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R E P O R T

ENGAGING CHINA'S PRIVATE SECTOR IN SUSTAINABLE MANAGEMENT OF MEDICINAL PLANTS—THE MULTIPLIER EFFECT

JULY 2015

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*Anastasiya Timoshyna, Chenyang Li, Zhang Ke,
Bryony Morgan, and Vasilis Tshipidis*



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HARVESTER OF GOJI BERRIES *LYCIUM BARBARUM*
DURING QINGHAI PROVINCE STUDY TOUR
OF EGP MAPS PROJECT



Project funded by the European Union

Project Partners:

TRAFFIC
the wildlife trade monitoring network

WELCOME
WELCOME MEDICINE INDUSTRY
浙江维康



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ABBREVIATIONS AND ACRONYMS

CBD	Convention on Biological Diversity
CoP	Conference of the Parties
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMPMA	Chinese Medical and Pharmaceutical Material Association
CPPCC	Chinese People's Political Consultative Conference
CSR	Corporate Social Responsibility
ECBP	European Union–China Biodiversity Programme
EGP	China Environmental Governance Programme
EGP MAPs	Acronym for the project: 'Engaging China's private sector in sustainable management of medicinal plants—the multiplier effect'
ESPC	European Strategy for Plant Conservation
EU	European Union
FDA	Food and Drug Administration
FLO	Fairtrade International
GACP	Good Agricultural and Collection Practices
GAP	Good Agricultural Practices
GSPC	Global Strategy for Plant Conservation
GMO	Genetically modified organism
ISEAL	ISEAL Alliance, the global membership association for sustainability standards
ITC	International Trade Center
IUCN	International Union for Conservation of Nature
MAP(s)	Medicinal and aromatic plant(s)
NGO	Non-governmental organization
PES	Payment for ecosystem services
PP	Partnership project
PPP	Public-private partnership
R & D	Research and development
SATCM	State Administration of TCM
SFA	State Forestry Administration
SSC	IUCN Species Survival Commission
SME	Small and medium-sized enterprise
TCM	Traditional Chinese Medicine
TUGRMM	International Trade Union of Genuine Regional Materia Medica
WCCM	World Congress of Chinese Medicine
WFCMS	World Federation of Chinese Medicine Societies
WHO	World Health Organization
WWF	World Wide Fund for Nature
WWF CPO	WWF China Programme Office

BACKGROUND

Medicinal and aromatic plants (MAPs) are a valuable resource for their intrinsic biodiversity value, as a source of raw materials underpinning healthcare systems and industries, and as a source of income for harvesters.

The People’s Republic of China (hereafter China) is the origin for, and biggest centre of, production of many plant materials used in traditional Chinese medicine (TCM). China produces a wide variety of plant-based herbal medicines and ingredients that are consumed both within China and worldwide. Over 70% of the different species used in TCM, and about 30% by volume, come from wild medicinal plants. These resources are under threat owing to overharvesting to meet high demand from the TCM and herbal products industry, as well as other factors such as land conversion and pollution. Poor management is not only threatening wild species but also the livelihoods of millions of collectors and TCM healthcare system.

“Chinese medicine is the unique health resource, potential economic resource, original preponderant technology resource, outstanding cultural resource and significant ecological resource of China”
Liu Yandong
- the vice-premier of China

Between 1st March 2013 and 31st July 2015, TRAFFIC, with funding from the EU-China Environmental Governance Programme (EGP), together with the World Federation of Chinese Medicine Societies (WFCMS), WWF China Programme Office (WWF CPO), and Zhejiang Wecome Pharmaceutical Co. Ltd (Wecome), implemented the ‘Engaging China’s private sector in sustainable management of medicinal plants—the multiplier effect’ project (abbreviated as EGP MAPs). This focused on building sustainable supply chains of medicinal plants in the Traditional Chinese Medicine industry in Hunan and Zhejiang provinces, two important centres of TCM sourcing, trade and manufacturing.



Figure 1. Map of China with highlighted target project provinces: Hunan and Zhejiang

The overall goal of the EGP MAPs project has been to achieve sustainable management of medicinal plants and to contribute to improved rural livelihoods and environmental governance in Hunan and Zhejiang Provinces, China, through establishing green supply chains among Traditional Chinese Medicine stakeholders.

With leadership and leverage from TCM manufacturers and traders, the project connected various stakeholders in the TCM industry, including companies, their suppliers (farmers and wild-collectors), conservation NGOs, industry associations and academia, as well as government. This project is the first of its kind; innovative in China and indeed globally in leveraging of commitment and resources from the TCM industry to address the issues of sustainability in the sector.

The project used the FairWild Standard as a best-practice framework for sustainable wild harvesting and equitable trade in plants. The 11 principles of the FairWild Standard cover social, environmental and economic aspects of sustainability; a comprehensive framework for tackling the complex issues involved in sustainable wild collection.

The project has contributed to building a sustainable TCM industry in the long term, and is piloting a participatory approach to governance of China's environment and resource management. A particular emphasis has been placed upon exchange of experience between China, Europe and beyond, in line with the aims of the European Union–China EGP, and the global nature of the trade in Chinese medicinal and aromatic plants (MAPs).

EGP is a key priority of the EU–China environmental co-operation. It aims at developing opportunities for improving the environmental situation across China through the following four priorities:

- 1.** Public access to environmental information
- 2.** Public participation in environmental planning and decision making
- 3.** Access to justice in environmental matters
- 4.** Corporate environmental responsibility

EGP MAPs was approved for funding under Priority 4 as one of the local level partnership projects (PPs). The local level Partnership Projects focus on local actions, build on local experience, and showcase good practices of environmental governance at the local level. Experience gained through the PPs at the local level is expected to feed into recommendations for regulatory improvement, change or enhancement at the central level and promoted to the Ministry of Environmental Protection.

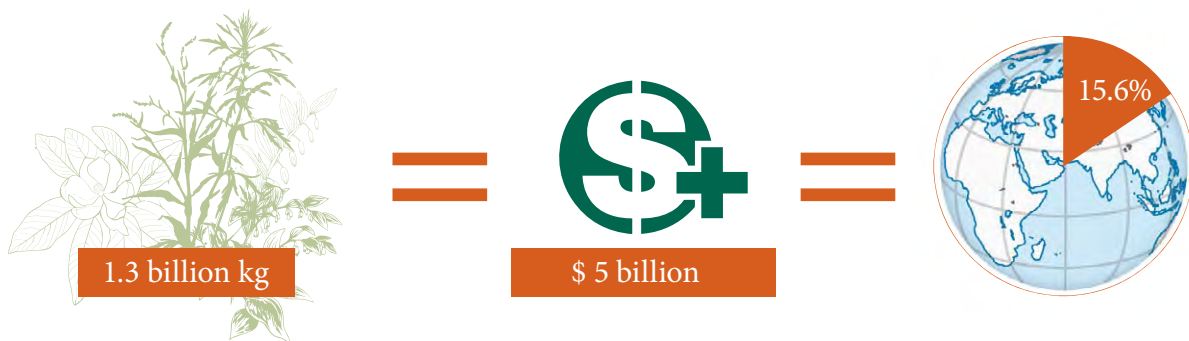


EU-China Environmental Governance Programme
中欧环境治理项目

CHINA'S TRADITIONAL CHINESE MEDICINE (TCM) AND THE MEDICINAL AND AROMATIC PLANTS (MAPS) TRADE

Relative value of China's exports in total world exports.

According to the recent study¹, undertaken by the International Trade Center and TRAFFIC within the EGP MAPs project, China's 2013 export volume and value for selected MAP articles (both wild-collected and cultivated) amounted to over 1.3 billion kg with a reported Customs value of over USD 5 billion. This represented about 15.6% of total world exports of these species in terms of reported Customs value.



Particularly noteworthy is the fact that China has an approximate 41.7% global share of trade under Customs code HS 1211 (includes medicinal plants e.g. astragalus, cordyceps, danggui, ginkgo, ginseng, liquorice, rhubarb, schisandra) exports in terms of reported value. Although it is not possible to quantify the proportion that is obtained from wild-collection versus cultivation, it is known that hundreds of Chinese MAP species are wild-collected either entirely or partially.

¹ Brinckmann J., 2015. Analysis of Market Potential for Wild-collected Chinese Medicinal and Aromatic Plants with Sustainability (Organic and Fair) Certifications (Technical Paper). International Trade Center (ITC), Geneva

Precise quantification of China’s export volume and value of wild-collected MAPs is not possible due to lack of differentiation and specificity in the tariff codes used for analysis (especially general codes that may hold hundreds of species). The determinations were made for the China Trade Data 2013 reported exports and figures are presented in the summary table below².

MAPs (China Trade Data for 2013 exports)	kg	% of total volume	US(\$)	% of total value
Cultivated	1,086,138,364	80.9%	3,409,355,209	63.1%
Wild-collected and some cultivation	171,777,258	12.8%	1,453,192,877	26.9%
Cultivation and some wild-collected	54,299,824	4.0%	314,006,933	5.8%
Not known	21,805,367	1.6%	142,335,767	2.6%
Wild	8,435,445	0.6%	85,749,242	1.6%
Total:	1,342,456,258		5,404,640,028	

Table 1. Wild and cultivated species of MAPs in China Trade Data for 2013 exports, Brinckmann 2015

Main destination countries for China’s MAPs exports differ depending on the items. In the case of HS 1211 (e.g. most medicinal plants; cultivated and wild-collected) Hong Kong SAR, Japan, Republic of Korea, Viet Nam and Malaysia were the top five importers. For HS 1302 (e.g. herbal extracts made from both cultivated and wild-collected plants), the top five importers were USA, Japan, Republic of Korea, Germany and India. See map below which demonstrates the top 25 main export destinations from China in 2013 for HS 1211.

The EGP MAPs project report on ‘Policy, Laws and Regulations for Collection, Management, and Sustainable Use of Medicinal Plant Resources’ (Runhuai *et al.*, 2015) provides recent estimations about China’s TCM resources. China is endowed with rich TCM resources—12,807 types of TCM materials were found in the third National Survey of Chinese Medicine Resources which include 11,146 medicinal herbs, 1,581 medicinal animals and 80 types of medicinal minerals. The total reserve of 320 types of essential medicinal herbs is about 8.5 million tonnes. By the end of 2012, China had over 2,000 TCM companies above the size of CNY20 million (over USD 3.2 million) turnover, including 179 companies with an annual turnover of CNY100 million (over USD 16.3 million) and 25 companies with CNY1 billion (over USD163 million) or more. In 2012, the TCM industry’s gross output was CNY515.6 billion (over USD 84 billion), of which only a fraction was exported, primarily as medicinal plants and herbal ingredients.

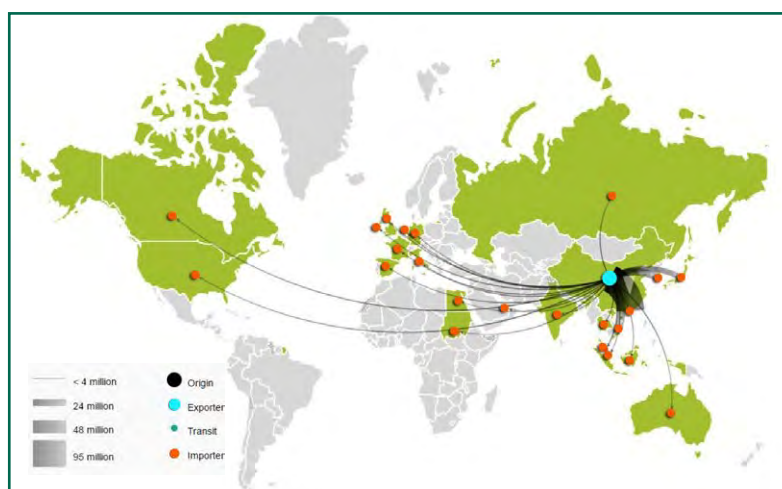


Figure 2. Top 25 export destinations in medicinal plants (HS 1211) by volume from China in 2013, in kg (based on UN Comtrade data 2015)

² As above

PROJECT FRAMEWORK DETAILS

Project Goal: To achieve sustainable management of medicinal plants and contribute to improved rural livelihoods and environmental governance in Hunan and Zhejiang Provinces, China, through establishing green supply chains among Traditional Chinese Medicine (TCM) stakeholders.

Project Objective: To establish green industry supply chains among TCM stakeholders, linking private sector manufacturers and traders in Hunan and Zhejiang Provinces to producers, in order to achieve sustainable management of medicinal plants, livelihoods benefits, and to contribute to improved environmental governance.

PROJECT SPECIFIC OBJECTIVES:

- 1.** To establish a voluntary sustainable production scheme for private TCM manufacturers and traders by applying FairWild Standard principles.
- 2.** To promote sustainable collection of wild medicinal plants through industry leadership on supply chain management.
- 3.** To promote environmentally-friendly cultivation of medicinal plants through industry leadership on supply chain management.
- 4.** To improve government awareness and capacity for sustainable management of wild medicinal plant resources, built through partnerships with the TCM private sector and other stakeholders.

PROJECT TARGET GROUPS

- Manufacturers in Hunan and Zhejiang provinces: At least three manufacturers
- Traders in Hunan and Zhejiang provinces: At least five traders (distributors, wholesalers and exporters)
- Wild-collectors: At least 1,000 wild medicinal and aromatic plants collectors
- Farmers: At least 1,000 farmers

PROJECT BENEFICIARIES

- Manufacturers and traders in Hunan and Zhejiang provinces
- TCM consumers in China and Europe
- Wild-collectors of MAPs in project sites in Hunan and Zhejiang provinces
- Poor and marginalized communities residing in project sites in Hunan and Zhejiang provinces
- Farmers in project sites in Hunan and Zhejiang provinces
- Government agencies: environment, forestry, healthcare and trade ministries in Hunan and Zhejiang provinces.

2013

MAR-13

EGP MAPs project starts.

AUG-13

Partnership inception workshop held in Beijing, China.

SEP-13

Profile development of target manufacturers and traders and confirmation of target groups.



OCT-13

Project workshop given at the 10th World Congress of Chinese Medicine, USA, attended by target companies.



NOV-13

Official project launch in Lishui city, Zhejiang province. Declaration of Sustainability commitment signed by five target manufacturers and traders.



NOV-13

Benchmark assessment of the Zhejiang Wecome Pharmaceutical Ltd (Wecome) and its suppliers in Lishui city, Zhejiang province.

NOV-13

Start of the training programme. Training materials on FairWild Standard principles developed and delivered to all target manufacturers and traders.



JAN-14

Benchmark assessment of the Hunan Solita TCM Decoction Pieces Co. Ltd. Training sessions given to manufacturers, suppliers and government in Hunan province.



FEB-14

The 1st TCM Corporate Social Responsibility and Sustainability Forum held in Beijing, China. Launch of the Chinese version of the FairWild Standard; and presentation of the Standard and certification schemes in TCM sector review.



DEC-13

Mapping of Wecome supply chains. Screening of ingredients list to identify species sourced from the wild and cultivation and assess their protection status in China.



MAR-14

Project target species selected.



APR-14

Training manual completed for wild-collectors and farmers.



JUL-14

Sustainable wild-collection and cultivation training sessions started for wild-collectors and farmers in Zhejiang province, China: 1,105 wild-collectors and farmers trained by the end of the project.



2014

OCT-14

Target companies attend the 11th World Conference of Chinese Medicine in Saint Petersburg, Russia. A dedicated workshop organized for participants on the issues of sustainability in the TCM sector.



AUG-14

Organic cultivation study visit by all target manufacturers, traders and project partners in Qinghai province.



OCT-14

Project presented at the 12th meeting of the Conference of the Parties to the Convention on Biological Diversity, Pyeongchang, Republic of Korea.



OCT-14

Study visit to the Pingwu Shuijing Cooperative, Sichuan province.



OCT-14

Meetings conducted with certification bodies to further opportunities for FairWild Standard, the best practice framework for wild-harvesting and equitable trade application in China.



JAN-15

Government awareness workshop conducted in Beijing, bringing together representatives of relevant agencies, including State Administration of TCM (SATCM), State Forestry Administration (SFA), Food and Drug Administration (FDA) and others. Preliminary project findings presented to the participants.



MAR-15

Farmers' Association of TCM Sustainable Development established by the project partners in Longquan County, Zhejiang province under the China Medical and Pharmaceutical Material Association (CMPMA) umbrella, creating opportunities for improved trade linkages and on the "footing" of sustainable sourcing.



APR-15

Launch for comments on the CSR TCM sector guidelines and the completion of Wecom's CSR roadmap, inclusive of all other manufacturers and traders (Wecom's suppliers).



MAY-15

Target manufacturers attend BioFach China, Shanghai.



JUN-15

Target species rapid resource assessment completed in Zhejiang province and training sessions for wild-collectors and farmers held.



JUL-15

Policy review and recommendations consultation.



DEC-14

Research conducted on international market for sustainability certified wild-collected products from China.



FEB-15

International industry links presented at side event at BioFach trade fair, the world's largest organic trade fair, held in Nuremberg, Germany.



MAR-15

Policy proposal for adopting sustainable voluntary standards guiding sustainable wild-collection and environmentally-friendly cultivation of TCM raw materials submitted to the National People's Congress and to the Chinese People's Political Consultative Conference .



APR-15

2nd TCM Corporate Social Responsibility and Sustainability Forum, Hangzhou, Zhejiang province held; launch of best practice case studies; CSR Guidelines and Wecom's roadmap; market study findings.



JUN-15

The Organic TCM Cultivation Alliance founded under World Congress of Chinese Medicine (WCCM), influenced by the project activities and training sessions.

JUL-15

Project closing event and the delivery of main project outputs.



A close-up photograph of a person harvesting goji berries. The person is wearing a pink headscarf and pink gloves. They are holding a blue bucket filled with bright red goji berries and green stems, which they are pouring into a yellow plastic basket. The background is a blurred outdoor setting with green foliage.

PROJECT
OUTCOMES
AND IMPACTS

RESULT 1

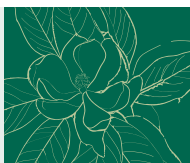
A voluntary sustainable production scheme and “green labelling” system in place, supporting sustainable supply chains led by key TCM manufacturers and traders



The concept of Corporate Social Responsibility (CSR) is growing in China. The EGP MAPs project engaged TCM manufacturers and traders through a CSR framework. Key outcomes in this result area include:

- *CSR guidelines for the TCM sector developed for sustainable supply chain management in China through multiple stakeholder consultations. The guidelines were designed to help the TCM companies to green their supply chain (management) and improve product competitiveness through improved traceability and the ability to communicate good practices to consumers. The guidelines are based on international and national best practices including the FairWild Standard.*
- *Targeted TCM manufacturers and traders supported through development of a long-term strategy and implementation roadmap for sustainable production and supply chain management.*
- *Targeted TCM manufacturers and traders have committed to the longer-term adoption of voluntary standards, including the FairWild Standard for wild-collection and Good Agricultural Practices (GAP) standard for cultivation practices.*
- *Training materials for the manufacturers and traders on aspects of the FairWild Standard developed, delivered and made available publicly, including “train the trainer” materials.*
- *Private sector multi-stakeholder leadership platform for sustainable sourcing and production established. Two meetings of the TCM Corporate Social Responsibility and Sustainability Forum were held in 2014 and 2015, generating sustainability discussions around TCM resources, supply chain management, standards development and TCM internationalization. The Forum is convened on the platform provided by the Chinese Medical and Pharmaceutical Material Association (CMPMA), ensuring its continuation beyond the project’s completion.*
- *Promotion of the project to the global TCM community at two World Congresses of Chinese Medicine (2013, 2014) and to the private sector at two BioFach Conferences (2014, 2015), the world’s largest organic trade fair.*
- *Case studies on best-practices in sustainable wild-collection worldwide developed. These highlight lessons drawn from pilot projects, covering both implementation through private sector adoption and government policy, as well as the challenges met in the implementation of the FairWild Standard globally.*
- *Research and analysis completed in a number of areas relating to voluntary standards, including the feasibility of introducing the FairWild Standard and certification scheme in China, the understanding of the market for sustainability certified wild-collected plants, contributing to the policy recommendations and the implementation of the best practices. The project contributed to discussions on the uptake of voluntary standards in China through engagement in processes of the ISEAL Alliance, the global membership association for sustainability standards.*





ZHEJIANG WECOME PHARMACEUTICAL LTD AND ITS SUSTAINABILITY JOURNEY

Wecome, a leading company in Zhejiang province, is a modernized pharmaceutical enterprise integrating medicine research and development, manufacture, and sales. In 2011 it was awarded the Best TCM R&D Enterprise and Model in Innovation among SMEs (small and medium enterprises). Wecome is both an implementing partner in the EGP MAPs project, and a target company—implementing activities and leading innovation on sustainable sourcing amongst its trading partners and peers.

Mr Dai Dexiong, Vice General Manager of Wecome, the company's project lead, is in charge of research, innovation and supply chain management. He has long been aware of the difficulties in obtaining supplies of wild-harvested ingredients: “We used to have an adequate supply of many wild species 10 years ago, but now only source limited amounts of widespread species, as many perennial plants are hard to find in the wild. They are, however, important in TCM formulations and provide essential income to harvesters”.



Mr Dai Dexiong from Wecome holding Solomon's Seal plant

“We cherish indigenous wild species, calling them ‘genuine regional materia medica’. While TCM theory states that species growing in original habitat have better efficacy than those grown elsewhere, shrinking wild resources and ever-mounting market demand limit our choices.”, Mr Dai said, reviewing the company's sourcing approach. “It is excellent that the EGP MAPs brings the funding and expertise through TRAFFIC in pursuing FairWild sustainable collection principles with suppliers. We have started harvesting trainings, creating shared understanding of the benefit of species conservation.”

In 2014, TRAFFIC and Wecome carried out training sessions to suppliers in Zhejiang province resulting in the establishment of a trading alliance with a farmers' co-operative. “In previous decades, plant protection was not a priority of wild-collectors, driving species decline, and products were often sold under the market value,” said Xu Qing, the Party Secretary of Shangyang town, Longquan County. “This alliance cuts out the middlemen, increases wild-collectors' profits and raises interest in sustainable collection of Water-pepper and Chinese Motherwort.”

At the sectoral level, Wecome plays a key role in convening the TCM Corporate Social Responsibility and Sustainability Forum through peer leadership to leverage government authorities' participation in building the dialogue and participatory governance of resources. Wecome's efforts to establish a sustainable supply chain started from an assessment review, which did not, initially, have an enthusiastic response from Wecome's management team. The gaps in knowledge of sourced species were filled through the development of a company ingredients species list, including their conservation status, volumes used, and additional research on demographic features of producers. “This proved to be more useful than I could have imagined. We used these documents to trace our supply in terms of places and producers, which is essential for supply management,” commented Mr Dai.

Wecome further committed to strengthening its supply chain management, through the adoption of sustainability standards and certification, and drawing management plans based on species' conservation status and risks evaluation. The training for suppliers' roll-out and

commitment to FairWild fits Wecome's vision of establishing fair and transparent relations with wild-collectors. The project contributes towards transparency and accountability in the supply chain, which in the global TCM market is important for Wecome's internationalization strategy. "Wecome is going to be listed on China's stock market and we will continue with our efforts on leading the green supply chain in China's TCM industry," said Mr Dai.



VOLUNTARY SUSTAINABLE PRODUCTION APPROACHES IN PRACTICE

One EGP MAPs project aim was to engage at least three manufacturers and five traders of TCM plant materials in the voluntary sustainable production of MAPs ingredients. The project worked through existing company networks in order to achieve this.



TCM manufacturers and traders sign initial declaration of commitment

In November 2013, five TCM companies committed to participate in the project, signing a sustainability commitment declaration, and demonstrating their interest in moving towards greening their supply chains. These companies, which include both traders and manufacturers from Zhejiang and Hunan provinces, were: Zhejiang Wecome Pharmaceutical Co. Ltd. (Wecome) (manufacturer), Zhejiang Shenghua Pharmaceutical Co. Ltd. (manufacturer and trader), Hunan Solita TCM Decoction Pieces Co. Ltd. (manufacturer), Yunhe County Zizhutang

TCM Materials Development Co. Ltd (trader), and Zhejiang Wangjing She Ethnic Medicine Development Co. Ltd (trader). Two additional companies joined the project later: Suichang County Xufu Charcoal Industry Co. Ltd (trader) and Jinyun County Qiuyong Pharmaceutical Co. Ltd (trader).

Project implementing partner Wecome played a critical role in convening this group of companies, which included their suppliers of ingredients and peer manufacturers. In implementing the sustainable sourcing initiative, working through Wecome also proved a useful entry point to engage other companies. Through investing effort into strengthening Wecome's capacity for sustainable supply chain and resources management, the project was also able to influence the other companies in Wecome's supply chains as part of the sustainability road map (including among the target manufacturers and traders). A major focus was to understand the scale and nature of Wecome's supply chains, and opportunities to improve management.

The first steps taken to increase the transparency of the supply chain were to carry out an inventory of all ingredients used by Wecome in their products' formulations and to visualize the supply chains for key target species sourced in Zhejiang and Hunan target provinces. With these tools at hand, project partners contracted an independent consultant to carry out the initial baseline verification of Wecome's operations in Zhejiang province, for a selection of both wild-collected and cultivated target TCM species. The baseline evaluation was carried out against

the FairWild Standard performance indicators for wild-collection and against the principles of organic agriculture for the cultivated species.

The verification report identified major areas for improvement, focusing on the need for additional internal research (product and species list, complete supply chain mapping and the verification of the conservation status of all wild-harvested species), and undertaking steps for establishing sustainable supply chain management, including a company standard on sustainable sourcing and production. Such a standard or roadmap would affect 13 direct suppliers, and through them, Wecome's supply chains, and in particular, those related to their performance in areas of trade documentation and quality of warehouse management.

Similarly, the project team carried out the baseline verification study of two other target manufacturers: Zhejiang Shenghua Pharmaceutical Co. Ltd. in Jinyun county, Zhejiang province and Hunan Solita TCM Decoction Pieces Co. Ltd. in Shaoyang county, Hunan province.



© Zhang Ke/RAFFIC

Project partners and companies at Wecome supply chain verification visit

These recommendations and action plan provided the major input into the piloting of Wecome's five-year CSR roadmap—an innovative approach tested to bring together the more generic CSR guidelines, also designed within the project, with a specific company-oriented action plan, including the stepwise improvements plan for short-, medium-, and long-term periods.

The baseline verification reports further provided a means to evaluate the progress of the target manufacturers and traders against the critical points identified, both at project end and at a later date, in order to judge the long-term progress.

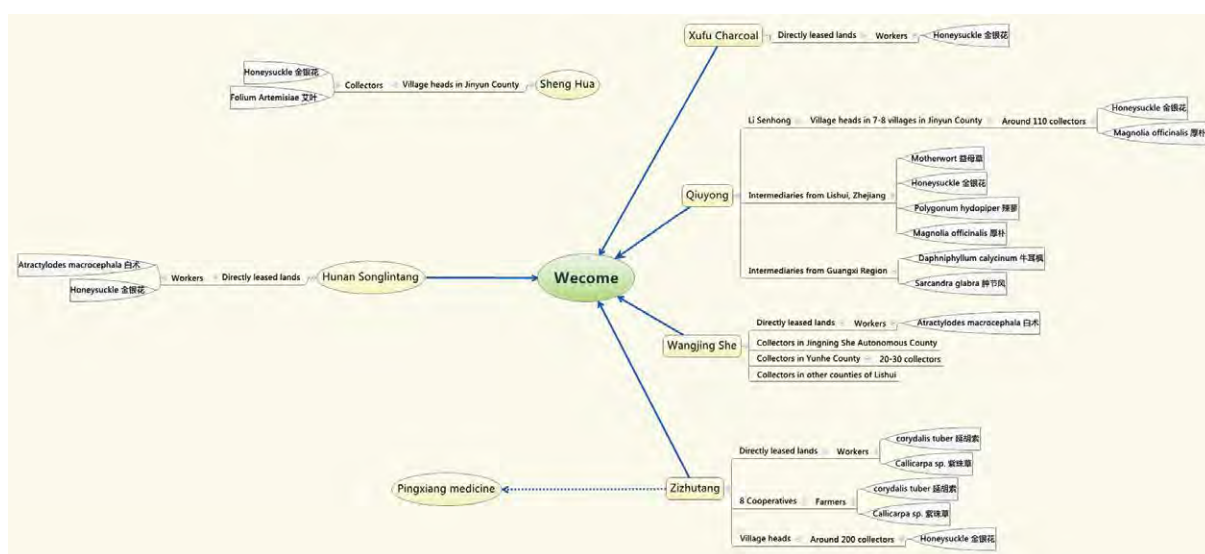


Figure 3. Map of the part of Wecome's supply chain (based on interviews)



CSR TCM SECTOR GUIDELINES AND PILOT ROADMAP FOR THEIR IMPLEMENTATION

Corporate Social Responsibility (CSR) TCM sector Guidelines were developed following the review of standards and certification schemes and the feedback of industry.

An independent consultant, with CSR and supply chain management experience, was contracted to develop the Guidelines. Initially, the relevant policies and laws, as well as other industry sectors guidelines were collected, compared against the FairWild Standard requirements, and the first draft of the Guidelines developed. These were presented at the 2nd TCM Corporate Social Responsibility and Sustainability Forum and feedback was received from the target companies and other TCM sector stakeholders. These comments were then integrated into the Guidelines.

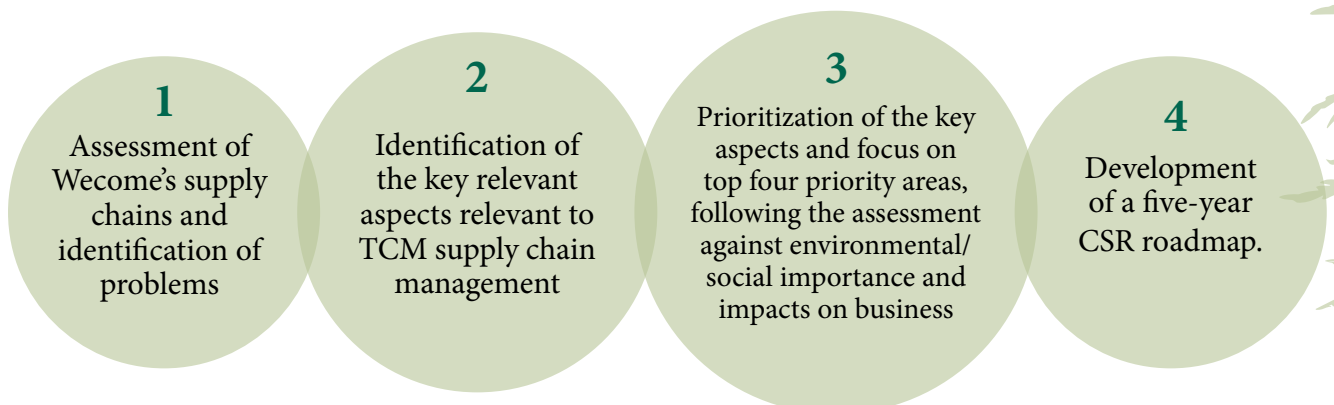
The Guidelines cover a number of aspects of CSR and in particular those related to sustainable supply chain management. These include:



Practical sustainability skills trainings

- The development of sustainable management systems for the TCM sector
- The principles of acquisition of medicinal plant resources and the issues of environmental protection (including sustainable wild-collection, replanting, and cultivation practices)
- Principles of procurement and supplier management
- Logistics management (including packaging, storage, warehouse management and traceability systems)
- TCM quality assurance
- Fair trade issues
- Community development and engagement
- Labour rights, health and safety
- Risk management (including environmental risks, quality risks, market risks, logistics risks, and policy risks risks)
- Transparency and stakeholder engagement.

As a result of the verification assessment report and the CSR TCM sector Guidelines, project partners supported Wecome in developing a five-year CSR company roadmap. The process of roadmap development included four steps:



Wecome's CSR roadmap focuses on four priority areas:

- 1.** Protection of wild-collection and natural areas. This includes, for example: conducting resource inventories, establishment of standardized collection practices, and use of organic fertilizers for cultivation.
- 2.** Sustainable access to TCM resources. This includes: development and updating of species lists, conducting risk analyses, identification of strategic species for increased attention regarding resource management (e.g. *Magnolia officinalis*), and continued work with the established Farmers' Association and International Trade Union of Genuine Regional Materia Medica (TUGRMM) to secure long-term trading relationships.
- 3.** Increased community engagement. This includes: set-up of the enterprise and community communication platform, increased interaction with the community (providing technical and financial support and tools), development of community projects (including implementing government policy on education and poverty reduction) and, in the longer-term, set-up the community development Premium Fund (using the FairWild Standard model)
- 4.** Increased public transparency and communications. This includes: development of the information disclosure system following the requirements for a stock exchange-listed company, set-up of institutional and management mechanisms to disclose company information systematically, periodic publishing of CSR report, increased communication with priority stakeholders, including through piloting the approaches within the Longquan trading alliance, and the establishment of long-term partnerships with stakeholders (e.g NGOs).



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Processing facilities of the target TCM manufacturer in Hunan province



FOCUS ON THE SUSTAINABILITY OF TCM SPECIES

Companies in the TCM sector often use wide ranges of different plant species in their product formulations. As well as helping participants to review and assess their assortment, the project activities also included more in-depth work to improve the management of selected species. Five target species were selected to pilot sustainable management practices by target manufacturers. Activities included an analysis of the resilience to harvesting of the target TCM species and rapid resource assessment of plant species.

The selection of target species was based on the evaluation of species used by target manufacturers and their suppliers. The species selected were those often used in the final products or in high volume. The national and international protection status were also considered, including the inclusion in the China's National Wild Plants Protection Regulation and the species conservation status within the IUCN Red List and the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). For example, *Magnolia officinalis* is a second class protection species in China. Species used by local ethnic minorities, which have cultural and economic importance for local people, are also included. An effort was made to choose species with different biological characteristics, and various plant parts used, in order to encompass a range of resource management issues.



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Measuring sample plant species as part of the resource assessment

The project team collaborated with the IUCN-SSC Medicinal Plant Specialist Group and the FairWild Foundation to carry out the “risk analysis” for the five target species. This methodology is used to analyse the resilience of the plants to harvesting pressure, and hence the risk of unsustainable wild-collection. Based on available information, three of the target species were classified as “Medium risk” (*Magnolia officinalis*, *Polygonatum odoratum*, and *Polygonatum cyrtonea*) and two as “Low risk” (*Leonurus japonicus* and *Persicaria hydropiper*).

The desk-based risk analyses were complemented by a field resource inventory conducted in the Longquan county of Zhejiang province, the pilot site for the project, where both *Polygonatum* spp. and *Magnolia officinalis* are present. The team carrying out the inventory consisted of the representatives of Wecome, the supplier company Longquan Longkang Agricultural Development Company, Longquan county government, community leaders and farmers who are part of the local Farmers' Association of TCM Sustainable Development (established with the support of project), as well as TRAFFIC.



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Different species of Honeysuckle in herbarium of Wecome

The team found a recently felled 26 year-old *Magnolia officinalis* tree, cut down for its bark despite being nationally protected. They also reported that one *Polygonatum* species—*Polygonatum cyrtonea*—is declining rapidly in China in recent years through over-harvesting. The participants of the resource inventory estimated the local declines of up to 60% of some TCM target species populations in the recent years, which emphasized the importance of work carried out in the EGP MAPs project on sustainable harvesting and use of medicinal plant species.





TOWARDS THE “GREEN” TCM LABELLING IN CHINA: THE FAIRWILD STANDARD

The FairWild Standard (Version 2.0) applies to wild plant collection operations wishing to demonstrate their commitment to sustainable collection, social responsibility and fair trade principles. Its 11 principles cover aspects of ecological, social and economic aspects of sustainability.



The purpose of the FairWild Standard is to ensure the continued use and long-term survival of wild species and populations in their habitats, while respecting the traditions and cultures, and supporting the livelihoods of all stakeholders, in particular wild-collectors and other workers. It is intended to bridge the gap between existing broad conservation guidelines and ethical codes on the one hand, and collection-management plans developed for particular species and local conditions on the other.

Adopting the Principles and applying the Criteria of the FairWild Standard will help private companies, government agencies, research centres and communities to identify and follow good practices for the following eleven key elements of sustainable wild plant collection:



A FairWild poster in Chinese

1. Maintaining wild plant resources
2. Preventing negative environmental impacts
3. Complying with laws, regulations and agreements
4. Respecting customary rights and benefit-sharing
5. Promoting fair contractual relationships between operators and collectors
6. Limiting participation of children in wild-collection activities
7. Ensuring benefits for collectors and their communities
8. Ensuring fair working conditions for all workers of wild-collection operations
9. Applying responsible management practices
10. Applying responsible business practices
11. Promoting buyer commitment

The FairWild Standard was used as a guide for various activities in the project, such as the risk analysis of target species, training on sustainable collection practices, verification of the supply chain management of participating companies and subsequent CSR roadmap development, as well as the wide-reaching sustainable supply chain management guidelines for the TCM industry, and recommendations for future policy developments. The project also explored how the FairWild certification scheme could be introduced into China, opening the possibility for future “green labelling” of sustainable wild-harvested products from China.



ENGAGING INDUSTRY LEADERSHIP FOR WIDER TCM SECTORAL CHANGE

The experiences of individual TCM companies have been extended to the TCM industry sector in the target provinces, and more widely in China as well as internationally. The constituency and outreach capacity of the World Federation of Chinese Medicine Societies (WFCMS) has been key to this broader dissemination.

In September 2013 and 2014, the EGP MAPs project was presented at workshops during the 10th and 11th World Congresses of Chinese Medicine (WCCM) in the USA and Russia, respectively. A number of TCM companies from China attended the Congresses. A number of meetings were further carried out during the relevant trade shows, including BioFach trade fair in Germany, BioFach China and Natural/Health Ingredients fairs in Shanghai.

Project partners organized the TCM Corporate Social Responsibility and Sustainability Forum, carried out in February 2014 and April 2015 to facilitate an exchange of knowledge and experience within the TCM sector and beyond on sustainability. The Forum brought together government agencies, research institutes, NGOs and CSR consultancies, as well as companies. The wide-ranging CSR topics relevant to the TCM industry sector were narrowed down to the following: ensuring sustainable harvesting practices of wild medicinal plants; well-managed and transparent supply chains; and good manufacturing practices that focus on quality control and traceability.

Mr Yang Rongchen, Deputy General Director of the State Administration for TCM (SATCM), participated in the 2nd Forum meeting and encouraged participants to follow the CSR TCM sector Guidelines and contribute towards China's TCM Strategic Development Planning work. He also emphasized the importance of co-operation between government agencies, especially with the State Forestry Administration (SFA). "The SFA and the State Administration for TCM are co-operating over the use of TCM materials, which has benefits both for sustainable use of medicinal plants and for forest protection," he said ³.

The TCM industry associations' partnership provided major opportunities for scaling-up project outcomes. For example, the International Trade Union of Genuine Regional Materia Medica (TUGRMM)—a trade alliance supporting the sustainable production of wild medicinal plant species—has taken on a leading role in the facilitation of the TCM Corporate Social Responsibility and Sustainability Forum described above, providing a sustainable footing for the forum beyond the project end.

Another major project success was bringing the discussions around organic production of TCM ingredients into the agenda of WCCM, resulting in organic principles being the major topic during the June 2015 WCCM Summer Summit. In the Summit, organic TCM materials and products were highlighted and drew the attention of the audience, especially the discussion of the relationship between genuine regional material medica and organic TCM material, and the Organic TCM Cultivation Alliance was founded under WCCM.



II TCM CSR Sustainability Forum

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³ Quotes in TRAFFIC press release on 24 April 2015 <http://www.traffic.org/home/2015/4/24/traditional-chinese-medicine-industry-holds-csr-sustainable.html>

RESULT 2

Skills acquired and applied for sustainable collection of wild medicinal plants, supported by self-regulated associations.



The EGP MAPs project included an emphasis on putting the sustainable collection of wild plants into practice, working through the trade chains of the participating companies to engage with the wild-collectors (often farmers, who also collect wild plants). Key outcomes in this result area include:

- *Wild-collectors' awareness and practical skills in sustainable harvesting and production raised through the FairWild Standard training sessions, delivered in Hunan and Zhejiang provinces to 1105 wild-collectors and farmers.*
- *A national level Farmers' Association of TCM Sustainable Development established and legally registered under the China Medical Pharmaceutical Material Association (CMPMA). The Association is based on the suppliers to the target TCM manufacturers and specialized for target species, *Polygonatum cyrtonema* Hua and *Polygonatum filipes* Merr. (*Rhizoma Polygonati*). The association enables self-operation of sustainable production and extending markets for sustainable products.*
- *Research conducted on international markets, including the EU, for sustainably-certified wild-collected botanical ingredients from China, to understand the market pattern, trend, and growth potential. The research contributes to the overall arguments to promote the uptake of the sustainability standards, as well as specifically, supporting the interest and engagement of China's TCM sector in more sustainable practices.*
- *Skills further strengthened for enterprises and producers through a study visit to the European Union–China Biodiversity Programme (ECBP) beneficiary Pingwu Shuijing Cooperative to see the wild *Schisandra sphenanthera* harvesting site in Sichuan Province.*



TRAINING PROGRAMME: BUILDING AWARENESS AND SKILLS OF OVER 1000 WILD-COLLECTORS AND FARMERS OF TCM PLANT RESOURCES

Over 1,000 wild-collectors and farmers of TCM plants were trained between 2013 and 2015 by the project partners of the EGP MAPs project in Hunan and Zhejiang province. With an overall aim of increasing the capacity and skills of producers in sustainable wild-collection and cultivation of medicinal plants, species and situation specific training materials were delivered focusing on all aspects of harvesting and post-harvesting handling of materials.

A range of additional expertise was brought into the project to develop the comprehensive training materials, which covered both the international best practice of the FairWild Standard for wild collection, and national guidance on good cultivation practices. Various materials were developed targeting the traders and manufacturers



Wild-harvesters and farmers' training session

© U Chenyang/TRAFFIC

of TCM products and producers involved in both the growing and harvesting of plants.

Overall, nine training sessions were carried out, delivering presentations and practical knowledge to 1,105 wild-collectors and farmers. The post-training survey demonstrated that these sessions provided practical skills to producers in sustainable cultivation, harvesting, post-harvesting handling of materials, and increased their overall awareness of sustainable production.



TCM FARMERS' ASSOCIATION OF TCM SUSTAINABLE DEVELOPMENT SET UP TO BUILD SKILLS AND OPPORTUNITIES FOR SUSTAINABLE TRADE

In order to increase the capacity of wild-collectors and farmers for organization and improved trade relationships, a Farmers' Association of TCM Sustainable Development has been created in the EGP MAPs project framework to oversee the sustainable supply of "*Rhizoma Polygonati*" for the TCM industry. *Rhizoma Polygonati* is a TCM ingredient famed for its anti-fatigue powers, and is made from the rhizomes of *Polygonatum* spp. (Solomon's Seal). The Association brought together medicinal plant wild-collectors, farmers, community co-operatives and companies in the vicinity of Lishui city, Zhejiang province. The Association's development and growth is supported through the China Medical Pharmaceutical Material Association (CMPMA). The Association will act as a platform for dialogue between government agencies and those involved in TCM harvesting and production.

The harvesting and marketing of *Rhizoma Polygonati* was chosen as an example of how green supply chains could be developed from harvesting to product distribution via sourcing, trading and manufacturing and involving EGP MAPs partners, including farmers, co-operatives, companies and industry partners. Representatives from the TCM Administration and officials from the Environment Protection Bureau, Lishui Forestry Bureau, Agriculture Bureau, and Lishui Civil Affairs Bureau attended the ceremony where the Farmers' Association of TCM Sustainable Development was formally established. The Association announced that it would operate under the guidelines built around the FairWild principles of sustainable sourcing and equitable benefit sharing. Representatives from Lishui Forestry Research Institute, Lishui Agricultural Research Institute, and Nanjing TCM University committed to providing technical support on adopting good agricultural practices and following organic and FairWild Standards.

Liao Zhongkai, the first Chair of the Farmers' Association said: "This Farmers' Association will use modern information networks to find business opportunities for ethnic products, spread the fair trade concept in China, and focus on protection of wild TCM plant resources and biodiversity conservation."

The establishment of the Farmers' Association of TCM Sustainable Development built on the previous project experience of study visits and training sessions with the Pingwu Shuijing Co-operative in Sichuan province. The Shuijing Cooperative was established within the framework of the European Union–China Biodiversity Programme and benefitted from a range of training and an established international trade chain for Southern Schisandra (*Schisandra sphenanthera*), used in a medicinal tea by a US manufacturer. Beginning with one village where the approach was first piloted, the co-operative now includes over 20 villages, 480 households and 1,500 people. With increased quality of harvesting and production, as well as international market links established with responsible buyers, the price of the raw materials is also increasing, contributing more to wild-collectors' income.



Association establishment ceremony

©Sun Ping/CMPMA



BEST PRACTICE CASE-STUDIES

Case-studies illustrating international best practices focusing on private sector, government policies and legislation, as well as projects, were developed in the project framework and launched during the 2nd TCM Corporate Social Responsibility and Sustainability Forum in April 2015.

The main aim of the case-studies was to serve as a demonstration for the implementation of international (and in particular EU) best practices to provide practical examples for the project target groups and final beneficiaries. The case-studies included those dedicated to the implementation of the FairWild Standard and certification schemes by companies in the UK, Hungary, Poland and the USA. They further highlighted various implementation projects in China, as well as central Europe, focusing on the uptake of the FairWild Standard as non-certification. Finally, the case-studies focused on selected good practices in the development of better policies and regulations for management of wild plant resources, including the examples of South Africa and the Lesotho Biodiversity Management Plan for *Pelargonium sidoides*, the National Strategy for Non-Wood Forest Product Sector of the Republic of Kosovo, and the overview of legislation and policies covering wild plant conservation and sustainable use in the European region (see below, under Result 4).



Fruit of Southern Schisandra harvested in Sichuan province, target species of one of case-studies

© A. Timoshyna/TRAFFIC

Within the companies' experiences implementing the FairWild Standard, Runo Spolka z.o.o. is one of Poland's largest wild-collection companies with a network of 20 purchase centres and selling over 200 wild-collected herbs from north-east Poland. Runo has 500 registered wild-collectors, of whom 90% are elderly and retired and 10% are unemployed. Harvesting provides the only chance to earn some money. In 2002, Runo became the first Polish organic certified company and since 2009 has been FairWild-certified. Reflecting on the experiences with the FairWild certification scheme, the company noted the development of closer relationships with collectors and greater involvement through training sessions to learn about sustainable wild plant harvesting. 60 collector families receive a fair trade price for Dandelion roots and Nettle leaves and benefit from the FairWild Premium Fund (additional payment by the buyer into the fund for the community social development project). A US customer purchased 6,730 kg of raw materials in 2009 which grew to 30,000 kg by 2012. From the 2012 sales, about USD7,200 were placed into the FairWild Premium Fund account for the families to collectively decide on how to use these towards social development at the community level. Runo is also implementing the ecological requirements of FairWild Standard, developing management and monitoring systems for wild-collection and training collectors in sustainable harvesting techniques. A resource assessment was conducted in 2013, and annually, there are 2–3 training sessions on Good Agricultural and Collection Practices (GACP) and FairWild requirements.



Experience exchange of EGP MAPs target companies with the Pingwu Shujing Cooperative

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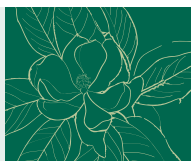
RESULT 3

Farmers pilot green (organic and environmentally friendly) cultivation schemes through learned skills and compliance with certification standards.



The EGP MAPs project also included an introduction to the sustainable cultivation practices of MAPs, as a component of the sustainable sourcing practices. Key outcomes in this result area include:

- Analysis of applicable sustainable cultivation standards and certification schemes and their feasibility of use in China carried out.
- Training materials in organic and standardized cultivation practices developed and delivered to over 1,000 farmer suppliers of the target manufacturers. Farmers welcomed the training materials, which raised their awareness on environmentally-friendly cultivation, enabled direct communication with technical experts and equipped them with the latest techniques. Their skills development was also supported through the study visit to an organic cultivation site in Qinghai province.
- The major target manufacturer Wecome and its supplier, a producer cooperative in Longquan (Zhejiang province), have developed a supply-purchasing alliance for sustainable TCM raw materials. The alliance will adopt standardized cultivation practices to reduce adverse impact on natural environment (soil, water and air) and improve product safety.



BUYERS OF SUSTAINABLE TCM INGREDIENTS — SELECTED MARKET STUDY HIGHLIGHTS

A joint study by the International Trade Center (ITC) and TRAFFIC implemented within the EGP MAPs project⁴, demonstrated that there may be a current market for between 5% and 15% of China's total MAP exports (about 65.1 million kg to 195.4 million kg) with organic certification. About 5% to 10% (3.3 million kg to 19.5 million kg) may have additional market opportunities if further value is added with the dual certification of organic and fair ("organic + fair").

Chinese wild-collected MAPs (wild and cultivated) with the highest export market potential if certified as organic + fair include: Barbary wolfberry (*Lycium barbarum*) fruit, Chinese angelica (*Angelica sinensis*) root, Chinese Licorice (*Glycyrrhiza uralensis*) root and rhizome, Chinese Rhubarb (*Rheum palmatum*, *R. tanguticum* and/or *R. officinale*), Chinese



EGP MAPs project manager presenting the project at the Health & Natural Ingredients trade fair in Shanghai

⁴ This section is an excerpt of Brinckmann J., 2015. Analysis of Market Potential for Wild-collected Chinese Medicinal and Aromatic Plants with Sustainability (Organic and Fair) Certifications (Technical Paper). International Trade Center (ITC), Geneva

skullcap (*Scutellaria baicalensis*) root, Cordyceps (*Cordyceps sinensis*) fungus, Eleuthero (*Eleutherococcus senticosus*) root and rhizome, Mongolian Dandelion (*Taraxacum mongolicum*) herb and root, schisandra (*Schisandra chinensis* or *S. sphenanthera*), and Seabuckthorn (*Hippophaë rhamnoides*) fruit.

From the data reviewed for this study it has become clear that the market for organic products continues to grow year on year (consistently for the past 30+ years) and that the market for fair trade products also continues to grow (consistently for the past 15+ years). Furthermore, the market for ingredients and products with dual certification, i.e. “organic + fair”, continues to expand. There may also be an emerging consumer expectation that certain types of products should be labelled with multiple certifications including “fair”, “non-Genetically Modified Organism (non-GMO)” and “organic”, among other assurances of value chain ethics and sustainability.

It therefore appears reasonable to suggest that China, as the largest producer, user and exporter of MAP ingredients worldwide, has an opportunity to participate in a fast growing sub-sector of sustainable products for the global market. And, as already stated, a retail market for “organic + fair” labelled products is already growing fast in parts of China. Retail stores in Hong Kong SAR already sell “fair trade”, “organic wild and “FairWild” labelled finished herbal products. Furthermore, a Fairtrade International (FLO) member is now situated in Hong Kong SAR, the “Fair Trade Hong Kong Foundation” (the marketing organization). Currently, India appears to be the leading exporter of dual certified “organic + fair” MAPs.



Pingwu Shuijing Cooperative Head and representatives of US buyer Traditional Medicinals Inc

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Project partners discussion with companies at BioFach 2015

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In the event that policies were developed and enacted that would enable China-based control bodies to inspect and certify operations for compliance with selected “fair” standards, China’s share of the global sustainable MAPs market should reach a level comparable to or greater than that of the current leader the Republic of India and continue to grow with the annually increasing global demand for dual-certified “organic + fair” herbal products. The “fair” standards are those determined to be appropriate and suitable for Chinese MAP wild-collection operations (e.g. the FairWild Standard) but also MAP farming operations (e.g. FLO Fairtrade Standard).

And finally, besides the market opportunities afforded as a result of value-addition through implementation of international sustainability standards that lead to organic + fair certifications, there is a long-term benefit of running MAP production operations in compliance with such standards because this activity contributes to improved resource management, biodiversity conservation, and long-term survival of the plant species in a healthy ecosystem, which, in turn, provides local communities with a reliable source high quality MAP materials to sell at fair prices into the future.



COMMUNITY MEMBERS' PERSPECTIVES

Shangyang town, Longquan County, Lishui prefecture of Zhejiang province has much redundant arable land and few people left in the villages. There are not many medicinal plants left in the wild and the local economy tends to fall in the winter months.

Since the establishment of the Wecome-Longquan community trade alliance, villagers have found the best way to utilize the derelict lands is to grow Solomon's Seal (*Polygonatum cyrtone-ma* Hua), the species that the trade alliance is focused on. This resulted in the fact that workers who left their hometown for jobs have now returned home to work on their land.



She Ethnic Minority Traditional Costumes

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Under the trade alliance agreement, Wecome, together with Longkang Cooperative, and technically supported by the Agricultural Academy, Forestry Academy in Lishui City, will develop 33 hectares of TCM cultivation sites over three years. This is projected to grow to 66 hectares in the future. About 400 households will participate in the construction of this cultivation base and the medicinal plants related industry will grow to become the leading economic growth factor in Shangyang town.

Sustainable wild-collection awareness and skills are also promoted amongst local farmers. Chen Zhenggen, the head of Tangyuan village, said: "A government slogan of Lishui goes that 'green mountains and clear rivers are the gold and silver for Lishui'. Conserving the wild plants and learning to use them in a sustainable way complies with this government initiative. Farmers love their community and wish the adjacent areas to enjoy good ecology."

"It is urgent to take action to stop chaotic collection. Solomon's Seal is common in the mountains nearby, but since 2013, the species population has plummeted while the market price goes up," said Xia Zeshou, the head of Shekou village.

"With a government subsidy and a purchasing commitment by TCM companies, farmers are much more confident in investing in TCM standardized cultivation. After all, it is a three-year investment before any harvest can be done," said Chen Zhenggen, who encouraged villagers to reclaim the wasted lands and to join the trade alliance.

Xu Qing, the Deputy Sectary General of Shangyang town said: "The grass-roots government is always seeking the best way to improve farmers' income and thus boost local economy while not depleting the local environment and resources. Medicinal plants farming, considering the natural environment of Shangyang town and the market prospect, can be the most feasible option for the local economy. Mushroom cultivation used to be the leading industry here, which consumes timber. Cultivation of medicinal plants will not only revive the waste lands but also help to save the wild plants."

"Sustainable wild collection is also desirable, because Solomon's Seal will soon disappear from nearby mountains if its price keeps going up and if nothing is done," said Xu Qing⁵.



Resource assessment of Solomon's Seal *Polygonatum* spp in Longquan county in support of the trade alliance

©Chen Dingran/TRAFFIC

⁵ Press release about the establishment of Farmers' Association is available at: <http://www.traffic.org/home/2015/4/1/farmers-association-created-to-support-green-supply-chains-f.html>, and further quotes based on personal interviews with TRAFFIC staff



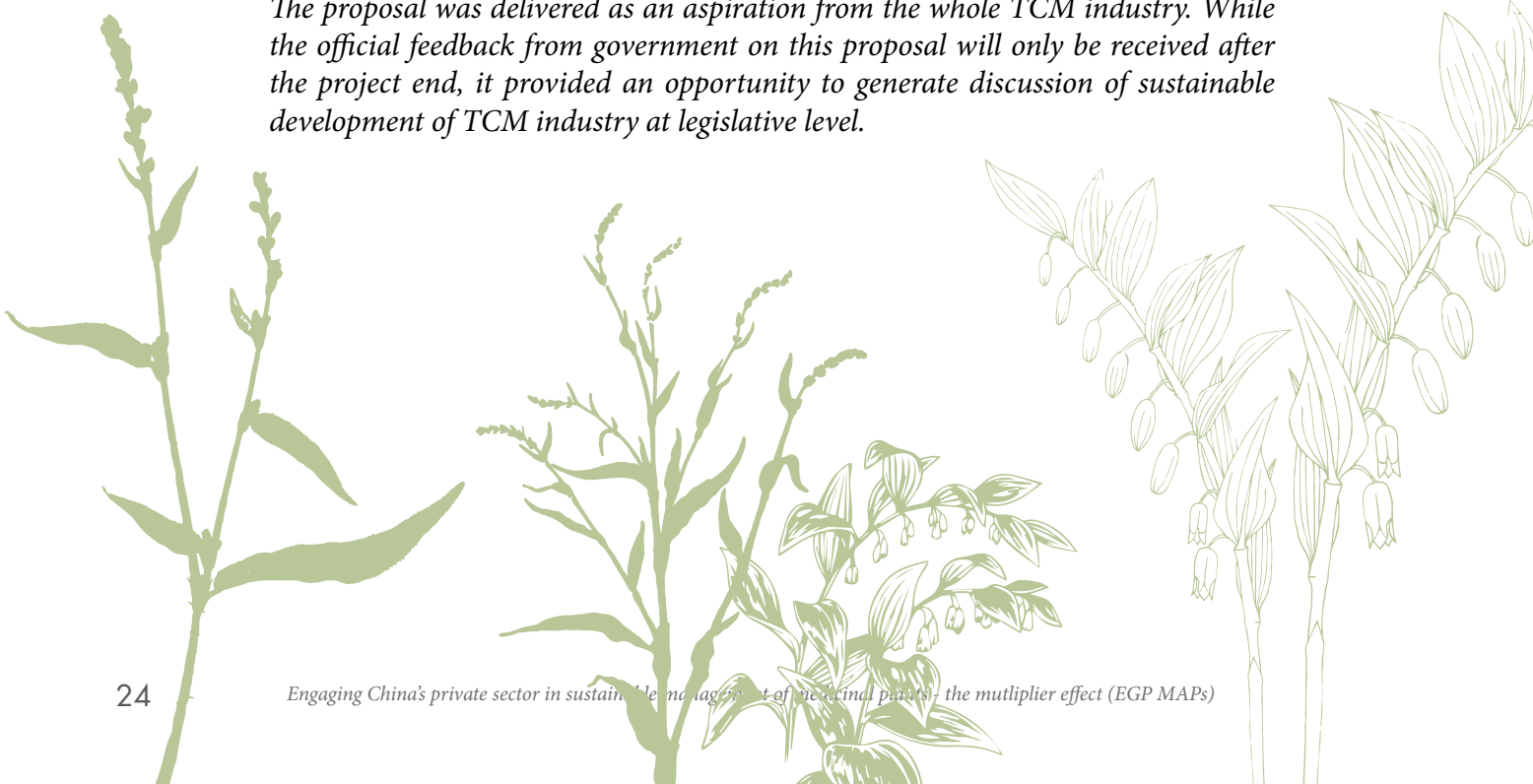
RESULT 4

Increased participation of TCM stakeholders in decision-making (laws, regulations and policy making) processes through communication between private sector, communities and governmental agencies to develop government policies favourable to green business practices.



The EGP MAPs project aimed to bring together the perspective of different stakeholders in developing recommendations for future policy developments in China, both at the provincial and national level. Key outcomes in this result area include:

- *A number of training sessions and targeted discussions carried out with government agencies, aiming at raising government awareness and capacity for the support of sustainable management of TCM resources at levels from central to provincial to local.*
- *A review of existing laws and regulations governing TCM resources carried out and output reviewed through a process engaging multiple stakeholders.*
- *At the international level, the project experience was presented at the 12th Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD CoP12). This included targeted interventions during the discussion of the Global Strategy for Plant Conservation and biodiversity and health; as well as presentations to CBD Parties, government agencies and other representatives at side-events and the Business and Biodiversity congress.*
- *The project supported the formulation of policies encouraging sustainable TCM business practices. In particular, a policy proposal was made through the China Medical and Pharmaceutical Material Association (CMPMA) for adopting sustainable voluntary standards guiding sustainable wild-collection and environmentally-friendly cultivation of TCM raw materials to the National People's Congress and to the Chinese People's Political Consultative Conference (CPPCC) in March 2015. CPPCC is the highest legislative and advisory government institute of China. The proposal was delivered as an aspiration from the whole TCM industry. While the official feedback from government on this proposal will only be received after the project end, it provided an opportunity to generate discussion of sustainable development of TCM industry at legislative level.*





GOOD GOVERNANCE AND POLICIES MATTER FOR THE SUSTAINABILITY OF THE TCM SECTOR

Better, inclusive and effective TCM sustainability governance has been a primary focus of the EGP MAPs project, recognizing the need for an appropriate policy and legal framework, as well as effective implementation and enforcement, in creating the enabling conditions for sustainable business and resource management.

The potential for the TCM products sector to move towards sustainable production and consumption is strongly influenced by the policy and regulatory environment in which the private sector operates. This environment can both hinder and reinforce the uptake of sustainability measures, through the creation of barriers or incentives for the private sector to take action. In addition to the formal policy and regulatory environment and government programmes to support development of the sector, other stakeholders, including trade associations and inter-governmental organizations, have the potential to provide support to enterprises in the TCM production sector. This support may be in a form of setting or using standards and tools to promote sustainable consumption and production through industry guidelines and industry standards.

A review of existing policies, laws and standards regulating the TCM sector, as well as sourcing practices was carried out as part of the EGP MAPs project, resulting in the policy recommendations for policy-makers in China (see section below).

Local, provincial and central-level government agencies were involved in project training sessions, meetings and consultations, including in the multi-stakeholder context, facilitating the exchange of opinions between government and companies involved in production and trade of TCM ingredients and products.

Two consultancy reports were developed relevant to the review of applicable laws, policies and standards for the sustainability of TCM sector within the framework of EGP MAPs. The initial project study “A Review and Comparison of Relevant Medicinal Plant-Related Standards and Policies in China and Internationally” provided an introductory analysis of standards and policies relevant to the TCM sector. A more in-depth report “Policy, Laws and Regulations for Collection, Management, and Sustainable Use of Medicinal Plant Resources” (Runhuai *et al.*, 2015) identified a total of 12 national laws, 10 administrative regulations, 29 departmental rules, 57 national industrial policies, 21 sectoral programmes and development outlines, 5 standards and practices, and 8 overlapping protection lists on the collection, management and use of medicinal plant resources in China. These were analysed and a comparison carried out identifying potential areas for strengthening the laws and policies, in order to provide more enabling legislative and policy environment for sustainable business practices in the TCM sector, as well as better regulation of management and use of medicinal plant resources.

See the section below for the policy recommendations proposed and discussed in a multi-stakeholders consultation process.



EGP MAPs project policy consultation

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PLANT CONSERVATION POLICIES CASE STUDY IN EUROPE

The EGP MAPs project emphasized exchange between the EU and China, in line with the overall aims of the EU–China EGP. The project developed a case study for plant conservation policy in Europe ⁶ to feed into the policy review and recommendations for China based on the report *The European Red List of medicinal plants* ⁷. The report describes conservation efforts focused on plants and habitats at scales ranging from the international to the national, and increasingly, market tools developed to promote the sustainable use of medicinal plants. The over-exploitation of wild resources was identified as the primary threat to medicinal plants in Europe.



©L. Jiangliang

Houpu Magnolia *Magnolia officinalis*,
bark of which is collected as an
important TCM ingredient

PROTECTION OF HABITATS AND SPECIES: INTERNATIONAL FRAMEWORK

On the international level, the Convention on Biological Diversity (CBD) promotes biodiversity conservation, sustainable use of its components and the equitable sharing of the benefits arising from the use of biodiversity. In relation to plants, the Global Strategy for Plant Conservation (GSPC) was adopted by the CBD in 2002. The updated GSPC sets targets for the period 2011-2020 which are of direct relevance to medicinal plants.

The CBD Strategic Plan agreed in Nagoya, Japan in 2010 established a further 20 target actions (the Aichi Biodiversity Targets). The CBD, in partnership with the World Health Organization (WHO) is also developing an area of work relevant to medicinal plant conservation, around biodiversity and human health.

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, another relevant policy document, is implemented in the EU through regulation 511/2014.

Another multi-lateral environmental agreement that provides a framework for trade in medicinal plants is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Over 65 plants traded for medicinal and aromatic purposes are subject to regulatory control under Appendix II of CITES, which aims to ensure trade is both legal and sustainable. Useful tools developed to support the implementation of CITES include the voluntary guidance on non-detriment findings for perennial plants.

WHO in its Traditional Medicine Strategy, prioritizes the finalization of the update of the *WHO/IUCN/WWF/TRAFFIC Guidelines on the Conservation of Medicinal Plants*, which will provide an important guidance to WHO members on the conservation and sustainable use of medicinal plants.

⁶TRAFFIC Factsheet. 2015. European policies on wild plant conservation and sustainable use. Available at: <http://www.traffic.org/storage/Case-study-10-EGP-MAPs-European-Policies-on-wild-plants-conservation.pdf>

⁷ Allen, D., Bilz, M., Leaman, D.J., Miller, R.M., Timoshyna, A. and Window, J. 2014. European Red List of Medicinal Plants. Luxembourg: Publications Office of the European Union



PROTECTION OF HABITATS AND SPECIES: EUROPE

European countries and EU Member States are signatories to a number of regional conventions and Directives targeted at conserving species and their habitats, including vascular plants. These include EU Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention), EU Habitats Directive, and EU Wildlife Trade Regulation.



© A. Timothyna/TRAFFIC

Herbarium samples of Houpu Magnolia
Magnolia officinalis at Wecome

Many individual European region countries have national scale conservation legislation that encompasses vascular plants, and there are a number of geographically-specific conventions (e.g., The Alpine Convention for the Framework Convention on the Protection and Sustainable Development of the Carpathians).

The European Strategy for Plant Conservation (ESPC) was first developed in 2001 by Planta Europa and the Council of Europe (2001) and was in force until 2007. At the 5th Planta Europa Conference, the Strategy was renewed and targets were set for the period 2008-2014, aligned to the GSPC.

At the national level, relevant legislation include the identification of protected or endangered flora, national Red Books or Red Lists. By 2007, almost all European countries had initiated national Red Lists. Countries have also developed National Biodiversity Strategy and Action Plans. In some cases, specific national responses to the GSPC (e.g. United Kingdom, France, Austria; see Plants 2020 (2014)) were developed. Protected areas established on different levels contribute to plant habitat and population conservation efforts.

Strategies specific to sustainable wild-collection of plants have also been developed in a few European countries, but such efforts remain scarce. One example of such regulation is from the Republika Srpska (Bosnia and Herzegovina) 2010 Rulebook of Conditions for Utilization and the Methods of Collection of Other Forest Products and its 2014 amendment, based on the Law of Forests.

In Central and South-eastern Europe, the number of traditional wild-collectors of medicinal plants is declining due to continuing urbanization (similar to the situation in many parts of China), putting at risk the survival of the tradition of wild-collection of medicinal plants. This issue is being addressed for example through the Traditional and Wild (www.traditionalandwild.eu) project in Hungary, Czech Republic, Slovenia and Poland, focusing on the revitalization of the tradition of wild-collection. The project developed training materials and strategies focussing on the use of the FairWild Standard, as well as an online toolkit (www.whygowild.com).



EGP MAPS
PROJECT POLICY
RECOMMENDATIONS

EGP MAPS PROJECT POLICY RECOMMENDATIONS

The aim of the recommendations is to provide guidance, based on the multi-stakeholder input obtained during the implementation of the project, to relevant government agencies and other stakeholders with a view of improving the existing policies and laws governing wild medicinal plant resources, as well as their implementation.

The draft policy recommendations were presented at the 2nd TCM Corporate Social Responsibility and Sustainability Forum in April 2015, incorporating input received from the target project companies, government and research agencies, and participating NGOs. Based on their feedback the report was further developed and shared for a round of consultations with government agencies and companies in June-July 2015. The policy recommendations are directed to the four primary stakeholder groups that influence conservation, management, use and trade of wild medicinal plant resources in China: (1) Legislative government agencies at all levels, and law enforcement agencies ⁸, (2) specialized government agencies responsible for enabling and implementing policies ⁹, (3) research institutions, (4) companies and relevant industry associations.

I. Improvement of legislation and strengthening management and control of wild medicinal plant resources (directed to legislative government agencies at all levels, and enforcement agencies)

- 1.1 Identify the resource value of medicinal plants, raise awareness of the need for resources protection, and establish the concept of sustainable utilization of resources at all levels
- 1.2 Accelerate the revision of existing legislation concerning traditional Chinese medicine, including clarification of the legal status, protection, dynamic monitoring, and regular surveys of wild medicinal plant resources. The legislation should encourage conservation, sustainable use and cultivation of medicinal plants.
- 1.3 Revise the existing Regulations on Protection of Wild Medicinal Resources, to inform the development of standards for endangered wild medicinal plant resources, necessary adjustments in species protection lists, expansion of protection scope, and clear administrative responsibilities. The Regulations should establish the principle of compensated use of resources, supplement the terms of Prohibited Actions, and define the legal principle and bottom line. The revision should inform the adjustments in the relevant provincial-, and local-level legislation.
- 1.4 Ensure involvement of stakeholders, including industry, industry associations, research institutes, enterprises, wild-collectors and communities, and civil organizations in the development of the legislation.
- 1.5 Clarify and improve the wild medicinal plant resources property regime to ensure the clear division of rights and responsibilities. Clarify and standardize the collection permits system and ensure non-discrimination for all resource users.
- 1.6 Strengthen law enforcement for conservation and sustainable use of wild medicinal plant resources.

⁸ Referring to China People's Congress – national legislative body, central and local government at all levels and enforcement agencies, such as forest police
⁹ Referring to government agencies including SFA, SATCM, Ministry of Commerce, Ministry of Finance, and Tax Bureau

1.7 Build capacity of relevant agencies to ensure the effective implementation of legislation at all levels, including through targeted training programmes. Establish performance evaluation and accountability mechanisms for enforcing the legislation and tasks identified in respective conservation programmes for wild medicinal plants.

1.8 Support dialogue in the nexus of biodiversity conservation and health, including through promoting closer collaboration between sectoral ministries, including the Ministry of Environmental Protection, State Administration of Forestry, State Administration of Traditional Chinese Medicine, Ministry of Health, Ministry of Commerce, Ministry of Industry and Information Technology and others, in particular as related to discussions on the sustainability of harvesting of wild plants.

1.9 Relevant to CITES implementation in China, review livelihood and conservation impacts of existing policy approaches (i.e. shift to cultivation) to managing species threatened by trade, in particular those listed in the CITES Appendices and those of high commercial importance. Support the use of rigorous Non-Detriment Findings guidance for medicinal plant species.

1.10 Relevant to CBD and its Global Strategy for Plant Conservation implementation, include the reference to the sustainability of wild collection in the China Strategy for Plant Conservation, and pilot the implementation of the sustainable wild collection and equitable trade approaches to the strategically selected medicinal and aromatic plant species. Include the implementation of the EGP MAPs project into the next China's National Report to CBD.

II. Development of policy measures to encourage and promote sustainable use of medicinal plant resources (directed to specialized government agencies responsible for enabling policies)

2.1 Set up a Special Government Support Fund for issues concerning the conservation and sustainable use of medicinal plant resources

2.2 Conduct a comprehensive economic valuation of China's wild medicinal plant resources, and based upon it, introduce a compensation system, such as payment for ecosystems services (PES) and the resource use compensation tax.

2.3 When developing and implementing favourable economic policies for TCM and MAPs industry companies, take into account companies' performance as related to the implementation of certification standards and schemes that meet international benchmarks such as the FairWild Standard, the experience of product registration, and the track-record of the approval of government-supported projects.

2.4 Encourage government agencies at all levels to formulate conservation and development programmes for TCM materials (including sustainable cultivation programmes) in response to the TCM Materials Conservation and Development Programme (2015-2020).

2.5 Government agencies at all levels should encourage conservation of China's TCM wild plant resources. In particular, through the encouragement of companies to use wild TCM plant resources in their products and formulate steps to ensure sustainable use, and where necessary protection of these resources. Companies should further be encouraged to develop operational and management practices with reference to international standards on sustainable use of wild plants. Government funding and tax reduction schemes should favour companies that are certified against domestic or international standards for sustainable use of medicinal plant resources.

2.6 Financial and insurance institutions and agencies should evaluate TCM and MAPs companies' practices in the area of sustainable use of medicinal plant resources, when assessing the overall companies' performance and credit rating. This would further help enhance companies' vision of development and corporate social responsibility.



III. Scientific research in support of sustainable resource development (directed to research institutions)

- 3.1 Carry out the 4th National Survey of China's Medicinal Resources, as a follow-up to the latest 1983 survey, develop priority species management plans, and establish a dynamic monitoring network feeding information into the annual updates on the status of wild medicinal plant resources.
- 3.2 Carry out a nationwide assessment of the conservation status of medicinal plants using widely recognized conservation tools, such as the IUCN Red List criteria.
- 3.3 Develop technologies for conservation and sustainable use of medicinal plants, including detailed resource inventories.
- 3.4 Compile a national programme for protection and sustainable use of wild medicinal plant resources.
- 3.5 Create medicinal plant germplasm banks and undertake in-situ and ex-situ conservation activities.
- 3.6 Establish pilot zones for conservation and sustainable use of wild medicinal plants. These pilots should be established with the participation of all relevant stakeholders and include in-situ conservation measures, studies of plant regeneration, and trial sustainable wild-harvesting with reference to international standards on sustainable wild-harvesting (e.g. FairWild Standard).

IV. Introduce international standards and encourage companies to implement sustainable business practices (directed to companies and relevant industry association)

- 4.1 Raise environmental consciousness and encourage the adoption of sustainable wild-harvesting practices by introducing international best practices (e.g. the FairWild Standard), raise awareness of such practices and promote their acceptance through publicity and training.
- 4.2 Select representative companies to pilot sustainable management practices certification that meet international benchmarks such as the FairWild Standard, evaluate the outcomes, and increase their use beyond pilot schemes.
- 4.3 Support companies to introduce risk analysis and resource assessment for the ingredients in their products, establish management plans for these resources and introduce a traceability tracking system. Encourage further periodical review of sustainable sourcing and supply chain management practices and introduce these issues into companies' CSR reporting and longer-term development strategies.
- 4.4 Promote the notion of enhanced product and brand value through sustainable sourcing and management practices and share relevant case studies.
- 4.5 Promote sustainable consumption of TCM products and the importance of sustainable and legal sourcing of TCM ingredients among domestic and international consumers, to increase market demand for sustainable sourcing and production.
- 4.6 Encourage the development of long-term relationships with wild-harvesting communities based on the principles of mutual respect and equitable trade and with consumers of products containing wild-harvested medicinal plants. Such holistic value chain relationships will ensure transparent communications and help promote a positive image for the TCM sector.

KEY PROJECT PUBLICATIONS

- Engaging China's private sector in sustainable management of medicinal plants—the multiplier effect (EGP MAPs) (Timoshyna A., Li Chenyang, Ke Zhang, Morgan B., and Tshipidis V., 2015), final project report brochure (English and Chinese)
- Project Policy report (English and Chinese)
- FairWild Standard and FairWild Standard Performance Indicators (Chinese)
- International Trade Center (ITC) and TRAFFIC publication: Brinckmann J., 2015. Analysis of Market Potential for Wild-collected Chinese Medicinal and Aromatic Plants with Sustainability (Organic and Fair) Certifications (Technical Paper). International Trade Center (ITC), Geneva
- Set of best practice case-studies (English and Chinese)
- Project flyer (English and Chinese) and FairWild flyer (Chinese)
- Project documentary (English and Chinese)
- Corporate Social Responsibility (CSR) Guidelines for Traditional Chinese Medicine (TCM) industry



In addition, a number of internal project publications were developed and may be available on request. These include: report “A Review and Comparison of Relevant Medicinal Plant-Related Standards and Policies in China and Internationally”; “Policy, Laws and Regulations for Collection, Management, and Sustainable Use of Medicinal Plant Resources”; report “Welcome FairWild Standard benchmark verification report” and the CSR implementation roadmap; a set of training materials (in English and Chinese); report “CSR approaches to risk analysis and risk analysis of target TCM species”; Target TCM manufacturers and traders supply chain map and list of selected TCM ingredients sourced; report “Feasibility study of sustainable cultivation schemes in China”; and “FairWild Standard and Certification scheme in China feasibility report” (in English and Chinese).

PROJECT WEBSITES

<http://www.traffic.org/egp-maps> (in English)

<http://www.trafficchina.org/egp-maps> (in Chinese)

ABOUT US



TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

TRAFFIC is a strategic alliance between WWF and IUCN, leading the delivery of key components of their missions and programmes through a unique partnership that combines the considerable strengths of each of these two major global conservation organizations.

For more information visit www.traffic.org



The EU-China Environmental Governance Programme (EGP) is a €15 million EU-funded programme implemented with China's Ministry of Commerce and the Ministry of Environmental Protection. The programme is carried out by the Policy Research Centre for Environment and Economy (PRCEE) and runs from December 2010 until Dec 2015. The objective of the Programme is to enhance environmental governance in the People's Republic of China based upon the principles of the Aarhus Convention. It comprises four themes:

1. Public access to environmental information
2. Public participation in environmental planning and decision making
3. Access to justice in environmental matters
4. Corporate environmental responsibility

The Programme comprise two parts: A National-level component and Local Component. The Local Component comprises 15 local partnership projects in which European entities work together with local governments in different parts of China. Each partnership project introduces a European approach to one of the four themes indicated above in order to test and put into practice new ideas on environmental governance.

The National-level Component acts as an umbrella to the Local Component. It extracts and brings the result and policy implications of the partnership projects to a platform set by the Ministry of Environmental Protection. These are used for consideration in policy modification and for replication in other parts of China.

Further details of EGP activities and partnership projects can be found on the EGP website: www.ecegp.com



TRAFFIC REPORT

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