

The Naxi Mountain Villages Coalition: A Model of Biocultural Conservation



Description

Nestled in the biodiversity hotspot of the Jinsha River Valley, the three Naxi villages of Stone, Youmi, and Labo have thrived for centuries, rooted in a rich biocultural heritage. The Naxi people, renowned for their harmonious relationship with nature, have sustainably managed their mountain landscapes for generations.



The geographical locations of the three villages

Historically, the Naxi villages cultivated a diverse range of crops. However, in recent decades, this diversity has dwindled, with only two local corn hybrids planted in 2012, compared to over ten in the 1980s. This decline in crop diversity, coupled with the erosion of traditional knowledge, has weakened the resilience of the community. Additionally, climate change has exacerbated these challenges, with increased frequency and severity of droughts, floods, delayed rainy seasons, landslides, and pest outbreaks, further impacting livelihoods and traditional culture.

In 2013, a participatory action research project, supported by the Farmers' Seed Network (FSN) and the United Nations Environment Programme -

International Ecosystem Management Partnership (UNEP-IEMP), was initiated to conserve and sustainably use Naxi bio-cultural heritage and agrobiodiversity. Through a series of participatory activities, primarily led by women, a holistic approach was adopted to combine traditional knowledge with modern scientific techniques. This collaborative effort resulted in the establishment of the Naxi Mountain Villages Coalition in 2015, which aims to protect and sustainably utilize biodiversity, water resources, and other natural resources. The Coalition seeks to promote a harmonious coexistence between humans and nature by fostering community-based ecological culture and sustainable development.

Since 2013, the action research project has worked to bridge the gap between traditional and scientific knowledge in agrobiodiversity and water management. Through participatory approaches, primarily led by women, the villagers have undertaken several initiatives:

1. Participatory Plant Breeding (PPB): Farmers, guided by scientists, have conducted trials on maize, legumes, and vegetables to identify and select varieties best suited to local conditions and culture.



Farmers' School - Scientists Visit Farmers' Fields for On-Site Guidance

2. Walking Workshops: These workshops facilitate peer-to-peer learning and knowledge sharing among farmers on topics such as seed management, agroecological practices, and water management techniques.



Members of the Naxi Mountain Villages Coalition exchanged seeds and shared farming experiences.

3. Farmers' Schools: Regular training sessions cover a range of topics, including video documentation, integrated pest management, post-harvest techniques, and water-efficient farming practices.

4. Community Seed Banks: Establishing community seed banks to preserve local crop varieties in all the villages.

5. Water Resource Management: Revitalizing and innovating traditional water management practices, such as above- and underground irrigation systems in Stone Village, to improve water efficiency and reduce soil erosion. To further enhance water resource management, the Coalition has incorporated modern technology, using GPS to map water channels.

6. Market Linkages: Connecting with urban consumers to promote the consumption of local, traditional foods and encourage participation in landrace

conservation and agroecology.

These initiatives have contributed to the in-situ conservation and sustainable utilization of agrobiodiversity, as well as the revitalization of Naxi traditional culture and knowledge. Importantly, women have been at the forefront of agricultural production, serving as custodians and leaders in both agrobiodiversity and water management. Female farmers have spearheaded initiatives like participatory plant breeding trials, seed bank management, and seed exchanges. They have also organized farmers' schools and utilized social media to share knowledge and inspire others. Moreover, they have created innovative, healthy recipes using local ingredients to nourish their communities.

Outcome

Key Achievements:

1. Community-Based Conservation: The Coalition has successfully implemented community-based conservation initiatives, including:

- **Participatory Plant Breeding (PPB):** Developing over 20 new crop varieties adapted to local conditions.
- **Community Seed Banks:** Preserving over 100 local crop varieties.
- **Traditional Knowledge Revival:** Documenting and revitalizing indigenous knowledge systems.

2. Documentation and Publication of a Bio-Cultural Book Series:

- Between 2016 and 2022, the FSN team conducted a six-year community-based participatory social and anthropological study in collaboration with villagers. Employing methods such as oral history, semi-structured interviews, and participatory observation, a systematic documentation was undertaken. This research culminated in the publication of a three-book series titled "Dongba Bio-Cultural Guardians" by CITIC Press, one of China's leading publishing houses. The series includes Oral History of the 11 Dongba Masters in Youmi Village, Biocultural Record of Youmi Village, and Photography Booklet of 4 Moso/Naxi Villages in the Jingsha River Valley. This book series has significantly contributed to the promotion of ethnic culture and ecological conservation.



Dongba Bio-Cultural Guardians Book Series

- Publication of a Field Handbook of Indigenous Wild Plants in Stone Village: Our intern, in collaboration with the village head, Mr. Mu Wenchuan, developed a field guide documenting over 50 wild plant species used by the Naxi people of Stone Village, Yunnan. This guide includes each plant's local Naxi name, Chinese name, Latin scientific name, along with traditional knowledge and uses.

3. Water Resource Management:

- Traditional Water Management Systems: The Coalition has restored and maintained traditional irrigation systems and customary laws, to improve water efficiency and prevent soil erosion.

4. Building Partnerships and Capacity:

- International Collaboration: The Coalition is a core member of the International Network of Mountain Indigenous Peoples (INMIP), which unites

mountain IPLCs in 13 countries. Coalition members attended INMIP Walking Workshops (WW) in Bhutan, Peru and Tajikistan and joined farmer-scientist-policymaker dialogues. Following the WW in Peru's Potato Park, Stone Village established the Coalition to reverse the decline of Dongba culture and strengthen customary rights. These efforts have garnered local governmental backing, aiding in the rejection of an ecologically damaging tobacco cash crop program. In 2016, the Coalition hosted an INMIP WW in Stone Village with 60 participants from 9 countries (China workshop).

- **Capacity Building:** Collaboration with scientists has provided Stone Village with technical support in PPB, while Naxi wisdom in pest control and seed preservation has been validated and appreciated, highlighting an integrated approach to agricultural sustainability and livelihood resilience.

- **Community-Led Innovation:** Each village contributes its unique strengths in the Coalition:

(1) Stone Village: Merges traditional farming wisdom with scientific knowledge to adapt to ecological and climate changes.

(2) Youmi Village: Centers community life around Dongba cultural and spiritual practices.

(3) Labo Village: Offers unique biocultural insights and hosts a Daba museum.

Good Practices and Lessons Learned

The three Naxi communities, renowned for their rich cultural heritage, particularly in water management, are actively revitalizing their indigenous practices, traditions, Dongba language, and religion with support from FSN and UNEP-IEMP. This initiative involves:

1. **Teaching the Dongba Language and Symbols:** Preserving and transmitting the ancient Naxi script.

2. **Establishing Community Seed Banks and Culture Museums:** Promoting seed conservation and cultural heritage.

3. **Reinforcing Traditional Customs:** Upholding age-old practices like elder-led governance and environmental stewardship.

The Coalition prioritizes inclusivity, valuing contributions from all community members, regardless of age. The Naxi tradition of respecting elders is evident in active senior associations that share wisdom, while the Coalition also engages young people, especially during the COVID-19 pandemic. Initiatives like Youmi Village's Youth Women's Group, which has revived weaving crafts, exemplify opportunities for youth empowerment. This holistic approach ensures the preservation and transmission of Naxi biocultural heritage, promoting equity and social inclusion across generations.

Key lessons learned include:

- **Empowering Local Communities:**

- o The Coalition has established the first farmer- managed Community Seed Bank (CSB) in China, playing a crucial role in preserving agrobiodiversity by safeguarding a diverse range of local crops and seeds. These CSBs have empowered villagers to take collective action and strengthen their cultural identity.
- o The first CSB, established in Stone village in 2016 with support from FSN, houses over 113 varieties, as detailed in the community seed registry. These encompass 20 maize PPB varieties, 14 varieties exchanged from FSN communities, 22 soybean PVS varieties, 43 local varieties, 12 local vegetable varieties, and 2 types of local cash crop and herbal medicine. Now, with four community seed banks established, a total of 207 farmer varieties are being preserved.
- o The revival of local seeds has promoted traditional diversified farming practices, which reduce pesticides use by using bio-pesticides derived from wild herbs and chilies, promote intercropping to reduce fertilizers use, both benefit the soil microbiome and wildlife, introduce reforestation around terrace field for soil conservation, and boost income through non-timber forest products like nuts. Moreover, these agroecological practices have enhanced water resource management by minimizing water use and pollution.

- **Preserving Traditional Knowledge:** Naxi women leaders have fostered the

establishment of informal groups promoting conservation farming. They have also formed two farmers' cooperatives to enhance market access and finance. These groups facilitate the exchange of climate action strategies, drawing on revived traditional knowledge and customary law to foster a sense of collective responsibility for shared resources. Additionally, the joint efforts to research and publish the "Stone Village Wild Plant Species Field Guide" and the "Dongba Book Series" have significantly contributed to the promotion of Naxi culture and ecological conservation.



Farmers obtain seeds from the community seed bank

- **Building Strong Partnerships:**

- o Local farmers and scientists conducted trials on maize, legumes, peanuts, and vegetables, developing four drought-resistant maize varieties. These PPB and PVS efforts enhanced crop diversity in communities along the Jinsha River valley, improving access to valuable genetic resources.
- o The Naxi Mountain Villages Coalition, in partnership with FSN, UNEP-IEMP, and CAS, has played a crucial role in community-led conservation. By engaging in international exchanges and global forums, the Coalition has elevated its voice on the global stage and strengthened its position as a

leader in sustainable agriculture and cultural heritage preservation.

- **Adapting to Climate Change:** By continuously conserving diverse seeds and incorporating innovative practices, the community has enhanced its resilience to extreme weather events. Additionally, reforestation and sustainable forest management on surrounding mountain slopes have improved water and soil management, mitigating the risks of drought and landslide.

Collectively, these endeavors exemplify a community-led governance model rooted in equitable water management. By leveraging global networks and scientific collaboration, local initiatives have been empowered, enriching global policy discussions and strengthening the voices of mountain Indigenous Peoples. This approach fosters resilience and self-determination by protecting cultural identity, territorial rights, and biodiversity.



Discuss water resource management with INMIP members at the water source of Stone Village

Implementing Partners

Stone Village Participatory Group: Sharing and disseminating experiences in seed conservation, community seed bank management, and traditional water management practices such as above- and underground irrigation systems.

Labo Participatory Group: Overseeing the day-to-day operations of the community seed bank, including seed storage, distribution, and documentation.

Wumu Participatory Group: Documenting and preserving traditional Naxi culture, including ecological knowledge and practices.

Youmi Women's Group: Managing the community seed bank, collecting oral histories and traditional knowledge related to seeds and agriculture, and promoting women's roles in sustainable agriculture.

Further Information

To scale up the Coalition's impact, FSN recommended it as a special demonstration site for the Sustainable Livelihood and Green Development project, led by the Chinese Academy of Sciences. Managed by UNEP-IEMP, this project is the first in China to focus on sustainable livelihoods in environmentally and economically fragile Silk Road areas through extensive field surveys. The project underscores the importance of community-based biocultural approaches in maintaining ecosystem services and building resilience to environmental and social change.

In recognition of its outstanding achievements, the Coalition received the "100+ Biodiversity Positive Practices and Actions Around the World" prize from the CBD Secretariat in 2021 and was named a finalist for the Equator Prize in 2024.

In 2024, Stone Village was recognized as a potential Other Effective area-based Conservation Measure (OECM) in China, highlighting the significance of its traditional mountain ecosystem and biocultural practices.

To further expand the impact of community seed banks, FSN has supported the establishment of 42 CSBs nationwide, including 27 in southwestern ethnic minority areas. These CSBs facilitate seed exchange, promote biocultural knowledge, and enhance local adaptation strategies. By bridging the gap between farmers and scientists, FSN fosters a collaborative environment that ensures the long-term sustainability of seed systems.



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FARMERS' SEED NETWORK(CHINA)

Farmers' Seed Network (China) is a pioneering organization in applying participatory action research on community based agrobiodiversity and natural resource management in China. We facilitate collaborations between farmers, scientists and other stakeholders for strengthening farmers' seed systems, improving farmers' livelihoods, enhancing farmers' dignity, and promoting seed and food security at multiple levels for all.

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