THE PENDEBA SOCIETY OF THE TIBET AUTONOMOUS REGION
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 Prize 2014 was awarded to 35 outstanding local community and indigenous peoples initiatives working to meet climate and development challenges through the conservation and sustainable use of nature. Selected from 1,234 nomination from across 121 countries, the winners were recognized for their achievements at a prize ceremony held in conjunction with the UN Secretary General's Climate Summit and the World Conference on Indigenous Peoples in New York City. Special emphasis was placed on forest and ecosystem restoration, food security and agriculture, and water and ocean management. 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. Case studies are best viewed and understood with reference to The Power of Local Action: Lessons from 10 Years of the Equator Prize, a compendium of lessons learned and policy guidance that draws from the case material.

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PROJECT SUMMARY

To safeguard the Qomolangma National Nature Preserve – an area that is roughly the size of Taiwan – this grassroots initiative employs locally-nominated volunteers known as pendebas from each of the 406 villages within the protected area to promote environmental conservation, improve family health, advance options for income generation, and organize collective action for common goods. Together, the pendebas’ initiative has helped decrease child mortality by 50 percent, reduce deforestation by 80 percent, and protect threatened species of endangered wildlife, including populations of the snow leopard, Tibetan wild ass, and Tibetan antelope.

Pendebas have mobilized their villages to improve water and sanitation services, protect wetlands and water sources, establish hundreds of tree nurseries and reforestation campaigns, spread the use of solar energy, and prevent the killing of endangered animals. Activities are carried out with a strong sense of partnership within the communities and with local governments. At the roof of the world, with six of the planet’s highest peaks, the initiative is helping to safeguard a climate change hotspot, a wetland ecosystem, and the health and wellbeing of local communities.

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Background and Context

Life at the roof of the world

The Qomolangma National Nature Preserve (QNNP) is among the most ecologically and culturally diverse regions in China. It boasts breathtaking scenery, abundant natural resources, and ancient Tibetan culture. Each year, thousands of tourists flock to the national park. The preserve protects a land area of 32,681 square kilometers and falls under the administrative jurisdiction of Tingri, Gyirong, Nyalam, and Dinggye counties. It contains four of the world's six highest peaks – Qomolangma (Mt. Everest), Lhotse, Makalu, and Cho Oyu – as well as a number of important cultural sites, including the highest monastery on earth, Rongbuk Monastery, and four hermitage sites of the poet-saint Milarepa. QNNP connects four conservation areas in Nepal, which together constitute a central Himalayan protected area the size of Taiwan.

Ecosystem types vary considerably across the preserve because of its vertical range. Vegetation distribution ranges from 1,600 meters on the southeast and southwestern slopes to 6,200 meters on the north. The south slope features an array of forest types: subtropical evergreen forests, needle-leaved and broad-leaved mixed forests, mountain cold temperate forests, subalpine cold temperate forests, subalpine frigid shrubs and meadows, alpine frigid meadows and cushion vegetation, and alpine frigid moraine lichens. Above 5,500 meters, beyond the snow and ice belt, the landscape changes dramatically. The north slope consists of plateau frigid semi-arid steppes, alpine frigid meadows and cushion vegetation, and alpine frigid moraine lichens. Together, these ecosystems house an abundance of biodiversity, including populations of globally important species that live few other places on earth, among them, the snow leopard (*Panthera uncia*), the black-necked crane (*Grus nigricollis*), the Tibetan wild ass (*Equus kiang*), and the Tibetan gazelle (*Procapra picticaudata*).

Economic marginalization and geographic isolation

Qomolangma National Nature Preserve houses two of the poorest counties in China. Local livelihoods depend predominantly on subsistence farming or nomadic herding. In a population of 90,000 people, 80 percent are engaged in some form of agricultural work. Over 95 percent are ethnic Tibetans and the majority of those are traditional herder-cultivators, known as ‘samadrog’, who live in widely scattered hamlets. Animal husbandry of sheep, goats, and cattle is an essential part of the local economy. At the conclusion of 2013, the livestock in QNNP numbered 866,800. Average incomes in the region are modest, in the range of 6,027 Yuan (approximately US$916) per year. In addition to a lack of livelihood options, the Tibet Autonomous Region is remote, has a dispersed population, and is characterized by severe landscapes that are only suited to certain types of agriculture. Communities in QNNP depend heavily on subsistence agriculture. According to statistics gathered in 2013, the total gross output value of farming, forestry, and animal husbandry was approximately 461.76
5 million Yuan (ca. US$70.2 million); 218.5 million Yuan from farming (ca. US$33.2 million), 3.75 million Yuan from forestry (ca. US$570,112), and 239.51 million Yuan from animal husbandry (ca. US$36.4 million).

Mapping the Human Development Index (HDI) in China offers a stark perspective on how unevenly growth and economic prosperity have been spread across the country. HDI in the Tibet Autonomous Region, Yunnan, and Gansu, for example, is 20 percent lower than in China's east coast provinces. Chinese investments in the Tibet Autonomous Region have favored infrastructure projects such as the Qinghai-Tibet railroad (which opened in 2006) and Lhasa-Shigatse City railroad (which opened in 2014) over investments in local capacity building and community development. Although more visitors are able to visit QNNP each year, the tangible gains for communities in terms of livelihoods and wellbeing have been inconsistent. This is reflected by the Tibet Autonomous Region's GDP, which is two-thirds that of China's average. Rates of literacy and access to health care are also troublingly low in the Tibet Autonomous Region, presenting an additional barrier to development. Outside the main industrial centers, communities are small and widely dispersed, located far from basic services. This remoteness and isolation is a key logistical hurdle to local development.

Environmental threats and drivers of poverty

The region's five largest rivers, its inland lakes, and its wetlands have meaningfully shaped social and economic development in the region, and will be equally important in determining its future. Recent years have seen the Chinese government strengthening conservation efforts in the Tibet Autonomous Region, restoring and protecting the rivers, lakes, and wetlands that will sustain the local population and allow wildlife to thrive.

Environmental threats, however, still abound. Commercial mining and oil exploration, unsustainable resource extraction, and local pressure on wetland resources are all rapidly deteriorating the local environment. Soil erosion and desertification have intensified in recent years, owing to factors ranging from overgrazing to uncontrolled firewood collection. Desertification is particularly severe in the Pengqu River Valley, where vegetation is scarce and the soil is composed of dry sand with poor water storage capacity. Deforestation has also been a persistent problem. In the eastern part of the Tibet Autonomous Region in the 1980s, mountainsides of forests were clear-cut to support economic growth in inland China, where timber demand is high and unrelenting. Hundreds of trucks a day carried timber from the Yangtze, Mekong, and Salween valleys in the eastern Tibet Autonomous Region to inland China. Until 1996, when a ban was put in place, wildlife was wantonly killed, at times ruthlessly with automatic weapons. In the late 1980s and early 1990s, early proposals were developed to counter these problems.

Climate change is an additional degree of complexity to life at the roof of the world, changing the distribution of water resources and making for less predictable flows of glacial water melt and river
were empowered to use the land as long as the natural balance was maintained. Each area in which they were located. Seven core areas were put in place to ensure the protection of wildlife would be treated and managed depending on the particular needs of the area. Conservation management approaches and conservation interventions would need to be tailored. A decision was made to put conservation, resource management, and environmental protection in the hands of the local people, who could effectively localize conservation interventions.

QNNP remains a relatively closed society and economy, which has translated to slow rates of development and limited access to basic services. Local living conditions remain poor and conventional production methods that were once sustainable are putting unsustainable pressure on the local environment. As one example among many, wetlands are increasingly being explored in search of construction materials for sheep corrals, an important enclosure used in animal husbandry. This alone has been a relevant driver of the slow and steady destruction of local wetlands. Wetland ecosystems are highly resilient but, once seriously degraded, are extremely difficult to restore.

**Qomolangma National Nature Preserve**

Qomolangma National Nature Preserve was first established in 1989 and was among the first protected areas in Asia to rely on the conservation stewardship of local people rather than outside wardens. Conservation management was based on a biosphere reserve model that allows people to live in and adjacent to core protected zones. With 406 remote villages spread across a large and biodiverse expanse of parkland, the challenge was to ensure that local people benefited from nature conservation.

It was clear that paying wardens from outside to patrol the reserve and punish transgressors of conservation laws was not viable. Not only would this type of oversight be cost-prohibitive, but it would also distance the residents of the reserve. Locally-managed protection and governance of the reserve, however, offered a powerful means to ensure sustainable management of preserve land. Local villagers were knowledgeable about the landscape, were the main drivers of potential land-use change, and had existing institutions to build on. The founders of QNNP also recognized that the ecology and restoration needs of each valley in the reserve differed substantially, meaning that management approaches and conservation interventions would need to be tailored. A decision was made to put conservation, resource management, and environmental protection in the hands of the local people, who could effectively localize conservation interventions.

The preserve was created with a number of notable guiding principles. Land management would be pursued based on existing systems and institutions; that is, no separate park structure or warden force would be created. QNNP would use the existing administration of Tingri, Gyirong, Nyalam, and Dinggye counties, allowing for directions in land use and conservation planning without a new layer of bureaucracy. Management followed the biosphere reserve model of creating a zone-based mosaic of land-use, where land and wildlife would be treated and managed depending on the particular zone in which they were located. Seven core areas were put in place to protect key wildlife habitats. In surrounding buffer zones, people were empowered to use the land as long as the natural balance was not disrupted. Towns and villages were called ‘development zones’ where human use activities were permitted so long as they did not damage the wider environment.

‘Workers who benefit the village’

In 1994, the Qomolangma National Nature Preserve Management Bureau, Future Generations (an international NGO focused on conservation and community development), and village leaders piloted a project called the Pendeba Program. This program put forward a new type of conservation and development model based on a traditional practice of empowering community service volunteers, known as pendebas. Literally translating from Tibetan as ‘workers who benefit the village’, pendebas are locally-nominated volunteers from each village within the protected area who work to improve family health, advance options for income generation, disseminate conservation concepts, and organize collaborative action around local priorities.

In the early stages of the pilot program, surveyed villagers prioritized three issues: reliable energy, health care, and transport services. Of these, primary health care was selected as the most feasible entry point to pilot the pendeba model. Village surveys showed specific and urgent needs in treating diarrhea, pneumonia, cuts, broken bones, and providing assistance with childbirth. For the initial pilot, 24 villagers were selected to go to Shegar, the central town in the nature preserve, for three weeks of training in primary health care. They returned to their villages with a basic drug supply, knowledge of how to treat common ailments, and an understanding of preventive medicine. This was the birth of the pendeba program.

Pendeba skills grew incrementally. At first, they provided first aid, vaccinations, and oral rehydration for diarrhea, the latter provided using a homemade solution of roasted barley flour and salt. However, over time and with additional training, pendebas were able to meet a remarkable two-thirds of village health needs. In areas where the most experienced pendebas worked, ‘teaching villages’ were established to scale up the program. Pendeba numbers grew from 24 in 1994, to 87 in 1997, to 234 in 1999. By 2010, there were 450 pendebas trained. Expanding beyond health care, pendebas emerged as agents of positive change in a range of different areas, including tree planting, conservation, and sustainable livelihood activities.

The Pendeba Society of the Tibet Autonomous Region was officially founded in 2009, though its roots extend back to this initial pilot program. It was the first non-profit organization to be created in the Tibet Autonomous Region of China. The mission of the organization is to revitalize the pendeba model to train local residents as ‘preservation wardens’ in the conservation zone. The initiative employs locally-nominated volunteers from each of the 406 villages in the protected area to solve problems, protect natural resources, improve maternal and child health, and expand opportunities for income generation.

In this highly isolated region of the world, the Pendeba Society creates ambassadors in each village who link the people to outside ideas, best practices, and resources. Importantly, pendebas have been positioned to connect villages to government services and bring new innovations in sustainable energy, agriculture, ecosystem
restoration, reforestation, and alternative livelihood strategies to local people. This village-to-outside connection advances a different kind of connectivity, one that respects local culture and autonomy without relegating these remote populations to economic marginalization. The goal is not simply reaching the people, but enabling the people to reach out. It is a model of grassroots empowerment that has facilitated local ownership of land management strategies and landscape-level stewardship.

**Decision-making and governance structure**

The Pendeba Society is governed by a General Assembly that consists of 38 representatives from across the organization. The organization is still in the formative stages of fine-tuning its governance structure, but maintains a high level of commitment to transparency, accountability, local representation, and democratic principles. General Assembly members include local representatives from the four counties within QNNP, pendeba trainers, supervisors from the initial Pendeba Program, government staff, and private sector representatives interested in the Pendeba Society. The assembly elects an Executive Committee, which consists of representatives from each county and which is charged with making policy decisions on governance and financial management. Depending on the year, the Executive Committee may number from seven to fifteen members. It supports, supervises, and monitors the management, policies, leadership, and resources of the organization.

“Empowering local people and providing them with capacity building opportunities is the best way to eradicate poverty and to change behavior.”

Tsering Norbu, Executive Director, The Pendeba Society of the Tibet Autonomous Region
The Pendeba Society of the Tibet Autonomous Region works with local volunteers to protect the environment and improve living conditions in the Qomolangma National Nature Preserve. The governing objective of the organization is to cultivate a large network of community volunteers, thereby enhancing community capacity to better manage natural resources, protect local wildlife, and promote sustainable development. Pendebas are empowered to be agents of positive change in their villages by building partnerships that link the needs and capacities of the village people with the resources of the county governments and, through these county channels, regional and central Chinese government authorities. To facilitate these partnerships, the pendebas receive training to advance projects that improve local health conditions, establish tree nurseries, install solar and biogas units, protect wildlife, and generally ensure that nature conservation benefits local people. A related objective of the Pendeba Society is to facilitate networking opportunities for pendebas across QNNP, creating a peer-to-peer learning platform that improves the chances for best practices to be replicated. The Pendeba Society has a vision of a harmonious and prosperous QNNP based on a people-forward philosophy of economic development and wellbeing. In 2013, it was upgraded to a provincial-level social organization, meaning in practical terms that it can now implement the pendeba model across the entire Tibet Autonomous Region, thereby generating wider impacts on conservation and development.

Pendebas have mobilized their villages to improve sanitation, protect wetlands and water sources, establish hundreds of tree nurseries, plant kitchen gardens, spread solar lighting options, and prevent the killing of endangered wildlife. As a result, deforestation rates have decreased by 80 percent, and populations of endangered wildlife, such as snow leopard (Panthera uncia) and Tibetan antelope (Pantholops hodgsonii), are rebounding. Also owing to the pendeba system, today over 80 percent of the 406 villages of QNNP have an effective community-based health care system that links directly to government health posts. With tourism increasing, pendebas are also learning skills to start family hotels, restaurants, and guiding services to ensure that tourism revenues benefit local people and contribute to protection of the environment.

The Pendeba Society operates from a set of principles based on the SEED-Scale process of community change. Pendebas apply the SEED-Scale approach to build on local successes, organize community work plans, manage locally-available resources in response to community priorities, and partner with government agencies to access available services. This process builds local capacity and strengthens self-reliance while at the same time enabling communities to forge government partnerships. Four principles underlie the SEED-Scale approach: (i) build from success by strengthening what is working; (ii) create three-way partnerships between community, government, and outside agents of change; (iii) make decisions based on evidence, not opinions; and (iv) seek behavioral change as the primary outcome. Applying these principles, communities determine their own priorities and focus on practical solutions through the implementation of work
degradation and loss of livestock. Wetland ecosystems have been
conrad construction in the region have led to both environmental
and raise their livestock. However, deficiencies in traditional
eco-agriculture and agroforestry practices, and building flood control
dams to mitigate the negative impacts of seasonal floods on farmland.

Animal husbandry and sheep corrals

As animal husbandry plays a highly important role in the local
economy, protecting livestock can be a matter of life and death
for the local population. Most families rely upon corrals, which
are enclosures that are roughly 150 square meters, to protect
and raise their livestock. However, deficiencies in traditional
conrad construction in the region have led to both environmental
degradation and loss of livestock. Wetland ecosystems have been
degraded and depleted from over-extraction of resources for corral
construction. At the same time, poorly constructed corrals have
led to losses in livestock from exposure to the elements and have
increased risk of livestock losses due to predatory wildlife, which in
turn has created human-wildlife conflict.

The Pendeba Society has implemented a Sheep Corral Transformation
Project to meet these challenges. The goal is to address some of the
ways sheep corrals can be adjusted to improve both environmental
and social outcomes in the region. Poorly constructed sheep corrals
are transformed into stronger structures, reducing annual costs
associated with labor and repairs. Properly constructed corrals create
safer environment for breeding and reduce lamb death rates, thereby
increasing household incomes. The new structures also serve to protect
livestock from cold temperatures and snowstorms, reducing death
rates during the extremes of the region's oppressive winter weather.

Among the more important changes sought through this program
is the sustainable sourcing of materials for corral construction. Field
visits across a number of villages have shown that the construction
of conventional sheep corrals has been a primary driver of wetland
and grassland degradation. Local communities are putting increased
pressure on these fragile ecosystems for construction materials,
resulting in damage that can take years to restore. The initiative
seeks to bring communities from local villages into dialogue with
local government on regulations that will ensure local needs are
met while also protecting the environment. Interventions have
focused on creating better incentives for conservation and with
providing communities with alternative construction materials.

Environmental conservation and public health

A critical dimension of Pendeba Society work has been training local
volunteers in environmental conservation and judicious natural
resource management. Pendebas have been trained to establish
tree nurseries, care for seedlings, and reforest degraded areas. Other
trainings have focused on: composting, discouraging the use of
plastic materials, promoting alternative energy by installing solar
and biogas units, distributing smokeless stoves that help to reduce
respiratory illnesses, protecting the diverse wildlife of QNNP, applying
eco-agriculture and agroforestry practices, and building flood control
dams to mitigate the negative impacts of seasonal floods on farmland.

Equal emphasis has been placed on preventive health care,
meeting a gap in service provision to an isolated population.
Pendeba efforts place priority on care by mothers, families, and the
village. The organization trains pendebas on how to carry out safe
pregnancy care, immunization, family planning, addressing Vitamin
A deficiency and anemia, sanitation, and preventing diarrhea and
tuberculosis. Pendebas also learn the best means to refer patients
to relevant health services when needed. A parallel public health
concern has been that as the economy has developed the number of
annual migrant workers has increased, which in turn raises the
risk of exposure to HIV and AIDS. Trainings provide pendebas with
information about HIV and AIDS prevention, and pendebas work
together to discuss campaigns that will have the greatest chance of
successfully spreading information about the disease.

Capacity building and training

The ongoing recruitment and training of pendebas is a central
feature of the initiative. Capacity building workshops equip
pendebas with the information and tools needed for community
outreach, engagement, and mobilization. The Pendeba Training
Center in Tingri County is an example of one of several centers of
excellence, providing facilities to host multiday training workshops.
Participatory methods are employed for all activities, encouraging
community leaders to engage in open discussion that is driven by
local needs. The workshops are used to facilitate the exchange of
success stories, hurdles faced, and proposed future action.

Trainings cover topics across the spectrum of sustainable develop-
ment, including environmental management, reforestation, public
health, maternal health, proposal development, project monitoring
and evaluation, and HIV and AIDS prevention. Pendebas are
positioned as mediators between the initiative and participating
communities. They also implement specific projects, serving as
extension officers for the Pendeba Society in their respective
communities. Following project design, pendebas are the catalysts
of project implementation and management on the ground.

Recognizing that QNNP cannot develop or be protected without
the active participation of local people, residents of QNNP have become
active stakeholders in the conservation and development of the
reserve. The network of locally-nominated pendeba volunteers has
given resident communities a means to voice their ideas on how to
address conservation and development issues and, importantly, how
to reduce conflicts between resource users. Past pendeba programs
have proven that when pendebas return home following training,
they: (i) become valued knowledge-holders in their communities;
(ii) serve as needed health care consultants and providers in their
villages; (iii) share their new knowledge of environmental protection,
preventative health, and tourism; and (iv) lead their communities in
developing more environmentally friendly practices and identifying
new opportunities for income generation.

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of project implementation and management on the ground.
Changing the benefit stream of ecotourism

In 2008 alone, over two million Chinese and foreign tourists visited the Tibet Autonomous Region. With the development of new transportation infrastructure, this number is expected to rise significantly in the coming years. At the moment, the tourism industry is largely controlled by Han Chinese and has not been designed in a way that benefits local Tibetan communities. The Pendeba Society is working to ensure that Tibetans receive more of the benefits from tourism, tourism activities are low-impact, and village conservation itself becomes a point of interest for visitors. The goal of making ecotourism a vehicle to advance the joint aims of economic growth and environmental conservation is also reflected in the QNNP Ecotourism Plan. Vocational training for tour guide programs has the potential to not only create employment, but also to help local Tibetans adapt to a changing climate in which traditional farming and grazing practices are losing viability as singular pillars of the local economy.

To support community engagement in ecotourism, awareness raising, leadership development, and management training have been prioritized. Trainings focus on: (i) the potential benefits and impacts from ecotourism; (ii) running and growing small businesses related to ecotourism; (iii) furnishing visitors with a memorable, positive experience; (iv) promoting ecotourism ventures in partnership with the government and its line agencies; and (v) ensuring that sustainable natural resource management is a guiding principle for all activities. Local people have been supported to open hotels and hostels, transportation service providers, trekking and guiding services, maintenance centers, tea shops, and arts and handicrafts businesses. The organization promotes sustainable business practices, including energy consumption, waste disposal, and green transportation. It has also helped pendebas understand and plan for fluctuations in tourism traffic, encouraging families to diversify their sources of income so as not to become overly dependent on a single sector.

To date, the ecotourism training program has created new sources of income and improved the overall standard of living of the pendebas and their villages. It has served to incentivize conservation at the local level by demonstrating the economic benefits of intact ecosystems while also reducing dependence on rangelands and other natural resources that were previously used for grazing and farming. Additionally, it has proven to be an effective platform to pursue cross-sector partnerships in conservation between government, local institutions, and rural communities.

“Communities receive countless benefits from conservation. Access to forest resources, better drinking water, and improvements in health, sanitation, and social services. The environment and the condition of its ecosystems greatly impact human health and economic wellbeing. That is why we have linked conservation, livelihood, and health issues.”

Tsering Norbu, Executive Director, The Pendeba Society of the Tibet Autonomous Region
ENVIRONMENTAL IMPACTS

In the Tibet Autonomous Region, the pace of human-initiated environmental change and deforestation accelerated when new roads and highways into the region were constructed for large-scale resource extraction. Beginning in the 1980s, entire forests began to disappear, as organized timber and mining operations were able to reach a previously inaccessible resource base. The inflow of guns, which was limited to muzzle-loaders until the 1960s, was augmented with Chinese military activity and swelled with United States and Indian government support of Tibetan unrests in the 1960s and 1970s. New weapons led to higher incidences of poaching and the large-scale killing of wild animals. Some native species like the snow leopard (*Panthera uncia*), Tibetan antelope (*Pantholops hodgsonii*), Himalayan musk deer (*Moschus leucogaster*), and Asiatic black bear (*Ursus thibetanus*) are now on the brink of extinction.

Recent decades, however, have seen a transformation in the conservation movement in the region. Today, there are 24 nature preserves in the Tibet Autonomous Region and 42 percent of the land is protected. Thanks to a partnership between a central government with a sincere interest in the well-being of the people, a regional government with resources to invest, and local counties with administrative capacities, the government has been able to positively engage at the community level through the trained leadership of pendebas.

For nearly 20 years, pendeba volunteers have been spreading conservation concepts and promoting good practices in villages across QNNP. Not only have pendebas championed conservation and increased local understanding of environmental issues, they have also coordinated projects to develop more sustainable alternatives. Among the many environmental impacts of the program, pendebas have been able to simultaneously advocate for wildlife protection and communicate local concerns to the QNNP Management Bureau about wildlife predation due to increasing populations of snow leopard, resulting in reduced poaching and increased livestock safety enclosures. Pendebas have likewise campaigned for forest protection and conservation, leading to an 80 percent reduction in deforestation. To reduce pressure on natural forests, the pendebas have created village tree nurseries to source of animal fodder and promoted the use of high-efficiency stoves. The initiative has protected wetlands and neighboring cropland by fencing out livestock with low-cost, effective earthen brick corrals.
Protecting wildlife by taking away the market

In the area of wildlife protection, regulations were put in place in 1996 that banned the sale of wild animal skins, horns, and body parts throughout the entire Tibet Autonomous Region. A provision was made so that local people would not be punished for killing animals to eat or to protect their crops, but that poachers would be prohibited from financially profiting from the sale of wildlife. Demand for the skins and bodies of endangered animals previously came from markets outside the Tibet Autonomous Region: snow leopard pelts for fur coats, musk deer glands for perfume, the soft under-fur from the Tibetan antelope for clothing, and bear gall bladders for medicinal purposes. Pendebas, however, have been leading the charge to reduce wildlife poaching and trafficking in the preserve. Since 2001, population counts suggest that animal numbers have doubled across much of the Tibet Autonomous Region. By 2014, all documented wildlife species showed increased populations, some with dramatic improvements. Surveys by county QNNP offices show the snow leopard (Panthera uncia) population increased fourfold. The majestic argali bighorn sheep (Ovis ammun) began a substantial recovery that is continuing today. The Himalayan musk deer (Moschus leucogaster) and Asiatic black bear (Ursus thibetanus), two species that were almost entirely extinct in the region, have rebounded and their populations have stabilized for the first time in decades.

In May 2014, the Vanke Foundation joined QNNP to establish the Qomolangma Snow Leopard Conservation Center. The Center aims to promote human-snow leopard coexistence through science, conservation action, public engagement, and fostering the development of future conservation leaders. The focus of the center’s work includes studying and monitoring snow leopard status; reducing threats to snow leopards through science-led, problem-oriented, community-based actions; and securing greater financial and policy support for snow leopard conservation by increasing public awareness and participation. An expedition in May and June 2014 by the Center with scientists from the Wildlife Institute of Beijing Forestry University, South China Research Institute of Endangered Species, and Image for Biodiversity Expedition, found 293 snow leopard ‘signs’, which include indicators such as scrapes, pugmarks, and feces. They also installed 44 motion-sensing cameras at four sites in the Qomolangma area, which photographed snow leopards 27 times. This is the first time that wild snow leopards have been photographed in the northern slopes of the Himalayan Range.

In several of the villages throughout QNNP, pendebas are responsible for reporting sheep losses due to snow leopard attacks. Farmers are financially compensated for lost livestock as a way of avoiding retribution killings, which threaten an already vulnerable snow leopard population. Pendebas have helped communicate village concerns about predation from snow leopards to government authorities and worked to build more effective livestock safety enclosures, thereby reducing human-wildlife conflict.

Reducing deforestation

Regulations were also established on forest management in 1998, controlling tree-cutting on steep slopes and fragile ecosystems. Reforestation started around major urban areas, were then taken along rivers, and now include more than 250,000 acres of land across the preserve. Tree nurseries were started in the QNNP in 1992. By 1998 they were producing thousands of seedlings, which have been distributed by pendebas, who also provide training to families in tree care. The initiative focuses on willows and poplars, which are fast growing, provide fodder for animals, and whose branches can be used as firewood. Unlicensed deforestation, the most pressing environmental problem when the preserve was established, has been reduced to almost nil.

Linking conservation and ecosystem restoration to improvements in local wellbeing

Through the pendebas, conservation has been presented to residents of QNNP as the basis of long-term socio-economic development. The drawing of preserve boundaries according to existing administrative units allowed conservation planning to use existing staff and offices without spending money to set up new governance structures. The savings enabled investment in services for local communities, providing an incentive for them to support conservation activities.

A key feature of the Pendeba Society’s approach has been its landscape-level vision. Prior to the QNNP, conservation in the Himalayas focused on ecosystems. Each ecosystem had to link through corridors to other ecosystems to achieve adequate scale, and each of these structures had to be supported through separate financing and management. The new model of building within existing administrative units changed how conservation was planned. A zonal mosaic of land-use strategies was set up: seven core areas were demarcated for a strict protection, buffer zones abutting the core areas were created that allowed use of land and resources within ecological limits, areas within a third zone were allocated for sustainable agriculture, and towns constituted a fourth zone for intensive human use. Pendebas have become the lynchpin of this entire system.

The Pendeba Society works closely with local villages to execute environmental assessments, interviews, and focus groups that monitor changes in environmental conditions, biodiversity, and ecosystem health. Pendebas now face the challenge of empowering their communities to respond and adapt to climate change. At the roof of the world, QNNP is a climate change hotspot that faces threats ranging from glacial retreats to ecological disturbances in high altitude wetlands.

SOCIOECONOMIC IMPACTS

The organization has successfully applied a decentralized model of village-led development. Its projects have enhanced vocational training opportunities for communities in QNNP; promoted sustainable rural development in the Himalayas, and strengthened civil society in the Tibet Autonomous Region. Through ecotourism activities and alternative livelihood strategies, average incomes have doubled in many of the villages where pendebas work. Pendebas have been successful in promoting non-traditional crops – such as mushrooms and vegetables – improving both nutrition and local income. Local infrastructure projects have been implemented in three villages to reinforce flood control banks, windbreaks, and farmland enclosures.
The group has also done a great deal to promote Tibetan culture. At the village level, where promotion of traditional culture was historically carried out through monasteries (which is no longer permitted by the Chinese government), the pendeba organization is among the only systemic movements for the expression of Tibetan culture and identity. Pendebas have ushered in other quality of life improvements, as well. Initially, not one of the 320 villages had a protected water supply. By 2009, 74 villages did. The number of primary schools has also increased from five to 58.

Perhaps more than in any other area, the pendeba program has effectively filled a gap in health care provision. Today, more than 80 percent of the 406 villages in the reserve have a functioning community-based health care system that links directly to government health posts. Where health care services were extremely limited prior to the program, villagers now have access to basic health services including: pre-natal and maternity care, immunization, family planning, nutrition, sanitation, and disease control. Child mortality has been reduced by 50 percent.

GENDER IMPACTS

A main goal of the Pendeba Society is women’s empowerment. All programs place an emphasis on helping both men and women recognize and acknowledge the contributions that women make to their families and communities. In training programs, priority enrollment is given to women in order to maximize their participation. Women and men receive the same training and access to the same opportunities during the project. During practical training, study tours, and case study explorations, examples are chosen that highlight the equal involvement of women and men in the ecotourism industry and as leaders in their communities.

Participation in pendeba programs has helped local women become leaders in their communities and has raised the status of women in the region. Through the network, women have been able to build professional skills and access previously unavailable resources, information, and employment opportunities. Over the past two decades, 60 percent of pendeba trainees have been women. Many have become community leaders and health care workers offering needed medical services to their fellow villagers.

“Lack of local participation in protected area management is a major problem in the world. To promote a bottom-up conservation movement, we have trained a large number of local people to be agents of change and managers of their environment. Local villagers are now able to guide protected area residents to better manage the natural resources on which they depend.”

Tsering Norbu, Executive Director, The Pendeba Society of the Tibet Autonomous Region
SUSTAINABILITY

A recent survey shows that 70 percent of pendebas trained in QNNP continue to volunteer as community service workers. This is a comparatively high level of retention, which bodes well for the program’s sustainability. While the model is based on volunteerism, some villages have put in place creative compensation systems, such as donating two sheep from every family’s flock to support the village pendeba. The program also continues to receive high levels of support from the QNNP Management Bureau. In 2009, the bureau gave the Pendeba Society the rights to manage and earn income from the operation of a visitor information and training center located near the gateway to Mt. Everest base camp. Not only does the Pendeba Society use this facility for training programs and events, but proceeds from the visitor guest rooms, restaurant, and gift shop are used to support the operations of the organization.

The vast majority of Pendeba Society staff are local. Their ability to communicate with villagers in the local dialect is critical to every stage of program implementation: conducting baseline surveys, leading training workshops, monitoring program progress, and compiling evaluation results. Each cohort of pendeba trainees has been directly involved in evaluating program design, content, and delivery. Results from pendeba interviews inform new training programs and follow-up activities. Pendebas trained in the previous program are invited to be involved in future training programs and encouraged to continue their learning.

An innovative partnership model is one of the keys to the resilience and sustainability of the Pendeba Society. Rather than having conservation in the preserve managed using a warden system, the Pendeba Society builds on partnerships with existing government and community institutions. This has the dual effect of reducing transaction costs and effectively embedding behavioral change. For this model to be successful, it has been important for the Pendeba Society to actively publicize both obstacles to success and their achievements, thereby giving local people a sense of ownership, pride, and understanding of the trade-offs that are often necessary in balancing conservation objectives with sustainable livelihoods.

REPLICATION

Over the past several years, the Pendeba Society has been recognized as a best practice both nationally and internationally. Its achievements were highlighted at the first China Forum for Nature, convened in Beijing in May 2011, and the China Man and the Biosphere Conference in Lhasa, which took place in September 2011. Additionally, the Pendeba Society has shared its experience with other grassroots organizations, government agencies, and the public through events like the First China Charity Forum in 2014, the First and Second China Charity Fair in 2012 and 2013, First and Second Western China Grassroots NGO Convention in 2013 and 2014, and workshops held by the International Centre for Integrated Mountain Development in Nepal.

Peer-to-peer learning and knowledge exchange is a central feature of the Pendeba Society model. Taking pendebas to see conservation
and development success stories in other regions and countries has been a strategic priority to equip these village ambassadors with toolkits to facilitate the sharing of best practices within the preserve. The pendebas learn transferable ideas and receive affirmation that their work and contributions have wider significance in the national and global conservation communities. International trips have included travel to Bangladesh to learn about micro-credit schemes and to Glacier National Park in the United States. Pendebas who have engaged in learning exchanges return home to serve as a knowledge conduit for other pendebas, transferring what they have learned. For many of the pendebas, travel and peer-to-peer exchange takes place in Lhasa, regional cities, or other villages, all with the similar objective of recognizing success, sharing ideas that work, and learning new land and resource management techniques. Leaders of the organization suggest that formalizing peer-to-peer learning as part of their program has been a watershed event, providing a continuing mechanism for grassroots mobilization, bottom-up action, ongoing learning, and the kind of experimentation that is needed to achieve success.

PARTNERS

The Pendeba Society of the Tibet Autonomous Region emphasizes a three-way partnership between government, villages, and outside technical organizations. In addition to the more than 450 pendebas and their communities, the group partners extensively with government agencies of the Tibet Autonomous Region, including the Civil Affairs Department, the QNNP Management Bureau, and Forestry Bureaus in four different counties. Partnership also comes from donor agencies, local government, and other NGOs in the form of funding, training, and media outreach. One of the most important partners in its work has been Future Generations and the Future Generation Graduate School. Future Generations has been a contributing partner to the program since its inception. It provided seed funds as well as experienced personnel, training materials, and strategic planning support. The Lao Niu Foundation and the Narada Foundation have also been valued partners in Pendeba Society work, providing support since 2012 in the area of wetlands conservation and capacity training programs.
FURTHER REFERENCE