and a review is in process to ensure it satisfies the requirements of national laws, regulations and policies, while also meeting *Forest Stewardship Council* requirements. (URL: <http://www.forestandtradeasia.org/guidance/China/English/7/20/>). The *FSC China National Initiative* was launched in March 2006.

FSC certification can include non-timber forest resources as well (the most widely-known is Brazil nut). All NTFPs that bear the FSC logo must come from fully FSC certified forests and the management system must be evaluated for each NTFP. However, even though the *NTFP Working Group* of FSC has been attempting to put NTFP certification into practice since 1996, experience with the certification of NTFPs is still relatively small. Ecological, economic and social impacts related to controlled harvesting of the large variety of plant species in complex eco-systems and to adding value to these natural (formerly in most cases free-for-all) resource is still not well-understood. In many countries, land tenure

or long-term land use rights complicate the issue. That FSC-certified NTFPs command a price premium in the market is also not yet proven for the majority of products.

The *Center for Mountain Ecosystem Studies* is currently discussing with *WWF-China* and FSC to start a pilot project on community-managed forest and NTFPs in Southwest China. So far, only forest plantations have been granted FSC certification in the country. Presumably the Matsutake mushroom that is harvested by the community from the community-owned pine forest may fetch higher prices in Japan, once it bears the FSC label. This, and the opportunities for other products (such a walnut, truffle, medicinal plants, etc.) to increase in value through FSC or any other certification, will need to be confirmed through further research.

The new initiatives started in Southwest China, as presented above (Section 2 and 3), are hoped for providing directions and alternative working models for engaging smallholder farmers and collectors more genuinely in the production and marketing business in line with organic, Fairtrade and FSC standards. Outside facilitators, such as non-governmental organizations (NGOs; especially those with solid experience in the field; possibly building on experience in other countries), can play a decisive role in moving such initiatives forward by helping communities attain the needed technical, organizational and managerial skills. Successful examples could be extrapolated and implemented with the lead of local governments and extension staff. Findings can also be shared through national and international networks which will enhance mutual learning among all involved in promoting organic agriculture and Fairtrade. Drafting of policy recommendations and discussion papers – based on thorough evaluation of initial successful cases and approaches – can enhance discussion and exchange, and scale up impact.

4 SUMMARY DISCUSSION AND CONCLUSIONS: THE CHALLENGES OF MARKET ACCESS IN MOUNTAINOUS SOUTHWEST CHINA

Non-timber forest products are an important source of household supply and cash income for the majority of smallholder mountain farmers in Southwest China. Sustainable management is possible – as the case of Matsutake mushroom shows – but it does not normally exist for the majority of non-timber forest resources, such as medicinal plants, truffle and pine-nut for example. The incentive for communities to develop a mechanism to regulate the access to natural resources does only exist when producers or collectors understand and can enjoy the economic and environmental benefits from such intervention. While resource privatization can lead to sustainable management of NTFPs – as observed with Matsutake mushroom growing in Baoshan prefecture, Northwest Yunnan – it can also create or enlarge disparity in income levels within the community, as only a fraction of all households (in this concrete case: about one third) benefits from the valuable resource. Government regulation, such as taxation of the mushroom trade, could help improve the existing system so that every community member will benefit.

Domestication of NTFP is one way to reduce pressure on natural resources, it is, however, only applicable for plants that can be easily grown on-farm, such as some medicinal plants for example. Besides, if plants that demand a good price in the market can be easily domesticated, more people will grow them or even companies might start production on a much larger scale. This may cause fierce competition and is likely to change market prices.

Certification may be another option to balance income needs and biodiversity conservation goals. Certification systems relevant for NTFPs include organic agriculture, sustainable forest management (FSC) and Fairtrade. While FSC certification may be the

most “natural” scheme for a forest product, it is also the most difficult certification to obtain, in terms of the evaluation process and cost. In addition FSC-certified NTFPs may initially not sell as well as products that bear a well-recognized organic certification label, since most consumers may have never heard about FSC-certified non-wood products.

Recent discussions regarding combining certification schemes (see also URL: <http://www.isealalliance.org/> for more information) to reduce time and cost, have not been held in China yet since only organic certification is more widely known in the country. Combining certification schemes, i.e. organic, Fairtrade and sustainable forest management certifications, makes progressively more sense as all are moving towards holistic approaches, i.e. incorporating ecological, social and economic aspects in their respective standards. Therefore, the overlap between standards of all three major certification schemes is increasing. NTFPs have played a key role in this discussion since they can be certified under any of the three major certification schemes.

While certification has become more affordable for smallholder farmers in the developing world since group certification became available and IFOAM published a guidance manual for producer organizations applying for smallholder group certification in 2004, the challenges for smallholders in China’s mountainous Southwestern provinces are still more profound. Right now, no functioning and successful organic smallholder project exists in China. The government-promoted “*Farmers plus Company Model*” has worked well and without major conflicts where it has been applied in the past. Traders and processing businesses have contributed their skills, financial resources/investments (e.g. in storage and processing facilities) and have made use of their established business connections (all of which rural communities usually do not have). This is also how the Fairtrade pilot projects were initiated (i.e. through the initiative of the export company) and is still functioning today, with a notable increase in empowerment of the producer association over time, however. In any such case, there is no fast way for communities to take over the role that the company has played and not many have the desire to do this - as it requires commitment, time and patience at the start – and, hence, are satisfied with the *status quo*.

Many NGOs, especially in the Southwest of China, are working with poor communities where no such company & farmer scheme exists to develop or advance local business models that integrate economic, social and ecological benefits. They build capacity among producers of agricultural or handicraft products or collectors of NTFP to work together and jointly market their produce to enlarge incomes. However, improved market access is the major goal, certification just one of several potential pathways. Trainings that have been initiated by the *BioFach-China* Project in cooperation with CMES and OFDC support building the knowledge base needed by community development facilitators, local leaders and certifiers to develop capacity among communities to set up and run a market-oriented association. It needs to start from the basics of organizational management, including understanding the requirements for quality assurance and internal control systems in smallholder groups. A producer and marketing group will need this fundamental knowledge, whether the group likes to pursue certification or just wants to improve its marketing power. Easily overlooked is the fact that volume matters, i.e. the market commonly demands a constant supply of consistently high quality which can be a challenge for a small producer group and needs to be thought of early during the planning phase.

Aiming for certification may not always be the best option, as the domestic market for certified NTFP may be very limited and the challenges to export beyond solution for many smallholders, and with Fairtrade still in its infant stage in China. Alternative pathways need to be explored with equal vigor. Developing a brand name for community products from

sustainably-managed farm and forest land, linking with consumers and building trust are steps that need to be explored. Groups and facilitators need to learn from outside experience, such as the successful government-supported promotion of upland village products in Thailand for example.

The demand for certified products from well-managed forests and agroforestry landscapes is on the rise. That smallholder producers and collectors can benefit from this has been observed in various parts of the world. Poor communities in China's mountainous Southwest are surely going to participate in this trend. However, more needs to be done than just supporting capacity building and pursuing certification or alternative marketing schemes. NTFPs need to be duly recognized and monitored like any other commodity by the government, and use rights need to be improved. Research organizations have to support more research to understand the ecology, reproductive capacity over time and sustainable management of NTFPs. Moreover, consumer awareness need to be raised, and innovative partnerships sought with the business sector (e.g. looking at effective public private partnerships and corporate social responsibility).

ACKNOWLEDGEMENT

The research presented in this paper was made possible through support by the *Centrum fuer Internationale Migration und Entwicklung* (CIM; www.cimonline.de). The research and development work described in the paper were mainly funded by Misereor and the Ford Foundation.

REFERENCES

Belcher, B.M. (2003): Comment: What is an NTFP? *International Forestry Review* 5 (2): 161-168.