2.4 Linking a wild medicinal plant cooperative to socially responsible companies

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Introduction

Although sustainable timber production has been the focus of the majority of global research and investment to date, responsible management of non-timber forest product (NTFP) harvesting is also important to maintain ecosystem integrity and function. Indeed, NTFP collection can contribute significantly to livelihoods in rural areas, and product development based on these resources is often promoted as an incentive to prevent conversion of natural habitats.

However, experience has shown that all too often initiatives supported by government-funded environmental and social sustainability development projects come to a halt once external funding and technical cooperation stops. Engaging the private sector in initiatives for sustainable production of NTFPs can motivate investment in resource management in the longer term. To this end, the FairWild Standard\(^1\) and certification scheme were developed. They provide a framework to guide the sustainable harvest of wild plant resources, and to stimulate the development of long-term, mutually beneficial trade relations between collectors, producer companies and cooperatives, and buyers of fair trade botanicals.

This article shares the experience of supporting the implementation of sustainability principles in practice for wild harvesting of Southern schisandra (\textit{Schisandra sphenanthera} Rehder and E.H. Wilson; \textit{Schisandraceae}) berries in the Upper Yangtze region. This is a high-priority area for biodiversity conservation in China, home to an estimated 75\% of commercially harvested Chinese medicinal plant species and to many threatened plant and animal species (Cunningham and Brinckmann 2010).

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\textbf{Facilitating links to responsible buyers can stimulate ongoing investment by the private sector.}
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The project was implemented under the European Union (EU)-China Biodiversity Programme (ECBP; Box 1):

- it engaged harvesters from 22 villages in sustainable management activities;
- it led to the establishment of a cooperative to sell certified organic berries to the market; and
- it linked the cooperative in a fair trade agreement with two herbal product companies: 1) an organic botanical extraction company in Shanghai; and 2) a manufacturer of traditional herbal medicinal products in California (the experience of the latter is the main subject of this article).

Box 1. The EU-China Biodiversity Programme (ECBP)
The five-year (2007–2011) project, Sustainable Management of Traditional Medicinal Plants in the High-Biodiversity Landscapes of Upper Yangtze Eco-region, was one of 18 field projects within the EU-China Biodiversity Programme (ECBP). The projects were funded by the EU and implemented by the United Nations Development Programme (UNDP) in cooperation with China’s Ministry of Environmental Protection (UNDP 2006 and 2011).

The project enabled collaboration between WWF China, TRAFFIC, the International Union for the Conservation of Nature, the Ecology Committee of the Natural Resources of the Chinese Materia Medica, and several provincial forestry bureaus. The aim was to develop and implement a strategic model for biodiversity conservation and sustainable development in one of China’s important Giant panda (Ailuropoda melanoleuca) habitat areas (Cunningham and Brinckmann 2010).

The Upper Yangtze River is a major source of medicinal plants. Over-exploitation has been widespread, especially following bans on logging and farming on steep slopes, which limited sources of household income. Surveys carried out by the project team early on showed (Cunningham 2008) that between 30% and 58% of the region’s household cash income was from the sale of about 100 species of medicinal plants, only seven of which were cultivated. These plants are a critical resource during hard times; after the Sichuan earthquake in May 2008, which killed 69,000 people and left about 4.8 million people homeless immediately afterwards, there was a noticeable increase in the number of people harvesting medicinal plants, primarily for cash income for reconstruction (Cunningham and Brinckmann 2010).

Field activities were led by WWF China and began with a pilot in Daping village. A baseline survey of medicinal plant species was carried out in collaboration with the local community, and a resource management plan was developed and implemented. The survey resulted in a short list of high-priority species for sustainable development. In order to scale up to a level where commercial sales would be feasible, county government and village leaders were invited to join in the management planning process. With their support, meetings and training were organized, engaging harvesters from 22 villages.
One outcome of these activities was the development of a community-based cooperative. This was initially established as a loose association of households, and focused on delivery of technical support. As the project developed, it became apparent that legal standing would be needed if the group were to own a bank account and trade as a business. In 2009, the Shuijing Traditional Chinese Medicine Producers Association was formally registered as a legal entity. Around 150 households voluntarily joined the new cooperative, and voted to select the heads of the organization. Project staff provided technical support throughout the process, and invited the Kangmei Institute of Community Development and Marketing (from Chengdu City, Sichuan) to assist with facilitation and institution building at the community level. Development of the cooperative was also strongly championed by individual community members (pers. comm. Y. Zhao Y. and Q. Xu).

Engaging industry: Bringing responsible buyers in early

One key to sustaining positive outcomes in the project and to supporting continued investment was the early identification of socially responsible herbal companies and inviting them to participate as stakeholders. A U.S. company, Traditional Medicinals Inc. (California), became aware of the project in 2008 when a member of its supply chain committee (J. Brinckmann, co-author of this article) was invited to visit project sites at the suggestion of ethno-ecologist and botanist Anthony Cunningham, an expert working with the ECBP. Traditional Medicinals’ interest in the project was based primarily on its internal sustainable sourcing policies, rather than prospects for eco-product labelling and marketing. The company has a longstanding policy not to purchase ingredients anonymously from the open market, but instead to develop long-term equitable relationships with trade partners. One of Traditional Medicinals’ goals is to demonstrate, through independent verification, a sustainable botanical supply chain that can be measured through ecological, economic and social criteria and indicators.

Early discussions between Cunningham, Brinckmann and the project team on species of commercial interest identified the fruit of *Schisandra sphenanthera* as a priority. This climbing plant was locally widespread, and was considered to have high potential for development; the fruit can be collected without destroying the plant, and the species itself is relatively fast growing. The fruit is used in traditional Chinese medicine, and is also in demand for use in Chinese and global food, beverage and herbal medicine industries (Cunningham and Brinckmann 2010). After researchers identified Southern schisandra as being of interest, samples of the fruit were collected and tested.

In 2009 Brinckmann was contracted by the project to help develop guidelines for harvesters and traders and to assist in establishing links with buyers who would pay a premium for sustainably harvested medicinal plants. Coincidentally, Traditional Medicinals had a keen interest in stabilizing its own schisandra supply; had this not been so, other suitable companies would need to have been identified as potential project partners. Because Traditional Medicinals needed the fruit processed into a dry extract form, a second company was invited into the project. Draco Natural Products (Shanghai) was the first buyer of the berries, carried out processing (extraction and spray drying under certified organic and kosher rules), and arranged export to California.
As the ECBP project developed, the two companies were consulted on quality standards, good agricultural and collection practices, hygienic and sanitary practices, drying, storage, labelling and shipping, and requirements for certification against sustainability standards. By the third year, the companies had invested in extraction process development, pilot production and analytical testing. Product reformulation experiments were also carried out in order to accommodate the use of Southern schisandra in Traditional Medicinals’ finished products, instead of the Northern schisandra (*Schisandra chinensis* (Turcz. Baill.) originally used).

Furthermore, transparent purchase agreements between the two companies and the newly established Shuijing Traditional Chinese Medicine Producers Association were initiated. They were based on a fair trade pricing structure and pre-financing in consideration of the additional costs of implementing sustainability standards. The aim was eventual compliance with the United States Department of Agriculture organic wild-crop harvesting practice standard, the FairWild Standard, and the WWF standard for Giant-Panda-friendly products still in development (WWF China 2012).

A pre-certification audit by the Institute for Marketecology was carried out in 2009 and the cooperative achieved organic certification for the Southern schisandra fruit in 2011. Despite setbacks caused by poor weather, the cooperative has managed to increase the volume harvested each year (while complying with the sustainable management plan) to meet the buyer’s requirements. In September 2011, Traditional Medicinals and Draco Natural Products signed a letter of intent with the chairman of the cooperative to continue supporting the initiative through 2015. In the letter, Traditional Medicinals stated its intent to support efforts to obtain sustainability certification (e.g., organic wild and FairWild), which would help to define, formalize and strengthen a fair trading relationship.

**Project outcomes and future developments**

Since the ECBP project ended in 2011, the cooperation along the harvesters, the cooperative, government agencies, non-governmental organizations (NGOs) and private businesses has progressed into a long-term fair trade relationship for the supply of sustainably harvested NTFPs. Income for local producers in the project areas has increased, thanks to the higher prices paid — around 30% above usual market prices — for organically certified, sustainably harvested Southern schisandra fruit.

A survey of project sites in March 2011 found that income from medicinal plant collection had risen; in one village it increased by almost 18% over 2007 levels (WWF China project report, in TRAFFIC 2012). Elements of the FairWild Standard, such as the resource assessment, a management plan and monitoring for harvesting of the target species, continue to be implemented; FairWild certification is a future goal. The cooperation is also continuing to develop criteria and indicators for Giant-panda-friendly brand-
ing of biodiversity products from the project villages (Box 2). Although the project started with the production, sales and marketing of dried Southern schisandra fruit, there is the potential to launch a range of other biodiversity products with organic wild, FairWild and/or Giant-Panda-friendly designations (Cunningham and Brinckmann 2010). These include sea buckthorn (*Hippophae rhamnoides* L.; Elaeagnaceae) berry, wild kiwifruit (*Actinidia* spp.; Actinidiaceae), honeysuckle (*Lonicera* spp.; Caprifoliaceae) flower bud, and Chinese rhubarb (*Rheum palmatum* L.; Polygonaceae) root.

**Box 2. Developing a Giant-panda-friendly standard**

In September 2011, a workshop for the development of a Giant-panda-friendly standard and eco-label was convened in Chengdu with participants from a wide range of backgrounds. Giant-panda-friendly products are defined as those that bring no evident harm to the wild Giant panda populations and their habitats, contribute directly to the livelihoods of the communities in the areas where Giant pandas live, and motivate the communities to continue livelihood activities that are beneficial to the Giant panda's survival and development. Based on workshop results, in March 2012 WWF-China Chengdu Programme Office circulated draft Standards for Giant-panda-friendly products for review and comment. The idea is that the Giant-panda-friendly criteria and indicators would be applied as an annex to organic wild or FairWild inspections, reducing the cost of the certification audit (WWF China 2012).

**Remaining challenges and lessons learned**

The project showed that using market-based approaches (the introduction of standards and certification schemes) and facilitating links to responsible buyers can stimulate ongoing investment by the private sector in sustainable NTFP management. However, making the transition from external public funding support has its challenges.

**Capacity building for improved business practices**

The producer cooperative has benefitted from committed on-the-ground support and facilitation of trade links through the NGOs and government agencies involved in implementing the ECBP. The success of the project has been widely recognized (Box 3). However, continued support is required if the cooperative is to achieve its full potential as coordinator and sales representative for the project villages. Additional capacity building and training in business planning, invoicing and banking, logistics, transport, good agricultural collection practices and good manufacturing practice are still needed. Conditions for post-harvest drying, handling and storage need to be standardized across all villages for uniform consistent quality.

The cooperative also needs to improve its cost calculations to include the cost of organic inspection and certification. This was paid in 2011 through the ECBP project; Traditional Medicinals has agreed to pay the certification costs for 2012. It is hoped that by 2013 additional products and/or quantities will be certified, and that the annual cost can be...
incorporated into the cost calculations and prices of certified goods sold by the cooperative. This would strengthen the business model and the cooperative’s independence.

Box 3. Project recognition
In September 2011, in recognition of the project’s success, WWF China’s TCM programme received an Outstanding Contribution award from the Chinese State Ministry of Environmental Protection, EU-China Biodiversity Programme (ECBP), Ministry of Commerce and the United Nations Development Programme (UNDP) (WWF China 2011). Further development of the project, supported through the Kangmei Institute of Community Development and Marketing, has led to greater adoption of sustainable harvesting methods in the region. Communities are working through international partnerships to promote a Giant-panda-friendly brand and to create Giant-panda-friendly certification standards (Wu 2012). In May 2012, the Kangmei Institute was the recipient of the prestigious UNDP Equator Prize for its important role in the project (UNDP 2012). The Equator Prize recognizes outstanding local initiatives to advance sustainable development solutions for people, nature and resilient communities.

The importance of a supportive policy and market environment
Certification schemes such as FairWild and Giant-panda-friendly are important to companies like Traditional Medicinals in their efforts to achieve a 100% sustainable botanical supply chain with independent verification. Certified sustainability claims can also have an effect on end consumers, helping to raise public awareness and support for sustainable consumption. In China, the process for approval of new certification standards is subject to the Regulations of the People’s Republic of China (PRC) on Certification and Accreditation administered by the Certification and Accreditation Administration of the PRC (CNCA). At the moment, the only available international certification authorized by CNCA for the medicinal plants from this project is organic. Draco Natural Products and Traditional Medicinals continue to encourage the acceptance of additional certifications in China, in particular, Giant-panda-friendly and FairWild. The companies believe there is a growing market for biodiversity products carrying designations of sustainable management, production and use.
The need for industry champions

Even after responsible companies are identified and provisionally join a project, there must be someone within the company who champions the project. There were a few points when continued involvement and investment by Traditional Medicinals had to be argued for within the company, particularly after setbacks (premature harvesting and low yields due to poor weather) necessitated product reformulation two years in a row. Reformulating an existing successful product is a tough sell and requires collaboration between research and development, quality control, operations, accounting and purchasing and planning departments.

Furthermore, during the same time, other sources of sustainably harvested schisandra with less logistical complexity became commercially available. It was successfully argued within the company that it should wait at least five years before making a determination of long-term feasibility, and that the project was different due to its important link to supporting biodiversity conservation in Giant panda habitat. This convinced the company to take additional risks and to sign a five-year agreement to continue supporting the trade relationship. Fortunately, purchasing from the cooperative proved successful in the third year.

Long-term resilience through starting small, scaling up and diversifying

Concentrating initially on just one species of commercial interest, and slowly scaling up from a pilot project with one village, proved successful. The strong relationship between Traditional Medicinals, Draco Natural Products and the cooperative has been key to ensuring continued investment in sustainable resource management. However, although the purchasing companies are presently stable and successful, circumstances can change. The long-term viability of the project cannot depend solely on the demand projections of one California company. The gradual inclusion of a wider range of botanical species would increase potential incomes and decrease the risk, as would carefully diversifying trade chains to include other companies committed to fair trade and supporting sustainable forest management. This would require more species to be included in the sustainable resource management plan and scaling up to encompass more villages. Continuing to support leadership and capacity-building at the local level will ultimately ensure resilience, enabling the producers to adapt to changing circumstances and to find new buyers for their sustainable products.
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Endnotes
1. FairWild Standard Version 2.0 and Performance Indicators, Version 2.0. FairWild Foundation, Weinfelden, Switzerland. Available in Armenian, Azeri, Bosnian, English, French, Georgian, German, Hungarian, Japanese, Polish, Portuguese, Spanish and Russian; see www.fairwild.org/documents. The FairWild Standard provides guidance on best-practice harvesting and trading of wild-harvested plant and similar resources in 11 key areas. It was developed through a multi-stakeholder consultation process, and is now maintained by the FairWild Foundation. It forms the basis of a third-party audited certification scheme.
2. Giant panda habitat refers to the natural ecological systems that satisfy the core behavioural needs of giant pandas to eat, drink and breed freely and safely.

References