

Social Assessment combined with Process Framework

Project title: Establish Protected Area Friendly System in tropical China

Organization: Institute of Zoology, Chinese Academy of Sciences (IOZ/CAS)

1. Project background

One of major root causes for poor management in protected areas is that community development has not been well coordinated with conservation. The benefit generated from PAs is not fairly shared with local communities and major portion of the benefit has gone to pockets of small number of people (such as outside companies). Local communities have lost the right of development, but do not get corresponding benefit. Some residents have to increase income through poaching, illegal logging and over use natural resources, which become the major obstacles for effective PA management. In order to address the key threats to protected area conservation, Dr. Yan Xie from IOZ, together with over 200 experts from various disciplinary established the Protected Area Friendly System (PAFS) in China in 2013. The goal is to gather efforts from all social sectors, to create and maintain Protected Area Friendly Product Brand, to make sure all products certificated by the system benefit to protected area conservation and no poisonous materials are used during the whole production process, to allow general public enjoy products with double features of conservation and health, and allow local community's products better recognized by the society and their interests and rights are protected. A Protected Area Friendly System Co. Ltd. has also been developed to promote awareness and selling of the PA friendly products.

The core business model for PAFS is an open, charitable and diversified platform, and it mainly operate in the following ways:

1.1 The operation model at protected area sites: to promote collaboration among several organizations, the compulsory elements are:

- a. **Local community** (by means of farmers' association, farmers' group, enterprise) for production of raw products and conservation;
- b. **Local conservation organization** with the vision of environment protection (i.e. PA management organization / local NGO) for the monitoring of production process and the coordination of local people's involvement in conservation;
- c. **PAFS Company** for coordination, guiding, monitoring and supervision of production process and local conservation work;

The optional elements are:

- d. **The technical expert or organization** (i.e. the ecological agricultural technician or organization) for the technical support or production supervision;
- e. **Product processing and sales companies** for the process and/or sales of PA friendly products.

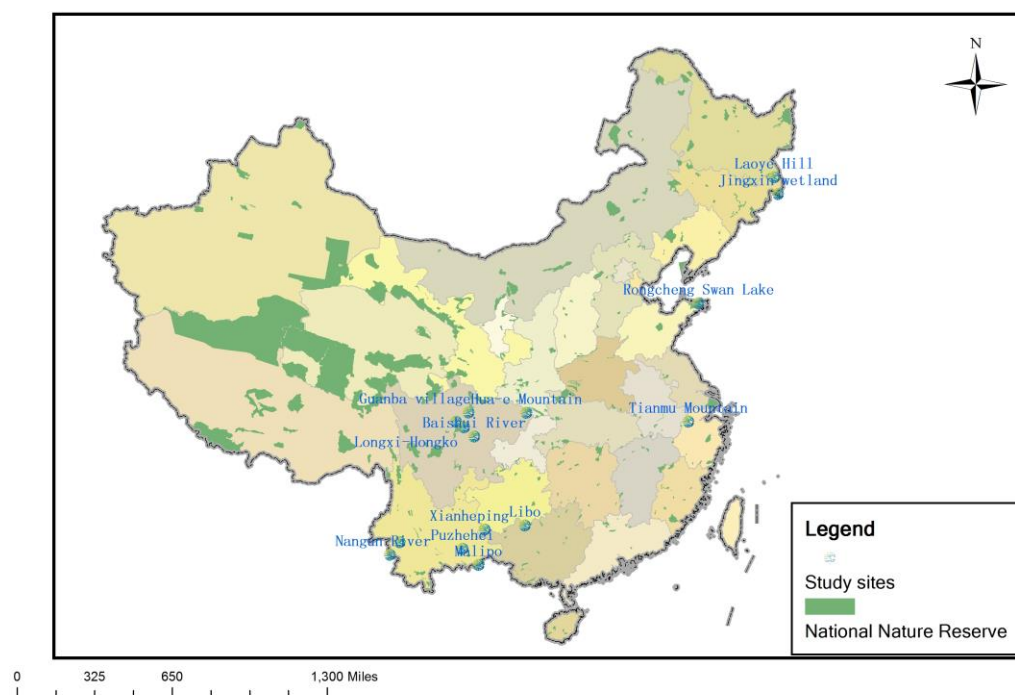
1.2 Conducting scientific research: to identify the ecological threats to the PAs and explore the long-term sustainable solutions;

1.3 Promoting education of conservation: to generate public awareness and participation for conservation by means of website, charitable scientific field research, members sharing and interaction, members meetings, training, public seminars and large-scale advocacy events etc;

1.4 Selling the products: the company will arrange various channels like self-sales, outsourcing, wholesale and retail for the product sales to generate more support for the conservation;

1.5 Promoting monitoring and biodiversity conservation by heavily involving in local people: 8% selling profits will be paid back to conduct local conservation. It will be managed by local conservation organization, but mainly to support local communities to participate in conservation and monitoring biodiversity. The funding will be the key to make sure PA friendly products meet the PAFS criteria in a long run and local communities support the conservation in a long run.

PAFS Study Sites



PAFS has developed a detailed certification procedure and criteria. During 2013-2014, PAFS received 18 self-evaluation questionnaires, and took field visits to 15 protected areas, and there are 12 PA friendly products have been identified from 9 protected areas crossing the country. There are 6 products have signed cooperation agreement. In 2015, 3 products are sold in PAFS e-stores (<http://shop114525977.taobao.com/?spm=a1z10.3-c.0.0.wqXzKM&v=1>), they are rice in Jingxin wetland, Jilin Province; Honey in Guanjia village of Pingwu county, two types wild vegetable in Longxihongkou of Dujiangyan, Sichuan Province. Other three products are Yak and sheep meat in Jiuding Mountain, Sichuan Province, tea in Yongde Grant Mountain, Yunnan Province and green plum in Libo County, Guizhou Province. It is expected to be the effective and efficient institutional platform addressing these challenges and balancing the conventional top-down PA

administrative system.

Based on the concept and practices of PAFS, combined with priority area of CEPF, we raised the idea of initiating PAFS in tropic China, and took visits to potential sites in June and December 2014. During the field trips, we are able to have detailed communication with local experts, PA management organizations and local communities, and finally prepared the proposal.

2. Analysis for the Society and Threat

Based on the following principals, we selected the projects sites:

2.1 Within the priority areas of the CEPF

2.2 Willingness from the local PA management organization for the positive cooperation

2.3 There are threats to the PAs from the local community livelihood

2.4 Willingness from the local community to make changes for conservation

2.5 Threats caused by the local cultural and economic scenario should be within the impact of PAFS.

We choose four pilot areas for the pilot study of initiating the PAFS, in Yunnan Province: Nanlang Village (Nangunhe National Nature Reserve Lanchang District Branch), Tuanjie Village (Nangunhe National Nature Reserve Gengma District Branch), Xiajinchang Township (Laoshan Provincial Reserve), and in Hainan Province: Shuiman Village (Wuzhi Mountain National Nature Reserve). These four areas are in biodiversity hotspots and the focus point of mixed minority cultures. Nationalities live in these areas are Yao, Zhuang, Miao, Mongolia, Wa, Dai, Yi, Bulang, Lagu and Li, and inherited rich cultural heritage.

Nangunhe National Nature Reserve has two branches respectively named as Cangyuan and Gengma Districts with each of their own different social and cultural diversities. So we developed separate project sites in these two branches.

Cangyuan District Branch is for the support of Nanlang Village, located in Cangyuan area and still remains in the experimental zone of the protected area due to historic reasons. The majority people are Wa nationality, 386 in population and 286 of whom are labors. The total land area is 1255 acre, 120 acre farming land, and 800 acre forest, and all is located in the protected area. Among all the forest areas, 200 acre is rubber trees, while the rest is national charitable forest. There is rich biodiversity near Nanlang Village, including many records of sighting Asia elephant. Besides this, there are some big ficus trees near the village attracting birds during the tree seeding season. The livelihood of Nanlang Village is mainly based on the growing of agricultural plants and with small part of immigrated jobs in big cities. Their main agricultural plants include fragrant rice, sugar cane, cassava and some tropical fruits. The local farmers have not made much use of NTFP, but collecting Jizhong mushroom (*Collybia albuminosa*). As they are located in the tropical areas, there is very few demand for firewoods. Therefore, burden from Nanlang Village towards the forest resources is low. However, agriculture is increasingly changing the environment. Sugar cane was introduced in the village several years ago, depending on the huge usage of chemical fertilizers and pesticides. Rubber tree plantation has 40 years history and have largely reduced biodiversity in a large area. Local people would like to cut off old rubber trees,

but are not allowed as they are growing in the protected area. The tradition environment friendly fragrant rice are gradually abandoned due to their attraction to elephants and big demand for water. Currently, only several families in the village still keep growing rice. The way of getting local farmers live co-exist in the protected area would be restoring vegetation around villages, plant various tropic fruit trees, and promote community based ecotourism (bird watching and elephant watching).

Gengma District Branch is for the support of Tuanjie Village located at the border of the Nanganhe National Nature Reserve. This is a village relocated from the protected area in early 90s. Nationalities are Wa, Bulang, Lagu and Han, with 70 families and over 300 people. The livelihood of Tuanjie Village is mainly based on sugar cane, immigrated jobs in big cities, tea leaf picking up, and some domestic animal breeding. There are 32 acres stated owned ancient tea plantation, in which 15 acre located in the water resources protected area (managed by Nanganhe Natural Reserve Management Bureau), and 17 acre are outside. It is worth noting that the legal agreement made when the relocation happened between local government and farmers, only defined the ownership of ancient tea trees but not the rights of tea leaf collecting, which caused the livelihood for tea leaf collecting is currently half legal. Starting from 2014, there began to use farm manure for tea trees, which cut off understory vegetation and plough soil, and this has caused bare soil and damage to biodiversity and water conservation. With the increase of tea price, there is higher pressure to collecting tea leaf. The protected area management organization is aware of this threat and willing to take actions against it to better protect the ancient tea trees, better conserve water resource and support good living for local people. Traditionally, management of the tea trees was very friendly to biodiversity without clear vegetation and plough the soil. Return to this tradition and demonstrate the tea plantation management that benefit to biodiversity could be a focus study in the area.

Laoshan Provincial Reserve is for the support of two villages of Xiajinchang Township, Yunling Village and Zhongzhai Village, both located in experimental zone of the protected area and the land owned by local farmers. Xiajinchang Township has Zhuang, Yao and Han nationalities, 246 families and 1024 people. Their livelihood is mainly tradition crops, NTFP collection, and immigrated jobs in big cities. There is rich biodiversity with enormous rare wild animals and plant species, especially wild orchids. With over harvesting due the high price of wild orchids over the past years, it is hardly see wild orchid any more. Now the price has dropped but the price of Dendrobium is increasing, there is quick increase dendrobium plantation in the protected area. Local farmers clear understory vegetation and cause damage to biodiversity. All the planted dendrobium are bought from the wild of Vietnam. Additionally, there is big demand of firewood in winter due to the special climate characteristics in that area. The key would be demonstrate that dendrobium plantation can be easily friendly to the protected area and potential community based eco-tourism can bring more benefit.

Wuzhi Mountain National Nature Reserve is for the support of the Shuiman Village of Shuiman Township, a Li nationality village located within the inner region of Wuzhi Mountain and neighbored by the national nature reserve. Shuiman Village has 6 natural communities, specifically, upper Shuiman, lower Shuiman, New Xinming, Old Xinming, Fangxiang and

Fangtong. Shuiman Village has a population of 896 people belong to 204 families. Among them, 332 people make living from agriculture while 47 people are immigrant labors. The village owned land contains 642 acres of crops, 910 acres of tea plantation, 484 acres of Yi Zhi (*Fructus Alpiniae Oxyphyllae*), 492 acres of bamboo and 828 acres of yellow cheesewood forest. Traditionally, Shuiman was already very famous for its tea production, supported by the Sino-German intergovernmental cooperation projects --- "Rain forest conservation and recovery" in the past 10 years, a community-based tea production association has been established. Currently, Shuiman Tea becomes an important brand for external promotion. Meanwhile, because Shuiman has the most convenient transportation comparing to other Villages in Wuzhi Mountain region, it is the best location for outside tourists to visit the rain forest ecosystem in Wuzhi Mountain. Therefore, Shuiman has a unique potential to develop eco-tourism. However, due to short-term benefit pursuing, the Village has enfaced problems in both agriculture and eco-tourism, for example, the chemical fertilizer is widely used in the farm land and majority of the profit made from tourism is collected by the outside tour company. To address those problems, it requires us to develop a turely community-based eco-tourism and to establish a new self-management commercial model, from which the Li ethnic minorities can really participate and share the commercial benefit. Additionally, it is important for Suiman Village, through the project, to become a new demonstration site of the Hainan international tourism island national strategy.

3. Free, Prior and Informed Consultations

Free, Prior and Informed Consent with the local communities is the guiding principle of the project implementation. By the time we prepared this proposal and social assessment, we have already conducted several on-site face-to-face consultations with the local communities at the proposed project sites.

In Yunnan province, all the three project sites are introduced by our consultant Xunfeng Wu, while in Hainan province, the project site is introduced by our consultant Bingbo Meng. Both of them have their offices in the provinces and have more than 10 years' experiences working with those communities. All the proposed sites are highly recommended by our consultants because they have both the enormous amount of biodiversity and extraordinary potential to develop PA friendly products.

For Nanlang village, the consultation took place at 1-2 June 2014 and 27-28 Dec. 2014. Most of local people speak Mandarin although some can be a bit difficult. There is help from nature reserve staff who is Wa nationality. Dr. Yan Xie, Dr. Xiaojing Gan and Mr. Ziling Gong from IOZ/CAS, Professor Xunfeng Wu from Forest Restoration Research Center, Yunnan Forest Professional Technical College, Mr. Bin Zhou, Deputy Director and 3 other staff of the nature reserve, Mr. Guang Guo from Lincang Forestry Department, village head Zhihong Li and more than 20 local villager took part in the consultation. A verbal agreement has been reached among the villagers. Additionally, the Nature reserve Administration expressed their fully formal support.

For Tuanjie Village at Gengma district, the consultation took place at 3 June and 29-30 Dec. 2014. Village. All village committee members participated in the consultation. Mandarin was used in the consultation. A formal verbal agreement has been reached. Dr. Yan Xie, Dr. Xiaojing Gan and Mr.

Ziling Gong, Professor Xunfeng Wu, Mr. Guang Guo from Lincang Forestry Department, Mr. Hebin Li and Mr. Jiangang Mao who is the Director and Deputy Director of Administrative Service Center of Gengma County were attending the consultation.

For Xiajingchang Township at the Malipo Provincial Nature Reserve, a consultation took place at 7-8 June 2014 and 3-5 Jan 2015, with Mandarin being used. Dr. Yan Xie, Dr. Xiaojing Gan and Mr. Ziling Gong, Professor Xunfeng Wu, Mr. Liyun Wang from Malipo Forestry Department, Mr. Guoyong Huo from the nature reserve, both the local township government and the community deputies Mr Mingzong Nie and Mr. Fuqian Deng participated in the consultation. Verbal agreement has been reached across the government side as well as the community deputies.

For Shuiman at Wuzhishan National Nature Reserve, the consultation took place at 11 Nov. 2014 and 7 Dec. 2014. Our consultant Mr Bingbo Meng reached a verbal agreement with the local community deputies Mr. Ridong Wang, Yeti Wang, Xiangqi Wang, Jimei Wang and Xueer Wang who are most influential persons in the village. Most of local people speak Mandarin and easily find local people help with Li language translation.

4.The Foreseen Project Impact and Its Planned Resolution

Through guidance, technical support and marketing support, the project is planned to change the environmental unfriendly livelihood which includes: to recover the local crop varieties and fruit trees, to improve biodiversity, to reduce and gradually stop using chemical fertilizers and herbicide and pesticides; to develop local community based eco-tourism, to reduce livelihood depending on forest resources. The project implementation will gradually change the livelihood of the local community and their income structure, improve the biodiversity around the communities and their neighboring areas, and reduce threats to the protected areas. The implementation organization will develop systematic mechanism to measure such impacts.

The communities in the project sites all have been growing sugar cane for quite a long time and with bigger development plans. Sugar cane growing needs great usage of chemical fertilizers and pesticides and its profit is heavily depended on the external factors. Local farmers can only passively accept the price set by local sugar factories. In this sense, the livelihood of sugar cane growing is very fragile. On the other hand, the communities of the project areas more or less depending on forest resources, including firewood, collecting mushrooms and tea leaves. In their traditional life and agricultural activities, local people have developed their own adaption to environment and the ways of using forest resources, which had controllable affects to the environment and less damage to the ecological environment. However, with the external marketing demand and changes, these communities all have started to over-use the forest resources. For example, the wild orchid and dendrobium have been both over collected in Laoshan Reserve and exhausted wild orchid resources. Dendrobium with its well-accepted medical value, has now been grown massively after collecting from wild and caused the losing of plants diversity in local area. Additionally, with the social development, the local building and architecture has gradually been replaced by the modern bricks and clementine. It is gradually losing its own tradition and ethnic characteristics in the local communities.

During the project implementation stage, there will be mechanisms taken to guide the community livelihood be changed to PA friendly ones, covering the agricultural development benefit to biodiversity conservation: i.e. replacing crops depends on chemicals like sugar canes with traditional crops, planting tropical fruit trees to recover local vegetation, develop tea plantation management that protect understory vegetation, growing Dendrobium without destroying natural vegetation and reduce the need of collecting from the wild; establishing NTFP harvesting management system; remaining traditional characteristics of building and culture in the modern development process. Such changes will definitely affect, to some extent, the livelihood of the community and limit its usage of forest resources and cause impact to the communities. With the previous communication and interviews, the community understands the underdevelopment of their livelihood and unreasonable usage of natural resources, concerns the changes of local environment and wishes to try sustainable livelihood. Based on the basic principal of community involvement and fully respect to their own willingness, the project will develop sustainable livelihood plans together with the community, manage the neighboring environment of the community, as well as to develop their own sense of self development and environment protection.

Considering the possible impact from the project implementation, it is suggested the following resolutions:

1. Together with the public awareness advocacy for scientific knowledge and environmental protection, all the activities are targeted to focus on the community involvement from the designing to the implementation stage to fully respect the ideas from the local community themselves, inspire their own self-motivation for changes and to make positive guidance for the dual purposes of ecological protection and community development;
2. In the first two years of the project implementation, there are supporting fund designed to help with the changes for community livelihood. The usage of such fund will be fully discussed with the local community ranging from the selection of pilot families, coverage of funding usage, measuring mechanism and the punishment measures;
3. There will be technical support provided to help with the vegetation restoration, eco-agricultural techniques for the transition of livelihood changes, and community based eco-tourism;
4. The promotion and sales channels will be developed by PAFS company to support the sales and marketing process for the PAFS products without affecting the benefit of communities;
5. The biodiversity monitoring teams will be established during the project period. The project will cover some part of the laboring cost for such teams, and when the project finishes, such cost is supposed to be covered by the conservation feedback of the sales profit of PA friendly products;
6. After being selected as a project site of PAFS, the system will work together with the protected area management organization to seek for all sorts of international and domestic funding for a long-term sustainable development of the communities.

5. Joint Management Mechanism of Participatory Community

One of the project objectives is to improve the capacity of the local community to protect the environment and to manage the natural resource. Thus in the three years of the project period, it aims to establish the joint management mechanism of participatory community, guide the community to use forest resources in a sustainable way, support developing farmers' association, proactively develop the market awareness for their products, generate more sales revenue for the community, release the worries and concerns of community participatory protection, improve the awareness of community farmers in environment protection, guide the community to realise the linkage between conservation and development, and support community take all conservation actions from their own initiatives.

The key for a participatory community joint management mechanism is the full involvement of community participation. All the sub-projects under the whole scheme will be conducted under the pre-condition of full understanding and stimulation with the community. The project plan to achieve the objective by following the strategies:

1. Conduct Participatory-rural-appraisal (PRA) at the early stage: develop the community baseline and encourage the community participation;
2. Support local community to develop farmers' association, the PAFS will provide related support to help them establish management mechanism;
3. Empower the community, establish mechanisms to allow local communities to participate in the project activity design and gradually lead them to make their self-decision;
4. Organize community activities like local folk traditions and technology exchanges to develop the participatory awareness of the community.

6. Measuring Mechanism

A reasonable measuring mechanism is the pre-conditions of project success. During the project period, it is planned to establish community monitoring system and biodiversity monitoring system. In the implementation stage, there will be overlapping of these two parts but serves for a good integration of comprehensive monitoring system for PAFS. Monitoring is a dynamic process and will guide future actions. The project monitoring will pay attention to the possible impacts from the project implementation to the community and design related specific monitoring plan, serving as the scientific reference for resolving actions.

6.1 Community Monitoring System

The community monitoring system consists of detailed pre-project baseline study, middle-stage analysis of improvement actions and the end-of-project final study. The key point is the comparison of data during these three stages, description of subjective facts and analysis of community change. It is worth noting that the middle-stage analysis is not exactly the timeline in the middle of the project but with more foci on the implementation process and improvement needs for the overall implementation of this project.

The community monitoring system consists of three main parts in rights (livelihood, education, credit debit, citizenship society), obligations (labor and relationship maintaining) and awareness (development awareness and conservation awareness) with the main focus on the awareness research and analysis. Awareness is the guideline for actions, specifically, to develop the self-awareness of local community for conservation actions is the key point for participatory protection projects.. Additionally, as the rights and obligations affect the overall awareness of community, thus the analysis of measurable factors will help us to identify the dilemma of local community for their conservation and development and propose reasonable actions for changes needed in real world accordingly.

6.2 Biodiversity Monitoring Mechanism

Biodiversity conservation is another key purpose for the project, and the effective conservation actions is always based on the reasonable scientific monitoring mechanisms. The project plans to develop the participatory biodiversity monitoring mechanisms, which is based on scientific monitoring system, encourage local community involvement, and further explore biodiversity knowledge from the community culture and experience, to enrich the methodology of biodiversity monitoring and develop a duplicable practice model for future.

From the methodology point of view, the biodiversity monitoring would include indicator species survey methods (i.e. birds or insects, we will select different indicators for different sites so that the indicators would best show the project impact) and 3S monitoring method (by using the remote NDVI, GIS). Similar to the community monitoring mechanism, biodiversity monitoring also includes three stages of analysis in pre-project, middle-of-the project and after project periods, to display the changes and understand the core reasons. It should be noted that from the previous experience that the 3S monitoring methods in large scale normally need long time to demonstrate the changes, which is not possible for the three-year-project duration. However the geographic location data with its own experience in community traditional culture, would normally easily to gain support from community people and promote the community participatory awareness. Thus this type of method is suitable for the participatory monitoring mechanism and worth trying even the data might not as accurate as that from 3S method.

7. Appealing System

Community participation is one of the key principals of the project and the project fully respect the ideas and suggestions from community. During the project period, PAFS will work with shareholders to develop a community appealing system to design several appealing proposal for the in-time understanding of possible unhappiness and suggestions from the community towards the projects. The pre-condition of appealing system is the localization, PAFS wishes to understand the real concern and ideas from the community and provide subjective and fair feedback for the community appealing. During the project period, several resolution is designed to serve the purpose, including but not limited in using local ethnic language during the farmers group discussion/meeting (i.e. Yunnan dialect, Wa dialect), recruiting local volunteer to strengthen the communication between project staff and community, and providing transparent and open

feedback for the appealing cases.

The appealing system includes the following methods that would be used in a combination during different project stages.

1. Participating villagers at each project site will be given the contact details of IOZ and the CEPF Regional Implementation Team. If they have questions or concerns about any aspect of this prospected project, they can contact IOZ and CEPF Regional Implementation Team directly.
2. During the project period, project team organize annual project review meeting in the local community on site;
3. Develop Idea Box in all the project sites for community people feedback their ideas directly to the project team anytime;
4. Collect negative feedback from the community by capable local volunteers;
5. During the pre-project and end-of-project research and analysis, organize open discussions with local community to generate any negative points of project for future improvement.