YUNNAN GREEN WATERSHED MANAGEMENT RESEARCH AND PROMOTION CENTRE (GREEN WATERSHED)
China

Equator Initiative Case Studies
Local sustainable development solutions for people, nature, and resilient communities
Local and indigenous communities across the world are advancing innovative sustainable development solutions that work for people and for nature. Few publications or case studies tell the full story of how such initiatives evolve, the breadth of their impacts, or how they change over time. Fewer still have undertaken to tell these stories with community practitioners themselves guiding the narrative. The Equator Initiative aims to fill that gap.

The Equator Initiative, supported by generous funding from the Government of Norway, awarded the Equator Prize 2015 to 21 outstanding local community and indigenous peoples initiatives to reduce poverty, protect nature, and strengthen resilience in the face of climate change. Selected from 1,461 nominations from across 126 countries, the winners were recognized for their achievements at a prize ceremony held in conjunction with the United Nations Convention on Climate Change (COP21) in Paris. Special emphasis was placed on the protection, restoration, and sustainable management of forests; securing and protecting rights to communal lands, territories, and natural resources; community-based adaptation to climate change; and activism for environmental justice. The following case study is one in a growing series that describes vetted and peer-reviewed best practices intended to inspire the policy dialogue needed to take local success to scale, to improve the global knowledge base on local environment and development solutions, and to serve as models for replication.
The Yunan Green Watershed Management Research and Promotion Centre formed in response to the Lashihai Dam project in 1998, which flooded large areas of farmland with impounded water and left the Naxi indigenous people displaced with no livelihood options other than farming unstable hillsides, leading to mudslides, and overfishing the Lashihai Lake. Green Watershed has become a model of indigenous self-organization and participatory watershed management, founding four autonomous organizations for resource management that have each achieved remarkable results: two watershed management groups belonging to the Naxi and Yi communities, which have brought mudslides under control, established agroforestry which have increased incomes ten-fold over 10 years, and protected over 1,300 hectares of mountain forest; a fishermen’s association which has banned illegal nets and recovered the local fishing industry; and a water users association which has successfully managed water access and negotiated fair upstream and downstream water use. Agroforestry, organic farming, animal husbandry, sustainable fisheries, and proper management of water resources have all improved local incomes and food security, and strengthened resilience in the face of droughts.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.
BACKGROUND AND CONTEXT

Located in the Yunnan Province, in southwestern China, Lashihai Lake is an important mountain wetland in China maintaining the highest diversity of birds in the country, and is one of few Ramsar Sites in the eastern foothills of the Himalayas. It is a unique freshwater, plateau lake with marsh meadows, located at the headwaters of the Yangtze and Mekong Rivers. This area is also an important migration passage, breeding ground and wintering habitat for nearly 76 species of wild geese and ducks, such as the Common Teal (*Anas crecca*), the Common Coot (*Fulica atra*), and the Tufted Duck (*Aythya fuligula*).

The Lashihai Watershed is also home to approximately 10,000 indigenous people, mostly representing two ethnic minorities: the Naxi, who live near the Lashihai Wetland and ancient city of Lijiang at 2,400 meters above sea level, and the Yi, who live in the Himalaya Mountains at 3,000 meters above sea level. The Naxi people mainly rely on agriculture and fishing, while the Yi people depend on agriculture and livestock farming.

In 1998, the building of the Lashihai Dam and water diversion, for the development of tourism in Lijiang, flooded large areas of farmland thereby displacing the Naxi communities. With their traditional area significantly reduced, the Naxi people who lost their land began to reclaim hillsides for farming and overfish the lake using illegal nets, resulting in mudslides, soil erosion, and the depletion of fish populations.

These environmental impacts resulted in widespread poverty, with tensions and contradictions between the local communities’ expectations of recovery and the local government’s desire for economic development. After the floods, the Chinese government banned logging in the upper reaches of the Yangtze River, making it even harder for the Yi people to balance environmental protection and livelihood recovery.

In this context, the Green Watershed organization began working with the local government to include local indigenous communities in resource management decisions, while considering the government’s economic growth objectives. In order to facilitate stakeholder participation in public resource management and establish constructive dialogue between the local government and villagers, Green Watershed established an indigenous people’s watershed management model in 2000. The initiative founded four indigenous people’s autonomous organizations:

- The Naxi Watershed Group controlled mudslide gullies and agro-forestry organic farming methods, achieving a 10-fold increase in income over 10 years;
- The Naxi Fishermen’s Association banned illegal nets, recovering fishing industry resources and fishermen’s livelihoods;
- The Naxi Water Users’ Association managed water resources and negotiated fair upstream and downstream water use;
- The Yi Watershed Group protected over 1,330 hectares of mountain forest pasturage and developed diverse livelihoods supporting poverty relief.

The initiative adopted participatory methods to promote self-management by the indigenous peoples, which proved to be more efficient than government management or unmanaged communal land conditions. This process halted resource degradation, developed dependable livelihoods, and enabled indigenous communities to gain greater awareness of their land and resource rights.

Within a few years, the Naxi people successfully resisted pressure from outside developers to lease land, and the Yi people resisted a forced relocation plan in the name of ecological resettlement. In its operations, Green...
Watershed strove to satisfy the expectations of the government and the community through resource protection, social fairness, GDP growth, and improved living conditions. Consequently, it gained legitimacy, credibility, and support from many different stakeholders.

Green Watershed used participatory and resource empowerment methods to mobilize indigenous people, encouraging their ownership of resource protection and sustainable resource use to safeguard livelihoods as well as the ecology of the Lashihai Watershed.

**Origin and structure**

Green Watershed was created in 2000 to enhance the sustainable development of the Lashihai Lake Watershed. This project received the support from the poverty-relief organization, Oxfam Hong Kong, because the surrounding community faced poverty and expected to implement poverty relief projects.

Through leadership from Anthropologist and Environmentalist, Yu Xiaogang's, the Lashihai Lake Watershed project gradually formed, including the Yi community and the Naxi community. Yu Xiaogang registered Green Watershed in 2002 as an independent management organization and registered the Lashi Fishermen's Association and Water User's Association in 2003 to ensure that the community benefitted from environmental rehabilitation and maintained sustainable development of resource use.

The goals of Green Watershed include:
1. Research and advocate for the participatory management of the watershed.
2. Enable governmental and non-governmental organizations to apply this method in the development planning in China's western areas.
3. Build an effective communication channel between the government, non-governmental organizations, community organizations, farming organizations, experts and scholars, to enhance the cooperation and sustainable development in China's western areas.
4. Enable the poor and vulnerable to participate in watershed management by supporting their traditions and through capacity-building.
5. Support and assist with the pilot watershed management project, while using this experience to popularize community watershed management.
6. Enhance the public recognition and capacity for sustainable watershed management through training and spreading knowledge about sustainable watershed management.

Today, Green Watershed works with the communities to improve the management of natural resources, restore and protect ecosystems, conserve biodiversity, maintain sustainable livelihoods, and build resilience to climate change.
LOCAL CHALLENGES

Deforestation

During China’s Great Leap Forward in the 1950s, the national government advanced industrialization across the country. Vast expanses of China’s forests were logged to help fuel the revolution, with devastating and long-lasting environmental consequences. Beginning in the 1980s, deforestation and agricultural cultivation on steep slopes in the upper Yangtze River increased. These activities had detrimental effects and the affected areas lost approximately 30 percent of their forest cover in the past 15 years.

The Yi people had long relied on logging as their livelihood. By the end of the 20th century, the upstream ecology was degraded from deforestation, resulting in a dramatical increase in poverty within the community. As a result of deforestation, soil erosion and natural disasters, occurred periodically, affecting the local communities.

Between June and September of 1998, intense floods along the Yangtze River killed almost 4,000 people. While sustained heavy rainfall caused flooding, the effects were more severe because of deforestation. Forests had been cleared and converted to farmland resulting in increased and unpredictable runoff.

In response to this disaster, China banned logging in both State-owned and community owned forests in the upper reaches of the Yangtze River. In 2000, the national government set up the Natural Forest Protection Program (NFPP), a 50-year program intended to protect forest resources and biodiversity, and to improve overall environmental quality in ecologically fragile areas.

Tourism development projects

Lijiang is located in the northwest part of the Yunnan Province and lies next to the Three Parallel Rivers of Yunnan Protected Areas, one of the UNESCO World Heritage Sites. The Old Town of Lijiang, which is also a UNESCO World Heritage Site, is an important tourist attraction because it has retained a historically authentic townscape. Its architecture is noteworthy for blending elements from several cultures that have converged over many centuries. Lijiang also possesses an ancient, complex water-supply system that still functions effectively today.

The importance of tourism to the local economy influenced the Chinese government built the Lashahai Dam in the 1990s. More recently, other tourism development projects have threatened the Naxi and the Yi indigenous ways of life, as well as the environment. These projects include a golf course, a film and television shooting studio, food courts, and real estate developments, all of which require large amounts of land and potentially relocation of local indigenous peoples.

Climate change

There are many risks related to climate change that affect this region, including droughts, floods, forest fires and extreme cold weather, all of which can result in hunger and poverty. For example, both mountainous and wetland areas have experienced continuous drought, hail and windstorms, floods, and bitter cold with severe snow storms. Often during these disasters, local people lose their crops and livestock. These weather extremities were not previously encountered.
Indigenous organizations for protecting rights to resource and FPIC

In 2000, Green Watershed held a participatory rural appraisal (PRA) for each village, including the Naxi communities around the Lashihai Wetland and the Yi communities in the Himalayas. These PRAs helped communities understand the issues and challenges they face and encouraged their participation in project implementation. The first action after the PRAs was the establishment of four indigenous organizations protecting the rights to natural resources and enforcing Free, Prior and Informed Consent (FPIC).

KEY IMPACTS

Indigenous organizations for protecting rights to resource and FPIC

- After several years of negotiation, the local government authorities accepted the recommendations made by these four indigenous associations and admitted that the Lashihai Watershed and the ecological environment it supports are highly valuable resources.
- At the same time, the central government recognized practices of green poverty alleviation. In 2014, the Poverty Alleviation Office of the State Council recognized the efforts of Green Watershed in green poverty alleviation and selected the Boduoluo Yi community as the first case study in the database of best practices in poverty alleviation domestically and internationally.

Reforestation and sustainable livelihoods

The Naxi people in the village of Xihu built silt dams to control soil erosion, planted forests, implemented household methane biodigesters and developed agroforestry. The average annual income of the villagers rose to 20,000 Chinese yuan, 10 times the level at the beginning of the project. The Naxi people depend on the Yi to protect the forests in the mountains so that the lower reaches of the river remain healthy.

Meanwhile, Yi villages developed animal husbandry and cultivation of Chinese herbal medicines. They also opened up an ecotourism enterprise, thereby diversifying livelihoods in response to natural and market risks. Income per capita reached 10,000 Chinese yuan, which was 10 times the level at the start of the project. A village-level logging ban enacted by the Yi community 15 years ago is still in effect today, and botanists carry out natural capital surveys together with the villagers encouraging the Yi community to further protect their natural capital.

Prior to this initiative, only four months of food could be ensured each year for Yi villagers. This food security problem was addressed when Green Watershed researchers investigated local resources in Lijiang and found a famous international potato planting base located in the Naxi Tai’an Township, just 30 kilometres away. After communicating with the International Potato Experiment Base, the project introduced high-quality potato seeds into the Yi households. After one year, the food production in Yi community increased five times.
KEY IMPACTS

Reforestation and sustainable livelihoods

- The initiative promoted the self-management and protection of over 1,330 hectares of forest by the Yi community upstream and encouraged livelihood diversification.
- The average annual income of Yi and Naxi villagers rose 10 times the level at the beginning of the project.
- Forests in the mountains have been rehabilitated and species such as the Rhesus monkey (*Macaca mulatta*) and the Asian black bear (*Ursus thibetanus*) have returned to their habitat.

Water management

The Naxi Water Users’ Association was encouraged to save water through careful planning, ensuring that over 3,300 hectares of farmland received irrigation during five consecutive years of drought. The initiative promoted the development of agroforestry and ecological cultivation by the community, thereby curbing soil erosion and reducing wetland sediment deposition.

In addition, the Fishermen’s Association established a management system to ban the use of illegal nets. As a result, fish populations, resources, and related livelihoods could achieve sustainable development and be protected. At the same time, the initiative helped the Fishermen’s Association restore the ecological balance of the wetlands, guaranteeing food for 76 species of wintering birds with populations over 100,000. These project activities not only mitigate and build resilience to climate change, but also increased the incomes and resource management rights of indigenous people.

KEY IMPACTS

Water management

- The Lashihai fish are now sold as a delicacy in Lijiang.
- Fish resources have returned to population sizes showed 20 years ago.
- Following the Water Users’ Association model, the county Water Resource Bureau duplicated the Water Users’ Association in 24 other townships covering the entire county territory.
Gender mainstreaming

Women’s voices have received more respect in such a male-dominated society. This organization increases women’s involvement in the meetings discussing village development issues. Now women have agency and can offer different opinions, even if they do not agree with men.

The Yi and Naxi communities traditionally have patriarchal societies. The initiative established night schools for Yi and Naxi women to empower them and teach them ecological knowledge and cultivation skills, with an aim of increasing their voices in community development. Over ten years, women’s status has significantly risen within the local communities. Women who either worked outside or performed housework at home now play a key role in their family economy.

In addition, the initiative established the women’s microfinance program in 2002, with the aim of encouraging women to gain economic and social independence. After the implementation of the microfinance program, the community agreed women had greater freedoms.

KEY IMPACTS

Gender mainstreaming

- The women’s night school in Xihu Naxi village has been selected as a model night school by the Women Federations of Lijiang City and Yunnan Province.
- The women’s night school in Boduoluo Yi village has actively operated for 10 years. The curriculum included not only language but also agricultural skills with some Yi men asking to attend class. Later, the women’s night school became a meeting place for decision making.
- Women actively participate in the decision-making process. For example, Naxi women representatives have engaged in every water management group. Yi women participate in mountain watershed management group decision-making and manage herbal medicine production which bring increased income to their families.
Disaster management

In 2007, Green Watershed launched a disaster prevention project with Oxfam Hong Kong. As part of this initiative, they provided disaster management training to the Yi minority. They trained villagers to analyse the different types of disasters and their causes, review traditional disaster knowledge, establish the first-level natural disaster management group, and help the community improve infrastructures to manage disasters. For example, Oxfam Hong Kong helped the community build water storage ponds, fortified houses to withstand earthquakes, encouraged afforestation and livelihood diversification.

In the spring of 2013, there was a forest fire in the mountains of the Yi community. The disaster management group at Boduolu village led the villagers to evacuate women and the elderly and extinguished the fire.

KEY IMPACTS

Disaster management

- In 2013, Boduolu village was selected as a “National example community of disaster prevention” and a model of disaster preparedness and reduction by the Ministry of Civil Affairs of China.
- The Yi community established disaster preparedness and reduction mechanism through the mountain forest resource management system.
POLICY IMPACTS

National Policy Impacts

The Green Watershed initiative pushed the government to establish a watershed management committee to act as a multilateral communication channel. Discussions of watershed resource development projects were held with the participation of indigenous people, on the precondition of being informed with ample time and freedom to express opinions. For example, when the expansion of the Lashihai dam threatened to flood even more of the villagers’ land, the initiative organized villagers to study the national Land Law, cultivating their ability to participate in decision making, articulate problems and advocate on their behalf. The fishermen’s Association surveyed the ecological, economic and social impact of the dam and organized the villagers’ appeals, then put together a survey report to provide to the Lijiang municipal government. They also visited the Provincial People’s Congress and provincial forestry office to defend their rights to knowledge and free expression, and to demand compensation. As a result, the government had to abandon forced land acquisition in favour of land leasing methods and signed contracts with villagers.

In addition, in the context of the resettlement program, the initiative assisted indigenous people in securing the right to mountain resources and the right to FPIC. Upon receiving information on the project, the indigenous people chose to decline relocation. In 2013, the initiative also drew on lessons learned to prepare a handbook on protecting indigenous peoples’ rights relating to water resource development, placing particular emphasis on the principle of Free, Prior and Informed Consent (FPIC).

Green Watershed initiated a Green Bank Watch Group to promote green policies in the banking sector, raise awareness and monitor environmental performance of financial institutions. Outputs included a website to track bank activities including information on green loaning and grant-making, and ranks according to their grant flows. They have also conducted trainings with other Chinese NGOs to enhance their capacity to lobby for green credit policies.

The fishermen’s association has been pushing the local government to enact regulations on off-season fishing and large mesh net use. Through policy support, the fishery management society started door-to-door outreach and monitoring fishing activity.

Thanksto non-governmental environmental organizations, the Nu River hydropower controversy in 2003 and 2005 brought the dam project to national attention. Because of efforts from organizations such as Green Earth Volunteers and Green Watershed, the central government suspended the Nu River hydropower project. For the first time in China, the voice and activities of domestic non-governmental organizations directly influenced the decision making of the central government. Finally, the provincial and central government of China decided to establish National Parks in the Nu River basin. The activities of the Chinese environmental organizations represent an important step forward toward the social modernization of China.

In 2004, Green Watershed viewed the establishment of good governance mechanisms as crucial to overcoming poverty and water crises. Fourteen villages from the Nu River basin were brought to the nearby Manwan dam in Lancang River basin in order to see first hand how the dam’s construction would affect their lives. The poor socioeconomic condition of the people around Manwan shocked the villagers. Additionally, Green Watershed facilitated the participation of the Nu River village representatives in the 2004 UN Dam and Development Symposium in Beijing. Consequently, these approaches were not welcomed by local government officials, who unsuccessfully tried to dismantle the local NGO for engaging in activities beyond its mission, but succeeded in banning the Green Watershed founder from travelling overseas for four years.
Contributions to Global Agenda

Green Watershed and its initiatives have contributed to several Sustainable Development Goals (SDGs), such as ending poverty and hunger and ensuring decent work and economic growth (SDG 1; SDG 2; SDG 8). In addition, they have contributed to gender equality through female empowerment (SDG 5). The ecological restoration activities carried out support the goals of responsible consumption and production, life below water, and life on land (SDG 12; SDG 14; SDG 15). Finally, the disaster management planning exercise in Boduoluo directly contributes to climate change mitigation (SDG 13).
REPLICABILITY, SCALABILITY, AND SUSTAINABILITY

Replicability

After the successful establishment and management of the Water Users’ Association, the Water Resource Bureau promoted this model to the entire county. However, not every newly established Water User’s Association has been as successful as that of the Naxi people. Green Watershed realized that the introducing fair development for NGOs and the learning opportunities of people who are in charge of the Water Users’ Associations also play a key role.

The Lashihai project serves as a lesson for Master’s and Ph.D. students who research China’s NGO development.

Scalability

The Lashihai initiative has been scaled up in several ways. For example, according to the Lashihai township government’s assessment, the Lashihai project educated the governments of all the surrounding townships. In addition, the Anthropology Department of Zhongshan University established a base for graduate student fieldwork in the initiative’s area. Based on how resource rights of indigenous people were respected, other indigenous communities chose similar development methods which prove extension to other areas of the country. Also, after being examined by the Poverty Reduction Centre of the State Council’s Leading Group Office of Poverty Alleviation and Development (LGOPAD), Boduolu’s community development garnered recognition by being included in the poverty alleviation case study collections of LGOPAD and the Asian Development Bank that can be shared domestically and abroad. Finally, the Ministry of Civil Affairs named the Lashihai Yi a national model community for disaster reduction, and its approach to combining nature protection with disaster reduction has extended to the Gansu and Sichuan disaster regions.

Sustainability

After 15 years of project support, the Fishermen’s Association, Water Users’ Association, the Naxi Watershed Management Group, and the Yi Watershed Management Group established its ecotourism and agriculture cooperative and registered it as social enterprise. These cooperatives will be financially self-sufficient and independent. Green Watershed, as a research and capacity-building organization, will extend its activities to other watershed areas, like the Nu River Basin.
FUTURE PLANS

- Green Watershed fulfilled its objectives in the Lashihai Watershed and is now extending its activities to Nu River Basin and to neighbouring countries such as Myanmar.
- Since the National Parks become priorities for development, Green Watershed has been helping the Lisu, Nu, and Tibetan communities during the last two years to provide these ethnic communities with capacity training in ecotourism development and networking.
- China overseas investment has been expanding, financed by China commercial banks and China-initiated banks such as the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB). Some large projects have environmental and social impacts and Green Watershed plans to cooperate with NGOs in neighbouring countries to advocate collectively for an environmental and social safeguard policy among banks. At the same time, it will provide capacity building for NGOs and local communities in these countries to hold the financial institutions accountable for their actions.

PARTNERS

- The GEF-Small Grants Programme (SGP): It funded a project aimed at ecological restoration, afforestation and greenhouse cultivation.
- Oxfam America: It supported project operations to combat water loss and soil erosion and to mix planting of agricultural crops and forests.
- Oxfam Hong Kong: It supported the establishment of diversified sustainable livelihoods, capacity building for villages and external exchange activities.
- The Nandu Foundation: It provided financial support to the construction of infrastructure for water cellars and pipelines during the drought in southwest China.
- Youchange China Social Entrepreneur Foundation: It provided capacity building and training for migrant workers who return to communities.
SOURCES AND FURTHER RESOURCES


Green Bank Watch Website. Available online [here](https://www.greenbankwatch.org).  


ACKNOWLEDGEMENTS

The Equator Initiative acknowledges with gratitude XiaoGang Yu (Green Watershed) for their assistance with editing the case study. All photos courtesy of Green Watershed. Maps courtesy of United Nations Geospatial Information Section and Wikipedia.

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Suggested Citation

EQUATOR INITIATIVE

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The United Nations Development Programme (UNDP) is the UN’s global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life.

The Equator Initiative brings together the United Nations, governments, civil society, businesses and grassroots organizations to recognize and advance local sustainable development solutions for people, nature and resilient communities.

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