Social Participation in Nature Reserve Management

1. Background
China has established a conservation system with relatively complete types, appropriately layout, and complete functions. By the end of 2017, the number of nature reserves at all levels has reached 2,750, with a total coverage of 1.47 million km², accounting for 15% of China’s land area. At the same time, communities near those protected areas often live in a difficult economic condition. Residents there highly depend on natural resources, which lead to large pressures on wildlife and other natural resources. In order to strengthen management on nature reserves, governments at all levels need to improve investment and promote the coordinated development of biodiversity conservation and poverty reduction. To achieve this goal, it is necessary to enhance social participation besides governments.

Baoxing County of Sichuan Province is a major habitat for giant pandas, and therefore, Sichuan Fengtongzhai National Nature Reserve has been established. Local communities have signed a biodiversity conservation agreement with management agency of the nature reserve, in which local communities have committed to protect biodiversity, reduce their dependence or even damage on biodiversity. Meanwhile, they can participate in training about relevant knowledge and technologies and apply for loans with low or even free interest rates from the Environment Protection and Development Fund for the development of ecological tourism, local agricultural products planting or feeding, traditional medical herb planting and other local characteristic industries.

2. Project Period
Since 2006

3. Project Performer
Local governments, communities, enterprises, and NGOs.

4. Beneficiary
Whole society

5. Total Investment and Composition
The Environment Conservation and Development Fund has been launched jointly by the government of Baoxing County and an NGO to help local community develop alternative livelihoods. The government provides favorable policies such as subsidized loans and subsidies for constructing biogas digesters, the NGO provides startup fund, and local enterprises provide ecological compensation for utilization of natural resources. The government of Baoxing County has included local natural forests into the scope of ecological compensation. Each unit area (Mu) of the forest receives 10 yuan as compensation with another 3 yuan as the management fee, providing a sustainable and stable investment for the local communities to protect biodiversity.
6. Project Level
Local

7. Mitigation and Adaptation on Climate Change
The establishment of a nature reserve system and the strengthening of corresponding management not only meet the requirements of biodiversity conservation, but are also beneficial for sustaining stable and resilient ecosystems. Nature-based solutions mean to avoid risks depending on the forces from nature. In this way, complete and stable ecosystems can serve as green barriers to protect mankind against climate change risks. Therefore, promoting the construction and management of nature reserves is one of the main ways to mitigate and adapt to climate change and reduce the impacts of climate disasters. Poverty reduction when protecting biodiversity allows local residents to be relived fundamentally from the dependency on natural resources and the damage of wildlife resources. Such an approach not only has a positive effect on nature reserve management, but also contributes to the mitigation and adaptation to climate change. Especially, the elimination of deforestation and promotion of clean energy have direct impacts on the mitigation of climate change.

8. Social, Economic, and Environmental Impact
8.1 Social Benefit
Local benefit: Local residents’ awareness of biodiversity conservation has been enhanced, and the enthusiasm for participating in biodiversity conservation and support for ecological environment protection has been improved. Nearly hundred villagers received community training, and their knowledge and technologies about beekeeping, organic food cultivation, and eco-tourism have been improved. Some villagers even became members of the biogas maintenance team after receiving professional training on biogas building and maintenance.
Availability benefit: The practice of social participation in biodiversity conservation in Baoxing County has proved the significance of coordinated development of biodiversity conservation and poverty alleviation. Mobilizing social forces to join in biodiversity protection can effectively supplement the government’s management of protected areas.

8.2 Environmental Benefit
Currently, negative activities affecting biodiversity, such as poaching, herb digging and deforestation, become quite rare in this area. Nearly 40,000 hectares of forests around the nature reserve have been protected through biodiversity conservation agreements, effectively expanded the protection areas of the habitat of giant panda. In addition, over 500 swarms of bees have been bred, and the pollination acts as a positive role in biodiversity conservation. Over 700 biogas digesters have been built, and over 2,000 m³ of wood have been reserved annually.

8.3 Economic Benefit
Local economic revenue has increased by nearly 2.6 million yuan, by supporting the development of characteristic industries such as bee farming and ecological tourism.