

Participatory Resource Monitoring (PRM) in Yunnan Province, China, by China and the Netherlands

Problems and Purpose

Mao Zedong, one of the key creators of New China, recognised early on the need for mass participation in the process of improving and solving problems. He expressed his understanding as “the mass line: everything for the masses, everything relying on the masses and coming from the masses to the masses”. This theory was later incorporated into the Party Constitution of the Communist Party of China as a fundamental guideline for governance. The right to participation of the Chinese people is also guaranteed at the institutional level, including the Grassroots Mass Autonomy System and NPC deputies contacting the masses. According to Fisher (1995) and Kellert et al. (2000), If people are involved in managing the resources on which they depend, it will lead to more excellent development benefits and effectively motivate them to conserve and use the resources sustainably. This case study analyses explicitly the critical role of public participation in the process of natural resource conservation and sustainable use development in the participatory resource management model in Yunnan Province. The positive experiences are summarised and extended to other regions of the country and other resource conservation areas to positively impact the sustainable development of Chinese society and biodiversity conservation.

Background History and Context

The rise of China is behind the rise of economic development as the number one development priority. The implementation of China’s reform and opening-up policy has dramatically stimulated the Chinese people to do business. Over the years, China has achieved remarkable results and has become increasingly influential in the international arena. However, as the pace of development accelerates China’s path of sacrificing the environment for the benefits of development has led to more and more loopholes in environmental protection. For example, the destruction of a large amount of vegetation and the construction of villas in the foothills of the Qinling Mountains in Shanxi Province, the indiscriminate discharge of water from a large number of factories in the Tengri Desert in the Inner Mongolia Autonomous Region, and the destructive exploitation of coal resources in Shanxi have been frequent incidents.

On the other hand, a different picture emerges in Yunnan province, rich in forestry resources in China. To make effective and sustainable use of forest resources, some areas of Yunnan Province have begun to explore community co-management models of

forest conservation. The abundance of forestry resources has also led to an over-reliance on forestry resources by villagers in the vicinity of nature reserves, with much of their livelihood and economic income tied to forest resources. As a result of this high dependency, various nature reserve management plans have identified the need for PRM of collective forests within and outside nature reserves (Jeannette & Zhang, 2005). An exploration of the participatory resource monitoring model in Yunnan Province helps extend its valuable lessons to the conservation of other resources.

PRM consists of two levels: the development of community-based natural resource management plans by protected areas and local communities, and the promotion of community-based natural resource management; and the participation and assistance of local communities in the management of biodiversity conservation in protected areas so that community-based natural resource management becomes an integral part of the integrated management of protected areas. The most fundamental objective of community-based management is to promote biodiversity conservation (Yunnan Provincial Forestry Department FCCDP Project Office, 2004).

Organizing, Supporting, and Funding Entities

The Sino-Dutch Cooperative Forest Conservation and Community Development Programme (FCCDP) was signed in January 1998 and is run by several entities. The Ministry of Foreign Affairs leads the Chinese side, the Ministry of Foreign Trade and Economic Cooperation, the State Forestry Administration and the Yunnan Provincial Forestry Department, while the Dutch Embassy leads the Dutch side (Li, 2001, p.1).

The Chinese Ministry of Foreign Affairs as well as the Ministry of Foreign Economic and Trade Cooperation:

The main task of both is to liaise with staff on the Dutch side and those within China. In addition, they are also active in resolving the formalities for foreign experts from the Netherlands to come to China.

State Forestry Administration of China:

It provided support from the central department level to approve the practical activities carried out by the Yunnan Provincial Forestry Department. The State Forestry Administration has also been instrumental in promoting the positive experience gained in Yunnan Province to the national level.

Yunnan Provincial Forestry Department and its subordinate units:

The Yunnan Forestry Survey and Planning Institute, Yunnan Forestry Academy, Yunnan Forestry School, Yunnan Wildlife Rescue Centre and the forestry bureaus of the four prefectures (Baoshan, Dehong, Nujiang and Simao) and the six nature reserve management offices of Laiyang River, Nuuzadu, Wuquanshan, Gaoligongshan, Xiaoshanhei and Tongbiguan are jointly implementing the project. A project management office has also been set up by the Yunnan Provincial Forestry Department

and the four prefectures of the project (Lei, 2002, p.80).

Villages around the reserve:

Villages and villagers in the vicinity of the reserve are the prominent participants in the project. As a stakeholder group closely linked to the reserve, the awareness and actions of the villagers are of utmost importance.

Dutch Embassy:

Through the Dutch Embassy, the Dutch government has mainly provided the funds needed to run the project, contributing a total of NLG 28.7 million (approx. 13 million euros). In addition, the Dutch side has been actively involved in contacting foreign experts to provide technical guidance at the project sites in Yunnan Province, China.

Participant Recruitment and Selection

The objective of this activity is to include more people in the participatory resource management project. So the project is theoretically open to all people involved in the area of operation. They all have the right to be informed about the project and to participate in it first-hand. However, the differences between protected areas and their surrounding villages make it challenging to enable every villager to experience participatory supervision. The following are two specific examples of how participants are recruited:

Wenshan Nature Reserve.

The reserve has recruited a total of 434 rangers from the eleven surrounding villages. This means that all farmers in each village, except the old, the sick, the disabled and the orphaned, are involved in managing the reserve as rangers.

Little Black Mountain and Tongbi Pass Nature Reserves.

In each village, we have established PRM groups based on the selection criteria for representatives of the villagers' leaders:

- Village leaders or one of them provides support with the support of villagers and can mobilise and motivate them.
- A well-known and respected person with extensive knowledge of the forest and its wildlife, such as a village ranger. A village ranger is a villager (usually a former hunter or an elderly person with extensive knowledge of the forest and its wildlife). He receives a small fee from the nature reserve management station for patrolling the collective forest and nature reserve to respond to criminal cases and increase wildlife populations.
- Women's representative.
- Other knowledgeable villagers, or people who can read and write Chinese, in case other team members are unable to do so.

Staff from the nature reserve management station or office have been added to the monitoring team to improve cooperation and communication. The monitoring team is

responsible for collecting, recording and analysing data and involving other villagers.

Methods and Tools Used

1. Holding village meetings. Mobilise as many people as possible to participate in the survey. The project provides an opportunity for government staff and villagers to meet regularly to discuss their views on the forest and how it should be managed.
2. Workshops. The monitoring team and other managers go through each workshop in the nature reserve to identify objectives, indicators, methods, data analysis, and dissemination. The workshops were attended by: (1) the monitoring teams from the six villages; (2) local nature reserve and forestry staff; and (3) project officers from the district, state and provincial forestry departments. At the end of each day, members of the working group exchanged the information they had collected so that intra-group information exchange or feedback sessions were a daily tool in the village community work (Gao, 2003, p.11).
3. Questionnaires. The questionnaire was designed through preliminary information gathering on the factors involved in the implementation of the project. The questionnaires were effectively distributed and collected with the help of staff from the reserve and village officials.
4. Conduct group interviews. Interviews were conducted with the elderly, women and particular groups of the poor and the general population. Interviews were conducted with the different interest groups involved to hear their views on participatory resource management and their attitudes to environmental protection. This allowed for more concrete and realistic ideas to be gathered (Dai, He, & He, 2003, p.24).
5. Matrix of questions. The information collected through interviews and questionnaires forms a matrix of issues. It allows for precise analysis and ranking of the issues of concern to the villagers.

What Went On: Deliberation, Decisions, and Public Interaction

The literature suggests that participatory monitoring can also be seen as a social, cultural and political process that brings people together in new ways, learns about different perspectives and strengthens democratic decision-making about the measures to be taken (Guijt, Arevalo, & Saladores, 1998). As the previous system provided for the individual ownership of the wilderness and forest land around the protected areas. Therefore, the first task is for the county government to collect and redistribute the land and forestry resources that have been granted to the surrounding communities for collective ownership. The collectively owned land will then be brought under the jurisdiction of the reserve. Farmers in the surrounding areas are then encouraged to sign up as rangers and become official rangers after certification by the nature reserve

management station or the relevant government forestry authorities. Rangers are paid monthly as a financial subsidy to the farmers whose land has been taken away from them and mobilises villagers to participate in the conservation work of the reserve.

Awareness-raising and education through a variety of channels to enhance the public's awareness of environmental protection. Large-scale campaigns are held in the county and around the reserve to raise awareness of environmental protection. Publicity is an effective way of making the public fully aware that community resources and protected areas are part of a larger ecosystem and interact with each other. Publicity measures should be targeted, with different measures for different audiences; the scope of publicity can be broader, either to the community, to relevant organisations, or the government. Through publicity, the outside world should be more aware of what the nature reserve is doing and what it is doing and should cooperate with and support the reserve management in its biodiversity conservation work. For example, Wenshan County charges the entire county an extra penny per kilowatt-hour of electricity and five cents per tonne of domestic water, and the funds raised to establish a special fund for the reserve.

Extensive knowledge dissemination sessions were held. Thirty teachers from the Provincial Forestry Technical College were first trained, and then the teachers conducted a one-week training programme in the project reserve for groups such as reserve staff, government staff, primary school teachers from surrounding districts and village representatives. A total of 31 training sessions were held, with 874 people receiving awareness training, and these people then formed teams to go into communities, schools and gatherings to promote the project. They used a variety of media such as television, videos, posters, cards and pamphlets, as well as village meetings and interviews to educate the community, students and various interest groups on a wide range of environmental issues. A total of 2,157 natural villages and 93,473 households in the six project reserves have been educated, with 400,271 people receiving education (Peng, 2007, p.53).

Institutional aspects. Once the land in the villages around the reserve has been divided into protected areas, the forestry management department at the county level or staff from the nature reserve management station enter the villages. Consultations are held with the villagers through village assemblies, and regulations are drawn up for the management and conservation of the area.

Formation of stewardship groups. The population structure and numbers and the geography of the surrounding area are not the same from village to village, so the selection criteria and the grouping of rangers vary. Each village has a woman on the committee, and the protected area management office has also appointed a representative to the forest co-management committee. The committee is responsible for coordinating, supervising and organising the implementation of the project; checking and monitoring the process of project implementation, progress and use of

funds; and accounting for the project.

Influence, Outcomes, and Effects

The successful implementation of the FCCDP in Yunnan Province has seen the use of community co-management in the project reserves. The PRM has had a significant impact on the communities around the reserve and has resulted in many valuable lessons learned for effective biodiversity conservation in Yunnan Province (Lin, 2005, p. 50). The application of participatory theory and methods to forestry projects has overcome some of the disadvantages of the traditional model of forestry construction and management. (Yong, 1982, p.2).

1. Building trust and improving relations between villagers and staff. PRM is one of the most effective ways to achieve effective conservation of nature reserve resources and biodiversity and seek to improve villagers' livelihoods in and around protected areas (Lai, Li, & Meng, 2004, p.18). The project involves the residents of the surrounding areas in the management process and makes full use of their participation in the sustainable development of the forest. A new, sustainable relationship is established between reserve staff and villagers. Conservation awareness education and training provide a good basis for sustainable forest management and better nature conservation (Lei, 2002, p.80).

2. Optimising the functions of the forestry management department. After several years of implementation, it has been found that organisational leadership skills have been well-honed and improved through this series of detailed activities (Wang, 2005, p. 20). The FCCDP introduces modern methods and techniques of integrated forest conservation and protected area management, focusing on involving local communities in the management of protected areas and surrounding areas to protect ecosystems and biodiversity. The approach has been adapted to the Chinese context and could become a standardised practice for the integrated management of nature reserves in Yunnan province.

3. Integrating the reserve and the surrounding village woodland resources to create a buffer zone. The project seeks to reduce human pressure on the reserve while coordinating the reserve resources and working to improve the living conditions of the villagers living near the reserve.

4. The conservation of the natural environment has been dramatically promoted throughout the province of Yunnan. The combination of poverty alleviation and environmental protection in China in recent years has led to a greater awareness of the importance of environmental protection and the benefits of participation in environmental protection to lift people out of poverty, as shown in the following policy from the Yunnan Provincial Government website:

http://www.yn.gov.cn/zwgk/zcwj/yzf/200805/t20080513_142786.html

http://www.yn.gov.cn/zwgk/zcwj/yzg/201911/t20191101_184163.html

http://www.yn.gov.cn/zwgk/zcwj/yzf/200808/t20080820_142806.html

Analysis and Lessons Learned

1. During the implementation process, the recovery of forest land resources from individuals to collectives caused the relevant villagers to lose a large part of their stable economic income. This action caused increased conflicts between the reserve management department and the surrounding local villages. The economic subsidies granted to villagers to participate in management and protection as forest rangers cannot be used as a long-term measure. PRM lacks a sustainable and stable mechanism. There is a lack of experienced co-managers and a stable source of dedicated funding (Zhao, 2004). The financial department is under enormous economic subsidy pressure, but the residents are not satisfied with the economic subsidy provided by the government. Blindly offering simple economic subsidies will make villagers lazy thinking and accustomed to accepting subsidies.

2. Residents' awareness of sustainable development is still insufficient. Participation enthusiasm needs to be improved; in villages where the community co-management model has been implemented to guide villagers to participate in forest land protection, each forest ranger enjoys a specific monthly economic subsidy. Still, other villages not included in the protection zone. Out of jealousy, he carried out retaliatory logging on the surrounding woodland.

3. It is difficult to carry out protection work in a sustainable manner if only focusing on the participation of the community and ignoring the equal and cooperative relationship with the community. External agencies only value protection, while surrounding villages pay more attention to forest land resources' rational use and benefits.

4. Lack of professional management personnel. The geographical and human conditions of each nature reserve are very complex and varied. Professional and highly educated personnel are essential to resolve the conflicts and relationships between the reserves and the nearby villages. Professional management personnel are able to apply scientific knowledge to solve the challenges of running the project more efficiently.

Attach importance to the traditional knowledge of local community residents on the protection and utilisation of forest resources. As the leading group in the forest ecosystem protected area, community residents are among the groups that have the most muscular disturbance to the forest ecosystem and have a close relationship with the management of the protected area (Peng, 2007, p.51). Full attention should be paid to the traditional knowledge of local community residents on the protection and utilisation of forest resources, which comes from their experience and the process of long-term

interaction with the living environment. The traditional cognitive system of local community residents on the ecological environment should be summarised. The participation of local communities is crucial to sustainable forestry development, and without their voluntary and genuine involvement, the desired goals of sustainable forestry development cannot be achieved (The Southwest China Forest Resources Conflict Management Case Study Project Team, 2002). Their enthusiasm and creativity in protecting the ecological environment should be stimulated so that their long-term accumulated traditional knowledge can be used and become a powerful weapon for protecting the ecological environment.

Staff need to learn from the experience of carrying out pilot projects in protected areas promptly. Coordinating biodiversity conservation with sustainable community development requires a long-term process of experience building (Lin, 2005, p.54). Researchers can begin by systematically learning and capturing pilot project experiences through a small number of participatory conservation projects. Through these pilot projects, understanding and knowledge of community development experiences can be deepened. During the project, a high priority should be given to community development and day-to-day decision-making. Where possible, projects should be co-organised with NGOs, government organisations and other public bodies to increase understanding and collaboration. Attention should also be paid to joint research, analysis and exchange of project-related experiences with universities and other specialist teaching and research institutions. In conclusion, it is crucial to find more patterns and guiding conclusions for future biodiversity conservation work.

Women, like men, are managers and users of natural resources and are essential participants in forestry activities and the management of protected areas. They have an exceptional experience of forests and a unique knowledge system due to their particular family and productive life (Lai, Cao, & Fan, 1997). Furthermore, this particular knowledge will play an essential role in the development of community forestry. Therefore, full attention should be paid to the status and role of women in resource management, providing them with more opportunities to participate in decision-making and receive training and thoroughly motivating them to participate in community co-management.

In conclusion, although the participatory resource stewardship project has only been in place for a few years. It has also revealed many shortcomings in the course of its development. However, in general, the participatory resource management project has not only contributed to the sustainable use of resources in the process of implementation but has also accumulated a wealth of practical experience. On the other hand, the development of nature reserves in Yunnan Province now confirms that participatory resource management has successfully protected biodiversity and sustainable use of resources, opening up new models of environmental protection.

See Also

<https://participedia.net/method/5179>

<https://participedia.net/method/5042>

<https://participedia.net/case/497>

External Links

<https://baijiahao.baidu.com/s?id=1691143526147378112&wfr=spider&for=pc>

<https://baoshan.yunnan.cn/system/2021/04/08/031381910.shtml>

<https://baike.baidu.com/item/%E6%96%87%E5%B1%B1%E5%9B%BD%E5%AE%B6%E7%BA%A7%E8%87%AA%E7%84%B6%E4%BF%9D%E6%8A%A4%E5%8C%BA>

<https://www.youtube.com/watch?v=3yrb9HkBx30>

<https://baike.baidu.com/item/%E4%BA%91%E5%8D%97%E9%93%9C%E5%A3%81%E5%85%B3%E7%9C%81%E7%BA%A7%E8%87%AA%E7%84%B6%E4%BF%9D%E6%8A%A4%E5%8C%BA/14215350?fromtitle=%E9%93%9C%E5%A3%81%E5%85%B3%E8%87%AA%E7%84%B6%E4%BF%9D%E6%8A%A4%E5%8C%BA&fromid=4457266>

<https://kknews.cc/zh-cn/travel/qe1l6jr.html>

<https://baike.baidu.com/item/%E6%97%A0%E9%87%8F%E5%B1%B1%E5%9B%BD%E5%AE%B6%E7%BA%A7%E8%87%AA%E7%84%B6%E4%BF%9D%E6%8A%A4%E5%8C%BA>

Notes

N/A

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