

**Future Generations Case Study: Tibet Autonomous  
Region**

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## Table of Contents

1. Executive Summary.....
2. Background.....
3. Country Program Overview.....
  - a. Qomolangma National Nature Preserve (QNNP)
  - b. Pendeba Program
  - c. Lhasa Wetlands
  - d. Four Great Rivers
  - e. Green Long March
  - f. Model Eco-Community Program
4. Program Analysis.....
  - a. QNNP
  - b. Pendeba Program
  - c. Four Great Rivers
  - d. Resources
5. Program Achievements.....
  - a. Gathering Evidence
  - b. Indicators
  - c. Monitoring and Evaluation
  - d. Major Achievements
6. Discussion.....
  - a. Measures of Change
  - b. Tibet Programs and Seed-Scale
  - c. Suggested Indicators
  - d. Tibet Programs and the Mission Statement
7. Lessons Learned and Recommendations.....
  - a. Documentation
  - b. Monitoring and Evaluation
  - c. The Role of the Top-down
  - d. Agreements
  - e. Self-Evaluation for Effective Decision-making
  - f. Importance of Research
  - g. Seed-Scale Lessons
8. Conclusion.....

## Part I. Executive Summary

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This case study of the Tibet program is part of a broader effort of Future Generations to evaluate its country programs and document their successes. The Future Generations Research Task Force, established in 2006, called for a review of all programs while seeking to bolster basic and applied community-based research within the organization. This effort is an important part of the Seed-Scale process (the SEED or self-evaluation for effective decision-making step), which we train our own community partners to do on a yearly basis. Specific questions to be answered were how much Future Generations has achieved through its programs, whether or not these programs have used Seed-Scale principles in their operations, and what lessons have been learned that can help the organization move forward.

Analysis of the Tibet component of the China program began with a review of the history of the programs, which stretch back to before Future Generations was even founded as an organization. Dr. Daniel Taylor, founder and current president of Future Generations, began working in Tibet for nature conservation and community development in the mid-1980's and over the years helped achieve astounding successes: the establishment of the QNNP, the Tibet-wide ban on the sale of wildlife parts, the creation and rapid expansion of the Pendeba Program, and the preservation of the Lhasa Wetlands. Future Generations greatest accomplishments have more to do with a shift in the conservation matrix and in raising awareness and capacity than they do with hard numbers of wildlife populations or child mortality. In a country that isn't known for its engagement and respect of rural communities, it is remarkable that Future Generations was able to so effectively bring together the government and local communities to seek common conservation and development goals. No other NGO has been able to maintain such long and respectful relationships with the government in Tibet.

These accomplishments embody the principles of Seed-Scale, of three-way partnerships, of emphasizing success, of seeking behavior change as the goal. They thus provide a compelling argument for the usefulness of Seed-Scale as a development methodology. But while we can celebrate a long history of cooperation with the government and communities, we must also acknowledge that we lack the information needed to truly tell the story of the impacts

and reach of our programs. One of the aims of the case study is to highlight areas where we have encountered difficulties and the first roadblock came in trying to document the programs themselves. Failure to systematically report on important aspects of our programs, as well as the lack of information we have received from our government partners, has made it difficult to measure the true breadth and quality of our programs. Government restrictions have also thwarted our efforts to conduct surveys, leaving us with little conclusive data about changes in behavior and environmental conditions that we can take credit for. Therefore, we must first undertake to reinforce our reporting, documentation, and research efforts in addition to thinking creatively about ways to monitor programs in areas with tight government restrictions.

The recent history of the Four Great Rivers program, which began fortuitously with the government requesting our help to protect the fragile environment, highlights the need to refocus our attention on what our ultimate goals for the region are, and to ardently search for new paths forward. After more than ten years of study tours, Pendeba trainings, and data gathering with the help of the David Suzuki Foundation, we have not achieved our mission. A protected area, of the kind we envisioned when we began working there, has not yet been created and the Pendeba Program is vastly under-staffed and under-funded according to the need that exists among communities. This calls for an immediate analysis of our methods and goals. We must reevaluate our relationships and agreements with top-down partners, our program structures, and our approaches to scientific research and fundraising. The results from these analyses will benefit the program regardless of the eventual conclusions.

The purpose of this case study was to highlight Future Generations successes and failures in Tibet. It offers a chance to use Seed-Scale steps to make mid-course corrections and to reallocate roles. It should also provide an opportunity to refocus on the Tibet programs and to investigate ways to integrate them with the Green Long March and the Model Eco-Community Program. New development approaches, ideas, and technologies should also be considered.

This moment in history is right for rural, community-based solutions to environmental challenges, particularly in such an important and vibrant nation like China. The effects of climate change will threaten the very existence of Himalayan villages as well as downstream

metropolises. Communities must be prepared for these threats and be equipped with the knowledge and practical solutions to make the necessary adaptations. Future Generations has the experience and the ability to continue to be an influence for good in Tibet. Through our vast networks, we have access to new ideas and technologies that could help mitigate the climate crisis and help villages adapt to climate change and melting glaciers. We also have the partnerships to see these ideas penetrate to the most remote corners of China. With such a strong foundation to stand on, we should not ignore the incredible opportunity that exists for us now. The only uncertainty lies in how we decide to focus our energy.

## Part I. Background

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### China and the Tibet Autonomous Region in the 1980's

The China of the 1980's, when Future Generations conservation programs were still mere concepts, was very different from the China that hosted the Olympics in 2008. Thirty years ago in 1978, China embarked on a path of reform and opening that transformed its economy from state-run to free market. Economic growth was beginning to boom as China unleashed its entrepreneurial potential. GDP was growing by double digits year on year, bringing China out of the ranks of least developed countries solidly into the ranks of middle-income countries. During the 1980s, huge investments by the government into education, health care, infrastructure, and industry raised living standards across China. The average person in China had more education, made more money, and had a longer life expectancy than ever before.<sup>i</sup>

This exceptional growth, that continues to this day, was changing the face of China. Though population growth was leveling off due to family planning policies, cities were expanding due to a vast migration of rural residents to urban centers. Connections with the outside world also grew and more foreign amenities could be found in China's cities. More Chinese traveled abroad and studied foreign languages and more foreigners came to China to study and be a part of the booming economic growth. Truly this was a remarkable time for China and deservedly drew the attention of the rest of the world.

High aggregate growth rates in the 1980's showed that China as whole was developing rapidly. In reality however, stark regional disparities existed between urban and rural areas and between eastern coastal cities and western provinces. Rural areas and western provinces lagged behind in all development and economic indicators. Real GDP per capita was three times higher in Beijing than in Tibet in 1982 and other measures such as life expectancy and literacy were markedly lower.<sup>ii</sup>

Taken alone, the Tibet of the '80's and today has a Human Development Index closer to the poorest of African countries, while China's wealthiest provinces are more akin to Eastern European levels of development.<sup>iii</sup> Life expectancy in Tibet in 1982 was 63.9 years compared to 71.9 years in Beijing. Adult literacy in Tibet was also low, with only 26.8% of the population able to read and

write, while 85% of the adult population in Beijing was literate.<sup>iv</sup> During the 1980's in response to these disparities, China began funding substantial anti-poverty programs aimed at rural areas. The focus of these programs was public infrastructure projects, such as roads and bridges, and brought electricity and water to the countryside.<sup>v</sup> Poverty relief programs in the 1980's and 1990's amounted to 3.2 billion Chinese Yuan.<sup>vi</sup> But in Tibet, with such spread out towns and villages and nearly 50% of the population engaging in nomadic pastoralism,<sup>vii</sup> infrastructure projects were not addressing the real day-to-day challenges of the poorest Tibetans.

In 1982, Tibet's population was 1.9 million with 9% living in Lhasa and 95% of the province's population of Tibetan ethnicity, while the total population of China at the time was over 1 billion.<sup>viii</sup> With a huge area of 1,228,400 square kilometers, Tibet had the lowest population density of any province in China, with only two people per kilometer in 1982. Due to the harsh environment and the high elevation of the plateau (3,500 meters on average), the area of cultivated land was extremely small.<sup>ix</sup> Only .2% of the land, or 2,255 square kilometers, was used for agriculture because of such high elevations.<sup>x</sup> The rest was more suitable to grazing of yaks, sheep and goats, with plentiful grasses spreading across the plains during the summer season.

In his health surveys of Tibetan villages north of Mt. Everest, Dr. Carl Taylor (Daniel Taylor's father) and his colleagues discovered communities that were struggling to meet even the most basic health care needs. Though the government had established medical facilities in urban centers and trained village doctors, most villages in the Qomolangma area were too small and too far away to receive these benefits. In the villages surveyed, the infant mortality rate over a five-year period was 136 deaths per 1000 live births, while this rate was 31 deaths per 1000 live births for China as a whole. Maternal and child services were virtually nonexistent and families had no access to midwives or prenatal and postnatal care. Inoculation rates were relatively low with only 28% of children vaccinated against DPT and 44% vaccinated against polio. Sanitation was also a major concern, with 19% of deaths between 1985 and 1990 caused by gastrointestinal diseases and 15% of children had at least one attack of diarrhea during the month of July, 1990.<sup>xi</sup>

Though nutritional needs were largely being met with barley flour (tsampa) and yak butter, surveys of the

Qomolangma region showed that families lacked access to reliable electricity and depended heavily on wood and juniper bushes for warmth and cooking. Families were also using antiquated techniques for farming, forestry, and raising stock. The area around the Rongbuk Everest Base Camp was also suffering from lack of proper refuse disposal, and the influx of tourists was exacerbating the problem.

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The Tibet Autonomous Region, closed off to foreigners for most of its recent history, has piqued the curiosity of governments, adventurers and naturalists for centuries. The first groups of Western travelers and scientists began coming to the region to study it and to attempt to ascend the world's tallest mountain, Qomolangma (Mt. Everest). During their travels, they encountered the Tibetan culture and became equally fascinated with its customs, religion, and people. In the 1980's, when the conservation movement was gaining strength, many people who had spent time in the Himalayas began to recognize that Qomolangma and its surrounding environment was being threatened. Growing populations, encroaching development, and increasing numbers of tourists and mountain climbers were putting the ecology and local communities at risk. At the time, there were two small preserves in the Zhangmou and Jilong Valleys that had been established in the 1970's, but broader measures were needed to protect the flora and fauna of the area and to help the local people increase their standard of living.

The Tibet that current Future Generations President Daniel Taylor began visiting decades ago was one of stark beauty and hardy people, eking out a living on high plateaus and in deep valleys without access to the comforts of the modern world. Home to the world's highest peaks and deepest valleys, it was also incredibly rich in biodiversity, with 6,800 varieties of higher plants and 799 varieties of wild vertebrates.<sup>xii</sup> In 1985, less than 1% of the environment in Tibet was officially protected and deforestation and poaching of wild animals was degrading Tibet's complex and diverse ecosystems.<sup>xiii</sup> Used for traditional Chinese medicine, for their pelts, for food, and because of habitat destruction, wild animal populations had been greatly reduced in recent decades. Areas along the border with Nepal were particularly void of wildlife, since hunting by soldiers on patrol was common.<sup>xiv</sup> In the Four Great Rivers region, widespread logging was denuding whole mountainsides and valleys of



trees. At the height of the logging, over 300 trucks left the region every day for central and eastern China.<sup>xv</sup>

The area that was to soon become the Qomolangma Nature Preserve was located in Shigatse Prefecture along the Nepalese border and included the counties of Dingri and Nyalam and part of Dingque and Kyirong counties. Five peaks above 8,000 meters can be found there (Qomolangma, Lhotse, Makalu, Cho Oyu, and Shisha Pangma) as well as deep valleys and a wealth of biological diversity. The Gama Valley, which lies to the east of Qomolangma, has the highest altitude forests in the world and is home to the rare snow leopard, the wild ass, and the black-necked crane. The area also supports diverse shrub and grassland environments with numerous rhododendron and juniper species.<sup>xvi</sup>

Future Generations programs in China began in the area north of Qomolangma and at the time were part of similar efforts to conserve the Nepal side of the border.<sup>1</sup> The purpose was to protect the area around the world's tallest mountain. In the mid 1980's, the nearly 35,000 square kilometer region that was to become the Qomolangma National Nature Preserve had 68,000 inhabitants, 95% of whom were Tibetan farmers or nomads. Two of China's poorest counties were located in this area, where 98% of people were illiterate and in 1989 the area had only five schools and none of the 320 villages had access to clean water supplies.<sup>xvii</sup>

In the Four Great Rivers region in eastern Tibet, where Future Generations began working in the mid-1990s, the situation was similar. In 1996 in communities across Linzhi Prefecture, gross income was 1,603 Chinese Yuan per person while the average income was 2,043 Yuan for all of Tibet. This was believed to be because of poor transportation infrastructure. Traditional land use patterns, pastoralism and harvesting of non-timber forest products, such as caterpillar fungus and matsutake mushrooms, were damaging the forests.<sup>xviii</sup> But clear-cut logging, undertaken primarily by Han contractors to sell the timber to eastern China, was the most prominent force for destruction of the forest ecosystems.<sup>xix</sup> Linzhi Prefecture has always been well known for its vast forests and much of its economic development had focused on logging; 60% of the prefecture's GNP came from commercial logging. Wildlife populations were also

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<sup>1</sup> Daniel Taylor worked for the Woodlands Mountain Institute until 1992 when he created Future Generations. For consistency, we have labeled all programs as Future Generations programs, except those that remained under the purview of the Woodlands Mountain Institute such as the programs in Nepal (WMI is now called The Mountain Institute).

falling due to subsistence hunting by villagers and for commercial sale of wildlife parts by officials.

Linzhi Prefecture was home to five nature preserves in the 1990's. These preserves, Metdog, Bajie, Dongjiu, Gangxiang, and Zayu, were all established in 1985 and a community survey at the time revealed that they were viewed as "paper parks." They had essentially no management structure or wardens and environmental degradation persisted within their borders. Although people were not allowed to live within the preserves, they traveled through them to hunt animals and harvest timber.<sup>xx</sup>

Across Tibet, from the Qomolangma region in the south to the Four Great Rivers in the east, the setting was ripe for new and innovative conservation efforts. The government was listening to new ideas and engaged in seeking out the most suitable and effective conservation management strategies. And the need was great, from small plateau communities struggling to meet their most basic needs to endangered wildlife populations facing multiple human threats.

## Country Program Overview - CHINA

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### *The Qomolangma National Nature Preserve*

#### **Background**

When Future Generations President Dr. Daniel Taylor began working in Nepal to establish a protected area surrounding Mount Everest (Qomolangma), he was interested in a new kind of land conservation; one that was done on a large scale and took into account the needs of the local people. In 1984, Dr. Taylor and other international conservation experts were working with the government of Nepal to create the Makalu-Barun National Park, which is directly east of Mount Everest. On one of their field visits to Nepal, they realized that conservation efforts in Nepal should be met with similar actions on the Chinese side of the border. Chinese officials and scientists were also involved in learning more about China's natural environment at the time and were receptive to Dr. Taylor's new ideas about the creation and management of a new kind of protected area near Qomolangma. After initial meetings with government officials, field surveys of the area were undertaken and satellite imagery was used to convince the government of the benefits of a preserve.

In Shigatse Prefecture, the leaders of the Woodlands Mountain Institute saw an opportunity to protect a large area the size of Taiwan that integrated community development and environmental protection into the preserve's master plan and management structure. This was possible, they believed, because planners in China were not yet indoctrinated with the Western concept of the "fortress" approach to land conservation. The fortress approach, or the "Yellowstone" model that had been practiced in the United States since the late 1800's, set aside wide tracks of land for conservation and prohibited human settlements inside the borders.<sup>xxi</sup> The parks would also be managed by conservation professionals; people who had been hired from afar and were not usually familiar with the local environment or communities. After over 100 years of using this approach, conservationists began to feel that it was not sufficient to meeting the needs of ecosystems or of the local people across the planet where it was being used.<sup>xxii</sup>

At the 1982 World National Parks Congress in Bali, Indonesia, a new idea came forth that became known as community-based conservation. A consensus was reached that conservation could only be successful if local

people and communities were part of the formula. In other words, conservation structures should be grounded in the local communities, not exclusive of them. Another concept that resulted from the congress was the idea of zonal land management. Typically, as in the national parks of the United States, a parcel of land would be designated as protected and all of the land within the park would be restricted from human development. Humans could be visitors, but could only leave footprints. Zonal land management recognizes that in nature there is no black and white distinction between human and non-human environments and it allows for varying levels of development in designated zones within a preserve.

Over the years, community-based conservation was tried in many different countries and political contexts and met with varying levels of success.<sup>xxiii</sup> Only a few years after the Bali Congress, Daniel Taylor and his colleagues brought these ideas to Tibet and further developed them. Conservation of the Qomolangma area was their goal, but community participation was the means to reach this goal. Not only was the QNP to be the biggest protected area in Asia at the time and to be managed within existing government structures, it also incorporated three zones of permitted human activities. These zones varied from core areas that restricted all human activities to periphery zones around cities and large settlements that allowed for controlled sustainable development.<sup>xxiv</sup> These new ideas were to guide the QNP project over the next few years and the Four Great Rivers Project after it.

### **Program Summary**

By the time Future Generations President Dr. Daniel Taylor began to be interested in conservation in Tibet, he had been exploring the area for thirty years in his search for the yeti. Dr. Taylor discovered that the infamous yeti was in fact an Asiatic black bear and as this discovery became known across the world, Dr. Taylor became well known amongst naturalists and government officials in the area.

Building on this experience, Dr. Taylor initiated talks began between his organization at the time (the Woodlands Mountain Institute) and Chinese scientists about the feasibility of creating a new and large preserve for the Qomolangma region. Over the next four years, evidence was gathered, surveys of the area were conducted and key officials from the Tibet Autonomous Region (TAR) Forestry Bureau were involved in workshops to study preserve management options. Four years later on March 18, 1989

the TAR Government formally established the Qomolangma Nature Preserve (QNP) on 34,480 square kilometers of land. This was a huge victory for those who had been working on the project and was also a victory for a new form on conservation management. The QNP was the first preserve in the world to be managed without the use of wardens.

In August 1989, the Qomolangma Nature Preserve Management Bureau was inaugurated and the "Twelve Year (1989-2000) Agreement between the Working Commission of the Qomolangma Nature Preserve of the Tibet Autonomous Region of China and Woodlands Mountain Institute" was signed in October 1989. Work had already started by numerous Chinese scientific and government departments on developing a master plan for the QNP with the help of WMI, which was finalized and approved in 1992. The role of the Woodlands Mountain Institute was to provide funding for equipment, implementation, and international conservation expertise and guidance. <sup>xxv</sup>

The management structure of the QNP was truly innovative and was based on principles that defined a new kind of nature preserve, one that focused on social development and environmental protection in equal measure. The guiding principles were fivefold:

1. establish a local support base with leaders from all sectors;
2. create a senior advisory committee made up of international conservation experts to give credibility to the program;
3. designate a local task force of specialists from the host country to conduct biological, physical, and cultural assessments of the proposed preserve;
4. use management zones when planning preserves to integrate social and environmental concerns; and
5. ensure short and long term funding mechanisms are in place. <sup>xxvi</sup>

One of the preserve's first achievements came three months after its creation. Preserve managers discovered that the construction of a Chentang logging road over the Pung Chu River was putting pristine forests and downstream watersheds at risk. When this information surfaced, the government immediately halted construction of the road, despite losing the \$2 million that had already been invested and being forced to lay off 1,000 workers. By 2000, deforestation had been reduced by two thirds. <sup>xxvii</sup>

Daniel Taylor established Future Generations in 1992 and stayed involved in the QNP (the Woodlands Mountain Institute continued to work in Nepal). Future Generations helped revise the conservation master plan for the QNP in 1999. It also helped build schools and restore monasteries, including the Paba Temple in Jilong County and the Rongbuk Monastery near Everest Base Camp. Perhaps one of the greatest contributions Future Generations made to conservation in the Qomolangma area was helping to pass a ban on the sale wildlife parts. The law allowed for the hunting and killing of animals, but none of their parts or pelts could be sold. After the law was passed by the central government in Beijing, officials confiscated pelts and burned them in a huge fire in front of the Potala Palace. This dramatic demonstration was a symbol of the government's commitment to enforcing the law (although no pictures of the fire were allowed to be published) and it subsequently reduced poaching and wild animal populations rebounded. Evidence for this is that farmers were more frequently reporting lost livestock due to hunting by large carnivores, such as snow leopards.<sup>xxviii</sup> Additionally, the government used the zonal approach and designated thirty-one percent of the preserve as off limits to human development. They also allowed the preserve to incorporate several towns and small cities, including Zhangmu. Even though Zhangmu was a bustling border town with thousands of inhabitants, having an environmental management plan as mandated by QNP officials forced the town to identify areas where they could improve the city's environment.<sup>xxix</sup>

After five years of conservation successes, the Chinese Government elevated the preserve to *National Nature Preserve* status, which is the highest level of protection in China, equal to the protection afforded to the Great Wall. This was a clear sign that the government understood the significance of protecting the world's tallest mountain and its surrounding environment.

Program Status: The QNNP program is closed.

### ***The Pendeba Program***

#### **Background**

In the early 1990's after the QNP was established, community surveys were conducted to discover what the greatest needs of the villagers were. Surveys revealed that above anything else, villagers believed the lack of access to good health care to be their greatest

challenge, in addition to a severe lack of transport options and energy sources.<sup>xxx</sup> Though local Tibetans were already being trained to help manage the preserve and to prevent poaching, health care needs and many other challenges throughout communities were not being met. Daniel Taylor and his partners in China realized that in order to achieve the overall goals of the QNP, there needed to be a way to address the needs of the communities. Out of this predicament grew the idea for training local villagers in primary healthcare instead of bringing in outsiders.

### **Program Summary**

In 1994, the Pendeba Program was created by Future Generations and its partners. A new word in Tibetan was created to describe the villagers that would be chosen by their villages to be trained as community development leaders. "Pendeba," in the Tibetan language means "worker who benefits the village." Surveys conducted in the late '80s on villages across the QNP revealed that people felt their greatest needs were to overcome the isolation of their villages, improve and expand sources of energy and secure access to better health care.<sup>xxxi</sup> Given those results and the results of the 1992 health survey, Pendebas were trained in first aid, vaccinations, and remedies for simple health problems such as diarrhea. Training programs evolved over the years and after the Pendeba Program was brought to the Four Great Rivers region, trainings began to incorporate primary education, sustainable income generation, and environmental conservation. Also in the mid 1990's, with assistance from Future Generations, a building in Dingri County was built to serve as a visitor's center and as a Pendeba training center.

To date, 276 Pendebas have been trained and work for their communities in the QNNP. Between 1994 and the present, great achievements have been made in raising the standards of living of Tibetan villagers across the preserve. Child mortality rates have declined by 50% and child immunization rates have risen to 90%. Use of renewable energy such as solar and hydropower have also expanded.<sup>xxxii</sup> Most recently, in 2007, a Pendeba training program was held at the QNNP Training Center for 22 village leaders, all of who were women. The training covered health care, nature conservation, and income generation.

After a successful beginning in the QNNP, the government asked that the Pendeba Program be brought to eastern

Tibet to be part of the conservation of the Four Great Rivers area. The Pendeba Program would compliment efforts to create a mega preserve modeled on the innovative management structure of the QNNP. The first Pendeba Program trainings were held in 2002 in Linzhi Prefecture and in 2006 the program expanded to neighboring Chamdo Prefecture.

Since access to health care was better in Linzhi and Chamdo and climate conditions were less harsh than in the QNNP, Pendeba trainings there have focused more on sustainable income generation and nature protection than on primary health care. The Four Great Rivers Pendeba Program has grown more quickly than in the QNNP and already 379 Pendebas have been trained over the last seven years, compared to less than 300 trained in the QNNP.<sup>xxxiii</sup> This is also in part due to the different course the program has taken in the Four Great Rivers. In recent years, Pendeba training sessions are broken up into shorter sessions and often only cover one or two topics at a time. Many people from surrounding villages will attend the one or two day training session to learn about specific topics such as kitchen gardening, animal husbandry and medicinal plants cultivation. They are thus trained by Pendebas, but do not become Pendebas in the same capacity as the original Pendebas of the QNNP. Traditional Pendebas would receive a two-week training that covered a wide range of topics including primary health care and sanitation and would serve their communities across a variety of areas. The Pendebas in the Four Great Rivers region are able to help their communities with particular efforts, usually relating to sustainable income generation.<sup>xxxiv</sup>

The change in approach in the Four Great Rivers program is due to a different need amongst local communities. Better access to health facilities and schools and more consistent supplies of electricity mean that villagers are most concerned with economic development and environmental protection. The changes are also due to the limited access we have had to the region to provide two-week training sessions. The Linzhi and Chamdo governments have provided their own Pendeba training programs as well, but these trainings focus almost entirely on income generation and do not seem to integrate environmental conservation and sustainability into their lessons.<sup>xxxv</sup>

Despite the last few year years, observations from the area suggest that years of Pendeba trainings have resulted in better hygiene in villages that have resident Pendebas and villages have recorded more frequent



sightings of wild animals, although concrete population numbers have never been established.<sup>xxxvi</sup> Communities have also directly benefited from training in vegetable and medicine cultivation techniques. Now Pendebas want to receive further training in ecotourism development, bio-gas energy, and the English language.<sup>xxxvii</sup>

Program Status: The Pendeba Program is ongoing in the Four Great Rivers area and the QNNP.

## ***Lhasa Wetlands***

### **Background**

The Lhasa, or Lhalu Wetlands, located in the heart of Tibet's capital city and the highest urban wetland in the world, once had an area of 86.67 square kilometers. Over the years, overgrazing, construction, infrastructure, and cutting of stones in nearby areas reduced the area of the wetlands by over 50%. In the mid 1990's, what was once a thriving and biologically diverse marsh habitat only contained 4 species of grass and a similarly small number of bird species. The Mayor of Lhasa at the time was very concerned about the future of the wetlands and shared these concerns with Dr. Taylor (whom he was already acquainted with through their common interest in the Tibetan Kyapso dog breed). With help from Dr. Taylor and Su Chun-Wuei, in 2000 the Lhasa Wetlands Nature Preserve was established with the help of the Tibet Science and Technology Department and the Department of the Environment. This new preserve prohibited further destruction and over-use.

### **Program Summary**

Future Generations became involved in protection of the Lhasa Wetlands in the late 1990's. It partnered with the Tibet Plateau Biology Institute of the Tibetan Science and Technology Department (STD) to support the drafting of a management plan and to provide training for officials.

The management plan used the biosphere reserve approach and designated core, buffer, and peripheral zones for the wetland, with only 15% designated as peripheral zone for development. Initially, Future Generations and its partners conceived of building a road around the wetlands instead of a fence that would keep people out. This road would be utilized by the city for transportation but it would also serve as a way to open up the wetlands to the public, so that they could see it and access it from the

road. Ultimately, a fence had to be built (people were bringing their livestock into the wetland to graze) and the wetlands are now entirely surrounded by the city but are protected.<sup>xxxviii</sup>

In 2003, Future Generations also supplied funds to the Science and Technology Department to design and build an education center for the wetlands, so that community members could learn about and enjoy the wetlands. The Lhasa Wetlands, thanks to government support and protection, is slowly regenerating and serving as an educational tool for Lhasa's citizens and is also providing key ecological services to the surrounding environment: they are now often called "the lungs of Lhasa" or "the kidneys of Lhasa" in reference to the environmental benefits it provides.

Throughout the early 2000's, Future Generations provided funding for the Lhasa wetlands educational center.

The Lhasa Wetlands Program is closed.

## ***The Four Great Rivers***

### **Background**

Along the southeastern border of Tibet, in Chamdo and Linzhi Prefectures, four major rivers (the Yangtze, Brahmaputra, Salween and Mekong) flow through deep, forested valleys on to Southeast Asia, supplying one fifth of humanity with fresh water resources. The area, over 400,000 square kilometers, is home to incredible biodiversity and its broad range of climate zones support 1/7 of China's timber reserves. Eight hundred thousand people live amongst the valleys and forests of this region, largely unconnected to the rest of the world.

### **Program Summary**

In the late 1990's the forests of the Four Great Rivers area were in desperate need of protection. Decades of expanding pastureland, over-extraction of non-timber forest products, and deforestation was threatening the region's rich plant and animal diversity.<sup>xxxix</sup> The former deputy governor of Shigatse Prefecture who had worked with Dr. Taylor on the QNNP project, had been transferred to Linzhi Prefecture. Zhou had been a long supporter of Dr. Taylor's ideas about simultaneously addressing conservation and development challenges, and invited Future Generations China Director Su Chun-Wuei to the

area to discuss opportunities for nature conservation. Su Chun-Wuei and Dr. Taylor visited the area many times and were immediately convinced of its value as a biodiversity hotspot and as a home to some of China's last great forests. Despite ongoing projects in Lhasa and the QNNP, their strong convictions led Future Generations to pursue a conservation agreement with the government.

In 1997, Future Generations signed a working agreement with the Tibet Science and Technology Department (STD) to develop a conservation master plan for the area using the QNNP zonal management strategy of conservation and human use zones and by introducing the Pendeba Program. The goal was to create a vast protected area, including core areas of nature preserves with wildlife corridors linking them, all the while allowing for concentrated pockets of human use. The protected area, once established, would be the size of Washington State or Italy. And inside its boundaries would live 800,000 people.

In the summer of 1998, devastating floods killed more than 3,000 people along the lower reaches of the Yangtze River. The government realized that the flooding was a direct result of deforestation in the upper catchment of the Yangtze River and instituted a logging ban for southwestern China, including Linzhi and Chamdo Prefectures. Because this would represent a huge loss in revenue for the affected areas, reforestation programs were initiated. The two most prominent of these were the National Forest Protection Program (NFPP) and the Sloping-Land Conversion Program also called the "Grain for Green" program.<sup>x1</sup> Efforts focused on reforestation, afforestation, and cropland conversion. The NFPP was to last for 10 years and both programs were given budgets of a combined 429 billion RMB for implementation across a vast swath of western China. As a result, the rush of timber from the area to China's eastern cities was dramatically slowed and those who had been employed in logging were given jobs in reforestation.<sup>x1i</sup> Leading up to the passage of these policies, Future Generations had pressured the government to stop deforestation and also convened a high-level meeting in Lhasa of conservation professionals and other relevant officials to discuss directions for environmental protection in the TAR. After this meeting and in response to the devastating floods, the central government wrote 200 million dollars into the next 5 Year Plan for conservation in Tibet. The majority of this money went to reforestation along the upper Yangtze, but this was nevertheless a boon for conservation efforts in the Four Great Rivers and was a

5-fold increase from the previous plan's budget of only roughly 40 million dollars.<sup>xlii</sup>

Future Generations also instigated a massive tree planting effort in 1999, which has continued to this day, and helped push for a number of small nature preserves to be established. The following are the new preserves that now exist in Linzhi and Chamdo: Yarlungtsampo Canyon Protected Area (PA), Chayu Ciba Ravine PA, Mangkang Hongla Mountain Snub-nosed Monkey PA, Leiwuqi Red Deer PA, Linzhi Bajieju Cyprus PA, Linzhi Dongjiu Red Ghoral PA, Bomi Gang Village Spruce Forest PA, Chamdo Laduo Snow Leopard PA, Gongbu PA, Midui Glacier, and the Yalong and Renlongba Glaciers.

Government officials decided that instead of hiring outside experts to draft management plans, locals should be hired for the job. At the time, locals lacked the requisite environmental knowledge and skills, so for the next six years Future Generations helped to run training sessions and study tours for local officials in nature preserve management, GIS mapping, and community development. Every year, Future Generations led and funded study tours to North America, often bringing Tibetan officials to Paul Smiths College in the Adirondacks to witness progressive American conservation techniques first-hand.<sup>xliii</sup> Future Generations also entered into an agreement with the David Suzuki Foundation to train officials in GIS mapping so that a comprehensive master plan could be created. For that purpose, a GIS laboratory and training center was established in Lhasa at the Science and Technology Department.

A new agreement had to be signed with STD in 2004 and in the meantime the QNNP agreement with the Forestry Bureau had expired, though Pendeba training sessions were continuing throughout this time. STD stipulated that Future Generations should only have agreements with one government department in the TAR. Up to the year 2006, most of the work in the Four Great Rivers area consisted of GIS trainings with the David Suzuki Foundation and ESRI (GIS software creators), study tours, data collection, awareness-raising amongst government representatives, and efforts by the government to educate the public about environmental protection. The Pendeba Program had been formally established in the area and numerous training sessions had been held in Linzhi Prefecture. The Future Generations Master's Program also had its first residential in China in 2005 and the students went to the Four Great Rivers region for the majority of their residential in Tibet.

At a major meeting and study tour of nature preserves in China in 2006, officials and partners gathered to discuss the Four Great Rivers project. At that time, data collection was still underway and the partners drafted a schedule for the remainder of the project. Initial drafting of the final protection plan would be followed by refinement and completion of the plan by 2007. After the 2006 meeting, data collection continued and trainings occurred when partners could travel to the TAR. The Pendeba Program was also expanded into Chamdo Prefecture during that year.

By late 2006, many officials and government leaders in Lhasa and across the program areas had left their positions and Future Generations had to form new relationships with their replacements. Because these new appointees had no history working with Future Generations, progress became slower than it had been throughout the 1990's. To make matters more complicated, Future Generations foreign staff were no longer allowed to do any work in the QNNP, including Pendeba trainings, as a result of a survey that was conducted in 2005 that had not received government approval. The survey had been an attempt to evaluate the impacts of the Pendeba Program in the QNNP for one of the program's major supporting foundations. Collecting data is always a sensitive endeavor in the TAR and because the approval for the study was given by an inappropriate government official in the QNNP, the government demanded that the results not be published and further decided to limit Future Generations access to working in the QNNP. To this day, the restrictions on Future Generations staff going to the QNNP for work or for collecting data are still in place.

During this year, funding sources also became scarce. Vital foundations and donors that had been constant sources of support in recent years, such as the Mulago Foundation, were lost either to controversies unrelated to Future Generations or dissatisfaction with general program directions and results. New donors and foundations were approached including the MacArthur Foundation, the United Nations Foundation, and IDRC (International Development Research Centre of Canada), but for various reasons, no funding materialized.<sup>xliv</sup> At last in 2004, a friend of the organization, John Lefebvre donated 2 million dollars to the project.

In 2007, Future Generations renegotiated an extension agreement with STD for the Four Great Rivers protection

plan, but further restrictions on travel to Tibet slowed progress significantly. This situation has continued to the present, fueled by political instability in the TAR and has thus affected the ability to run study tours and conduct fieldwork in the region. Staff are still running Pendeba trainings and GIS data is being collected, but the already short working season in Tibet has been shortened drastically by two consecutive years of restrictions on foreigners traveling to the TAR. As a result, in 2008 Future Generations staff didn't travel to Tibet until the end of October for a field visit.

Future Generations President Daniel Taylor and Executive Director of Future Generations China Frances Fremont-Smith returned to Lhasa in January 2009 to discuss the working agreement with STD and to evaluate data collection methodologies and goals. Discouragingly, they came away doubting the capacity of STD and Canadian partners at the David Suzuki Foundation to see the project to completion. Not only is this due to lack of strong leadership, but also to lack of capacity at STD and DSF in high level GIS collection, analysis, and writing of a protection plan that can finally guarantee protection for the Four Great Rivers area. As a result, efforts to finalize a protection plan and establish a nature preserve have stalled, and instead, work focuses on strengthening the Pendeba Program. A study tour of key officials to North America has now been delayed indefinitely.

Over the past five years, between 2004 and 2009, progress in the Four Great Rivers region has been unequivocally disappointing. Funding has been hard to get and what funding did come through has been ill spent. Lack of capacity amongst all Future Generations partners, including Future Generations itself has also contributed to a mediocre record of achievements in the last five years. New agreements with the Environmental Protection Bureau are sought, but the difficult political context makes signing new agreements unlikely in the near future.

The Four Great Rivers project is ongoing.

### ***The Green Long March***

#### **Background**

The Green Long March (GLM) was a new and very different kind of project for Future Generations. Conceived in 2006 by Future Generations China Executive Director Frances

Fremont-Smith, the Green Long March was developed in partnership with Future Generations and Beijing Forestry University. The idea of the GLM originated during 2006 when difficulties in Tibet were mounting. With progress dramatically slowed and funding drying up, Frances Fremont-Smith came up with the concept of a nationwide program that focused on environmental awareness and involved the energy and passion of youth across China. With the Olympics coming to China in 2008 and endless media attention focused on the environmental problems of China, it was clear that there were opportunities to highlight environmental success stories and engage youth in the process. The concept fit well with Future Generations Seed-Scale methodologies and it soon took off, garnering wide ranging corporate sponsorship through a partnership with the Communist Youth League and Beijing Forestry University (BFU). BFU became the main organizer of the GLM network of over 30 universities across China that participated in the March. The goal was to train university students in environmental leadership, to spread environmental awareness to the public on 10 routes across China throughout villages and cities, and through surveys to highlight community success stories.

### **Program Summary**

Since 2007, Future Generations and Beijing Forestry University have developed a network of universities and in 2008, 5,000 student volunteers participated in GLM campaigns. After the successful first year, the government asked Future Generations to continue the GLM as a 5-year program. Each year the GLM focuses on a different environmental theme. The first year's theme was water conservation, the second year was green enterprise (students visited and investigated businesses that had integrated environmentally friendly production processes or were producing environmentally friendly products), and the 2009 theme is energy (renewable energy and energy conservation approaches). GLM events take place between March and November of each year and are organized according to a geographic route system. During the first two years there were 10 routes that covered all provinces of China (not along the traditional Long March route). In 2009, the number of routes has been reduced to 7 to ensure quality. The GLM's climax is during July when student volunteers strike out on their own and hold awareness campaigns and activities along their routes across China. These activities are organized entirely by the students and are meant to engage communities and raise awareness about environmental protection. But the GLM also features events on Earth Day and World

Environment Day, and runs training sessions for student leaders.

Finally, the GLM opening and closing ceremonies serve as opportunities for student participants to gather and drum up enthusiasm for the March and to share experiences and lessons learned. New aspects of the GLM in 2009 are the Case Study Program and the Green Seeds Awards Program, which encourage students to study local energy solutions in-depth and receive funding for their own energy-related action plans. To facilitate these new programs, national and regional training programs and post-GLM forums have been added to the schedule.

Each year, the GLM strives to expand its impact by integrating new and practical programs that give student leaders new skills and that are relevant to the concerns of the Chinese people. Ultimately, the GLM seeks to build capacity amongst rising student environmental leaders and to empower communities across China with knowledge and ideas of how to affect positive change. Guided by the international expertise of Future Generations China, this process is facilitated by the GLM's government partners at the Communist Youth League and high profile corporate sponsors who lend the GLM credibility and long-term sustainability.

Looking ahead, Future Generations China hopes to ensure that the GLM is scaling up the impacts and scope of its programs and that they are self-sustaining. This will be achieved by stronger networks amongst participating universities and more meaningful results, in the form of substantive case studies and student-led action projects with support from the Green Seed Awards Program. This means that the GLM should reach a stage in the next few years where it can exist without reliance on financial support from corporate sponsors and Future Generations funding.

The Green Long March is an ongoing project.

### ***Model Eco-Community Program***

The Model Eco-Community Project is a product of the 2007 Green Long March and is implemented in partnership with China Agricultural University. Students on the March conducted community surveys along the 10 routes and identified many successful community-led environmental projects. After the March was over, and equipped with thousands of community surveys, organizers realized that they had a great opportunity to return to these



communities and help them scale up their environmental projects. The concept was that a group of 35 communities, with extra training and funding from Future Generations, would be able to scale up their projects and become demonstration sites for other communities across China facing similar challenges. Those community leaders would have sufficient training and experience to themselves become "Teachers of Trainers" and would assist the next phase of communities with their projects. The program would run on a three-year cycle, with 35 new communities chosen each year to participate and end with 105 communities that had in part been trained by the first 35 communities.

After a year of operation, the Future Generations China has trained community leaders from communities from Liaoning, and Guizhou Provinces, and Ningxia Hui and Xinjiang Uyger Autonomous Regions. Training sessions and environmental projects have focused on identifying and implementing small-scale solutions to local problems, including installation of energy-saving stoves, called *kangs*, which heat homes and beds in winter, and recycling and refuse management systems. The original target number of communities was downsized from 50 to 35 in 2009, due to limitations on the program including the restrictions in the Tibet Autonomous Region. The MEC Program is now in its second year and is focused on selecting another 35 communities and securing funding for another two years of program development.

The Model Eco-Community Project is ongoing.

## Program Analysis - CHINA

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This case study for the China country program focuses on the three major programs that Future Generations has run in the Tibet Autonomous Region: the Qomolangma National Nature Preserve, the Pendeba Program, and the Four Great Rivers project. These three programs were chosen not only because they have been the longest-running and most substantial programs in terms of resources, but also because they have had a direct impact on each other. One program cannot be explained without a description of the other two: there is a collective historical narrative of how each program was begun and how it led to the creation of the next. The Lhasa Wetlands project will not be explained in depth in the case study because it was a relatively short term, independent project.

### *Qomolangma National Nature Preserve*

When Dr. Taylor first came to Tibet with the Woodlands Mountain Institute, he saw an opportunity to preserve a huge track of land, something that had never been done to such a scale before in Asia. As opposed to preserves of similar size on other continents, Dr. Taylor wanted this preserve to be different. Through his experiences growing up in the Himalaya and searching for the truth behind the myth of the yeti, he knew that the ecosystems in Tibet were unparalleled for their remarkable biodiversity and range of climate zones. He also knew that without government protection, they would be changed and eventually lost forever to development.

In the area around Qomolangma, nature conservation was the ultimate goal. Falling populations of snow leopards and other such endangered species, and disappearing forests had to be addressed. But the means to this end would be different to conventional conservation approaches. Dr. Taylor believed that for a preserve to be successful in protecting the environment, it must enlist local communities to act as stewards for the land. The Seed-Scale methodology had not been developed at the time of the creation of the QNNP and so was not part of the planning process. But in retrospect, many of the principles of Seed-Scale are evident in the design of the QNNP.

From the beginning, Dr. Taylor's work in the QNNP focused on macro-scale conservation. The QNNP is 34,480 square kilometers in size, as large as the island of Taiwan, and covers all of Dingri and Nyalam counties and part of

Dingque and Kyirong counties within Shigatse Prefecture. The three hundred and twenty communities within the preserve are home to 89,000 people. Dr. Taylor believed that to achieve the kind of conservation that was needed, the government should do more than just set aside a few pockets of land as they had been doing, and instead protect a whole ecosystem. The second innovation in this approach was that the preserve allowed communities within its boundaries to continue living on and using the land. By integrating communities into the overall approach and by couching management of the preserve in existing government departments, this allowed planners to conserve a much larger track of land for a fraction of the cost of a "conventional" preserve. The scale of the QNNP was large, but the resources it required to function were not.

The creation of the QNNP was a cooperative effort between Dr. Taylor (and the Woodlands Mountain Institute) and the Tibet government. Based on the Seed-Scale methodology developed and used by Future Generations programs across the world, the Woodlands Mountain Institute played the tradition role of the outside-in advisor, motivating the government and bringing expertise to the project. The TAR government was receptive and from the beginning adapted and implemented Dr. Taylor's ideas on a massive scale.

The communities of the QNNP were surveyed to determine their needs and challenges, but they were not specifically involved in the planning process of the preserve. In this sense, the QNNP did not begin from a seed, but rather began at scale. The communities were built in to the management structure of the preserve, however, and the preserve's success depended largely on their involvement. It was through the Pendeba Program, which was developed a few years later, that communities became directly involved in conservation in the QNNP. Management of the QNNP was allocated to county-level governments and a special management bureau was established that educated officials and village leaders on the new preserve.

According to the Seed-Scale methodology, the QNNP preserve started at scale, or at SCALE cubed with an enabling environment provided by the top-down: the provincial government in this case.<sup>xlv</sup> Even though the methodology had not been developed at the time, the QNNP reflected with some foresight the primary principles of Seed-Scale: begin with success, three-way partnerships, evidence-based decision-making, and behavior changes.

From the beginning, partners always emphasized the positive. Instead of criticizing the government and villagers, proponents of the preserve emphasized the good that it could do and would accentuate positive developments and results, making partners feel proud and acknowledged for their work. Secondly, the QNNP was a result of cooperation between the top-down and the outside-in. The three-way partnership principle of Seed-Scale says that you must also involve the bottom-up, or the communities. Although this didn't happen immediately, communities were involved in the process through the Pendeba Program. Even though the communities didn't initiate the program, it was ensured that they would be brought to the table.

Throughout the planning process, government partners made great efforts to collect and consider local evidence before making decisions, as opposed to making decisions about the preserve based on an international formula for protected areas. This was possible through extensive collection of local data on the communities and ecology of the area. Beginning with aerial images of the region, Dr. Taylor showed his government partners what could be done and during the years leading up to the creation of the preserve, extensive surveys were undertaken, study tours for officials were conducted, and baseline data was gathered.<sup>xlvi</sup>

Finally, and in large part thanks to the Pendeba Program, the QNNP has succeeded in changing people's behaviors, as is clear from improvements in the environment (to be discussed in the achievements section). By involving the local communities and their needs in the conservation process, behavior change was much easier to accomplish than it would have been with top-down regulations that assumed people were part of the problem and not the solution.

### *The Pendeba Program*

The Pendeba Program, as already explained in Part 1, grew from the theory that in order to protect the environment, you had to work directly with local communities, or the bottom-up. If you want people to stop cutting down trees and hunting endangered species, you must ensure that they have the knowledge and the know-how to take care of their needs in ways that don't harm the environment. Community surveys in the late 1980's and the health survey

conducted in 1992 by Carl Taylor and his associates, showed that QNNP communities were most concerned about their geographic isolation, their lack of energy sources, and poor health care. Future Generations chose primary health care as the entry point for the Pendeba Program because it was the easiest challenge to overcome in terms of time and resources.

In 1994, when the Pendeba Program began, the Seed-Scale methodology was just beginning to be conceptualized. It wasn't until 1996 when the Seed-Scale theory began to guide the Pendeba Program in new directions. Until then, Pendebas were only trained in health care, focusing on diarrhea, pneumonia, and malnutrition: the top three afflictions according to a survey of three villages in 1994.<sup>xlvii</sup> Between 1994 and 1998, 87 Pendebas were trained in oral rehydration methods and how to detect pneumonia. During those years, Pendebas gained the trust and confidence of their villages and news of their effectiveness spread. Soon villages across the QNNP wanted their own Pendebas and training programs were scaled up. Particularly well-trained Pendebas became trainers themselves and over the next two years, more than 100 Pendebas were trained.

This rapid expansion of the program was an indication that the program was achieving SCALE-One (growth in numbers of Pendebas), but as the program grew, the quality of the Pendeba's training and the services they offered their villages declined. In an effort to raise the quality of the program and to achieve SCALE-Squared status (growth in quality) trainings began to focus on other aspects of community development, such as environmental protection measures and sustainable methods of income generation. According to the Seed-Scale methodology, emphasis was to be put on establishing SCALE Squared centers, or groups of communities that would act as training and learning centers for other Pendebas. These communities would continue to offer nearby villages with training and would use their own successes as models. Ideally, the government or the top-down would fund and support these centers. In the QNNP, what resulted was the construction of a Pendeba training center, financed by Future Generations and other outside-in donors. The center was to act as a place to train Pendebas. After the center was constructed, villagers complained that they would rather receive training in a village setting, so the training center was converted into a hotel and office buildings and SCALE Squared centers were designated in 10 centrally located villages in the preserve, such as Shegar.<sup>xlviii</sup>

To date, 276 Pendebas have been trained in the QNNP and there are 20 Pendeba supervisors or community health workers that are supported by the government.

The Pendeba Program, considered by the government to have been very successful in the QNNP, was thus brought to Linzhi and Chamdo Prefectures as part of the overall conservation strategy for the Four Great Rivers area. It was also brought to Nagqu Prefecture in northern Tibet, where the government had recently established the Chang Tang National Nature Preserve. Twenty-four Pendebas were trained in Nagqu in total, but trainings lasted only a short time, due to lack of funding and capacity on Future Generations side.<sup>xlix</sup> Different local contexts necessitated that Pendeba training sessions focus less on health care and more on sustainable income generation and environmental protection. Pendeba supervisors were trained by Future Generations and to this day conduct trainings, which are supported by the government. Future Generations also runs training programs when staff are allowed into the TAR (travel permits to Tibet have become harder to acquire in recent years due to political instability). Because of limitations in resources and restricted access to Tibet, Future Generations Pendeba training sessions were shortened and trained larger groups. Community Development Director Nawang Singh Gurung, who had run the recent training programs in the QNNP, also took on the Four Great Rivers training sessions. As he was the only staff member capable of running training sessions, Nawang would usually visit a community over a day or two and train dozens of people in one particular skill, such as building a greenhouse.

The Pendeba Program has trained 372 people in the Four Great Rivers region: 289 people in Linzhi Prefecture and 83 in Chamdo. In total there are now more Pendebas in the Four Great Rivers area, despite a much shorter program history. But the area is also much larger than the QNNP; instead of 89,000 people, the population is 800,000. There are still many communities that don't have Pendebas and those that have received training comment that follow-up training is required in order for them to offer more assistance to their communities.<sup>1</sup>

The Pendeba Program is a particularly good example of Seed-Scale as a theory of change. It was created, and more importantly, adapted with the Seed-Scale principles in mind: build from success, three-way partnerships, evidence based decision-making, and behavior change. Although it has faltered in recent years, government

support of the program has allowed for scaling up, from SCALE One to SCALE Squared. The Pendeba Program did not start from a *seed* in its theoretical sense; in other words, it was not envisioned and created by the communities themselves. Rather it came from outside-in experts and top-down government officials. But the *seed* dimension appeared later as the program rapidly expanded as a result of communities demanding their own Pendebas. Communities appreciated the services Pendebas offered and the government and Future Generations facilitated more training programs, with relevant, and evidence-based content. These trainings allowed communities to identify problems they wanted to solve and gave them the tools to come up with their own solutions, which often resulted in significant behavioral change (see part 111).

#### *Four Great Rivers*

Future Generations was asked by the government to assist in protecting the Four Great Rivers environment using the same model of the QNNP. The government, aware that the ecology of Linzhi and Chamdo Prefectures was at risk from logging and development, and had seen the positive effects of the QNNP and the Pendeba Program and sought an agreement with Future Generations. The entry point for the program was to protect the natural environment by creating a mega preserve for all of Linzhi and Chamdo Prefectures. Partners would create a master plan for the region that would allow for large-scale environmental protection, but also controlled human development. Previously, a handful of small preserves existed, which protected small pockets of land, but the vision for the Four Great Rivers was grander and Dr. Taylor and his partners hoped that it would be one of the first preserves of its kind that protected such a large and relatively densely populated stretch of land. It would act as a model for large-scale conservation that could be applied anywhere in the world, not just in pristine ecosystems.

Like the QNNP project, the Four Great Rivers conservation effort was initiated by the top-down (government), with the assistance of the outside-in (Future Generations and GIS experts from the David Suzuki Foundation). By nature, the project began at scale and sought to incorporate the communities through the Pendeba Program. As the agreement dictated, partners began to collect data that would inform the protection plan, incorporating GIS mapping techniques and community surveys. In this way, the final conservation master plan could be evidence-based and

address the real challenges of the ecosystems and the surrounding communities. Unlike the QNNP however, problems with government partners and other independent factors have hampered progress and prevented the project from going to scale.

Despite well-intentioned plans and agreements, difficult political situations and with the lack of capacity and commitment of our government partners at the Tibet Science and Technology Department have prevented this conservation program from meeting its objectives. Like the QNNP, the project plans reflected the principles of Seed-Scale. But the enabling environment that is so vital to successful conservation and development projects has been missing and thus confirms that without top-down support, projects cannot go to scale, and cannot achieve their goals. Sporadic study tours, meetings, GIS training sessions, and field research have created a foundation of relevant local information and capacity. In order for the last ten years of work to be utilized, a reevaluation of priorities, resources and strategies must occur amongst project partners.

#### *Resources:*

Future Generations contribution towards Tibet programs since the 1980's has been on average \$300,000 per year.<sup>li</sup> Some years, the amount was higher, such as in the late 1990's when the QNNP training center was built. The total cost for that building was \$500,000, which was spread out over a period of approximately three years.<sup>lii</sup> Future Generations staff based in China has always been small. Su Chun-Wuei, and after her Frances Fremont-Smith and Nawang Singh Gurung were the only permanent staff to work and live in China until 2007 and 2008 when two program assistants were hired. The major cost of the programs was the annual study tour and training programs. The study tours in particular were costly, as TAR officials were flown to locations like Nepal, Canada, and the United States for on-site training sessions. For six consecutive years during the 1990's, TAR officials were sent to Paul Smith's College in the Adirondacks.<sup>liii</sup>

Over the years, the Chinese Government's contribution to Tibet has been significant. In 1998, after the devastating flooding of the Yangtze River, the government pledged \$200 million for conservation initiatives in Tibet for the 10th Five-Year Plan from 2001 to 2005. The majority of this money was spent on reforesting the upper drainages of the Yangtze River to prevent future flooding, but it signaled a massive shift spending



priorities. The \$200 million was a five-fold increase from the previous amount of the roughly \$40 million per year that had been devoted to conservation in the TAR. This \$200 million was part of an overall budget for the TAR of a staggering \$1.25 billion.

The specific amount spent by government partners at the Forestry Bureau and the Science and Technology Department is not known.

## **Program Achievements - CHINA**

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### *Gathering Evidence*

One of the four primary principles of the Seed-Scale methodology is evidence-based decision-making; using local evidence that you have collected in order to formulate your goals and strategies. In most Future Generations programs in China, planners have taken pains to first gather evidence and then create plans.

Before the QNNP was established, extensive surveys were conducted to determine appropriate guidelines and parameters for the preserve. The following subjects were the topics of the surveys conducted in 1989: socio-economics, vegetative mapping and geography, culture, health, education, tourism, environmental pollution, and management.<sup>liv</sup> In 1991, further surveys of vegetation, geology, wildlife, and social and cultural issues were undertaken.<sup>lv</sup> The data that resulted from these surveys informed decisions about the preserve, including where to delineate core areas, where the environment was most fragile and where to allow for continued human development.

The health survey of QNNP villages conducted in 1992 by Dr. Carl Taylor and discussions with communities during the formation of the preserve was the basis of evidence for the Pendeba Program. Communities expressed a clear need for local health workers across the preserve and so Pendebas were first and foremost given training in primary health care. As conditions changed and as the Pendeba Program was expanded into the Four Great Rivers area where primary healthcare was already available, Pendeba's training shifted to focus on environmental protection and income generation, although in depth surveys were not conducted prior to the program beginning in Linzhi.

The Four Great Rivers project has also focused on gathering evidence to inform conservation plans. Government officials saw the success of the QNNP and decided to bring a similar strategy to Linzhi and Chamdo Prefectures, but knew that it had to be based on local conditions. Future Generations funded many years of training and study tours for local officials. These officials then had the capacity to conduct their own surveys and in 2001 wrote the Four Great Rivers Ecological Environment Protection Plan. This plan, which received government approval, was a preliminary step at creating a comprehensive conservation master plan. Since 2001, government officials have received training in GIS methods and have been collecting more data for the master plan.

### *Indicators*

Future Generations has never agreed upon formal indicators for any of its Tibet programs, including the QNNP, Pendeba Program, and the Four Great Rivers project. In part this was because funders had never demanded them, but also because Future Generations was focused on more generalized behavioral change and increases in awareness as opposed to one specific area, like literacy. Some believed focusing too much on indicators would detract from the broader achievements of capacity development.

Over the years, de facto indicators have arisen, and these are used in evaluations of the Tibet programs and have been noted in Dr. Taylor's books "Just and Lasting Change" and the soon-to-be published "Becoming Change." When discussing the QNNP, the most commonly used measures of success are: percentage of land under protected area management, wild animal populations, rate of deforestation, number of banks and schools, and community-capacity (closely tied to the Pendeba Program).

The Four Great Rivers project, which has not yet realized its goal of creating a QNNP-style mega reserve, will presumably use similar de facto indicators for success,<sup>2</sup> since the nature of its goals and the goals of the QNNP are the same. The most commonly cited measure of success thus far has been the drop-off in illegal logging, due to the logging moratorium passed in 1998 and shifting focus to sustainable income generation methods and better

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<sup>2</sup> Since the Ecological Environment Protection Plan is in government hands and no other planning documents make any mention of indicators, it is presumed that no indicators have been officially chosen.

public sanitation in communities where Pendeba trainings have been held.

Though indicators have never formally been part of the Pendeba Program, they have been suggested in various funding proposals and planning documents. The following indicators were listed as suggestions in a 2005 funding proposal, but would be difficult to substantiate, considering the complicated political circumstances in Tibet:

- Health
  - Infant/child mortality
  - Maternal mortality
  - Fertility
  - Mortality rates overall
  - Nutrition status: mid-arm circumference
- Economic
  - Incomes (self-reported probably accurate)
  - Equity
- Agriculture
  - Incomes
  - Productivity (yields)
  - Nutrition (micronutrients and protein-calorie)
- Conservation (need to determine indicators)
  - Forest cover
  - Indicator species
    - Increases in # of individuals
- Cost-effectiveness - formula for a given change:  
$$\text{Cost/unit} = \frac{\text{total budget} \times \text{estimate \% of total time devoted to activity}}{\text{Unit of Change}^3}$$

No indicators have been established specifically for the Pendeba Program in the Four Great Rivers area, where the Pendeba training sessions focus more on public sanitation and income generation.

#### *Monitoring and Evaluation*

Future Generations has never established formal monitoring and evaluation strategies for any of its Tibet programs. Partly this is due to the sensitivity around data collection in the TAR, especially where human development is concerned. It is also a result of lack of

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<sup>3</sup> (from 2005 agreement with Mulago Foundation)

funding to pay staff to work on developing M&E methods or to implement them. In funding proposals over the years, Future Generations has recognized the need for a proper M&E system, especially for the Pendeba Program, but has never succeeded in securing the funding or the capacity to make this possible.

In 1998, 2000, and 2002, Pendeba workshops were held in the QNNP and brought together Future Generations, government representatives and senior Pendebas, and village Pendebas to discuss achievements and to conduct participatory evaluations of the program. Although unscientific, these discussions were useful for gathering feedback from Pendebas and gave the opportunity to make suggestions. All parties agreed that the program should be immediately scaled up through the QNNP and in other prefectures in Tibet.<sup>lvii</sup> During these meetings, it was stressed that a stronger system of reporting and monitoring was required. Also in 1998, 70% of Pendebas completed a household survey of their communities in the QNNP, but due to political restrictions, the results were unable to be analyzed.<sup>lviii</sup>

### *Supervision*

In planning documents and in practice, the supervision structure for the QNNP Pendebas was set up as follows:

1. Future Generations provides outside-in expertise on planning, training, monitoring, and program revision
2. The QNNP Management Bureau designates a prefecture-level Pendeba Coordinator for the 4 counties in the QNNP
3. The QNNP Management Bureau also appoints a county-level Pendeba coordinator for the branch office of the QNNP MB
4. Twenty Senior Pendebas spread out across QNNP villages have been trained to supervise the 241 village-level Pendebas

The supervision structure mandated that the prefecture coordinator would visit all four county coordinators and senior pendebas on a 3-4 month rotation. When needed, the prefecture coordinator would also visit village-level Pendebas. County coordinators would visit senior and village Pendebas as much as possible, but there was no fixed timeline for these visits. Every 4-6 months, the QNNP MB was to organize a meeting of county coordinators.

Following the Seed-Scale model, program planners designed 10 Scale Squared Centers (SSC) to be located across the 4 counties of the QNNP. These SSC were villages that had strong connections to the Pendeba Program and because of their history of success would serve as model communities that would help surrounding communities implement new projects. Each SSC was also to have a SSC supervisor and 10 people were trained particularly for this purpose. They would run training programs for surrounding village Pendebras and serve as a source for support and information. Unfortunately, the agreement with the QNNP government expired and no more progress could be made on the SSC's.

After 2004, four Senior Pendebras dropped out and brought the total number of Senior Pendebras to 16. Because Future Generations has not been active in the QNNP since 2007, we are unsure how many Senior Pendebras are still serving their communities and village-level Pendebras.

In the Four Great Rivers region, the supervision structure was similarly planned. At present, however, no senior Pendebras have been trained and although 8 SSC's were chosen (4 in Linzhi, 4 in Chamdo), progress has been slow.<sup>lviii</sup>

### *Major Achievements*

Its twenty-year history of work in Tibet has allowed Future Generations to witness changes in communities and environments over a long period of time. Despite the inability to conduct proper scientific surveys in the region in recent years, observational data and anecdotal evidence from partners has painted a picture of positive outcomes.

The establishment and innovative nature of the QNNP, the ban on the sale of wildlife parts, the Lhalu Wetlands project, the Pendeba Program, and efforts in the Four Great Rivers area have all contributed to a safer environment and higher standards of living across Tibet. But the projects also represent a much more integrated, and holistic way of uniting conservation and development goals in practice. What is perhaps most impressive about these efforts is how path breaking they were. In a 2002 article about human-wildlife conflicts in the Changtang Nature Preserve, the authors ask what could be done for human development concerns in areas where nature conservation is a major goal. Their conclusion was:

"Clearly, as a start, better basic education and health

facilities are needed in the areas designated for pastoral development priority, and a commitment to reserve management, including education and hire of locals as staff, can contribute to an enhancement of living standards, pastoralism and wildlife conservation... In any event, if the reserve is to be successful, wildlife conservation measures designed to include recognition of the livelihood and development requirements of the local nomads are required urgently."<sup>lix</sup>

Future Generations and government officials within the Tibet Forestry Bureau recognized this in the late 1980's and created the QNNP and the Pendeba Program to address the very needs and challenges in resident communities that this article refers to. There was great wisdom and foresight in Future Generations approach.

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Future Generations has always emphasized the role of the government and since the very beginning all programs in China have been developed and implemented hand in hand with government partners. In a country where NGOs often have dubious relationships with the government, particularly when they seek to work in Tibet, the relationships Future Generations has cultivated alone should be considered a significant achievement. Beyond simply allowing Future Generations to work in Tibet, government partners believe in and support Future Generations programs. In January 2009, Chen Rong, a program manager at the Science and Technology Department in Linzhi Prefecture said this about our cooperation:

"Since helping organize and participating in the Four Great Rivers project from the beginning in 1997, to taking part in the first Pendeba training in Linzhi Prefecture and another in Shigatse Prefecture in 2002, I am so pleased to see that under the local Pendeba Program leadership in Linzhi Prefecture, the seeds of ecological protection, household sanitation, and sustainable income generation are now deeply rooted in the hearts and minds of the local people. Linzhi holds the majority of forest resources for all of Tibet, but the high plateau climate means that natural regeneration takes a very long time; ecological protection is a long term and absolutely necessary endeavour. I hope that Future Generations will always continue supporting the sustainable development of Linzhi Prefecture."

The following are Future Generations most significant achievements regarding improvements in nature conservation and community development in the TAR:<sup>4</sup>

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<sup>4</sup> One must remember the substantial investments made by the Chinese Government in protecting the environment and raising standards of living across Tibet. In this context, it is often difficult to discern exactly how much credit Future

### *QNNP Project*

1. Instrumental in the creation of the Qomolangma Nature Preserve; the first preserve of its kind to incorporate local communities in the management process, to use existing government structures to manage the preserve, and to allow controlled human development within its borders;
2. Recognizing its importance, the central government raised the status of the preserve to the Qomolangma *National* Nature Preserve in 1994 and shifted responsibility for the preserve from the provincial level management to prefecture-level;
3. Renovated three monasteries and helped build and furnish five schools;
4. Funded the building of a training center and hotel in Shegar, Dingri County (houses Pendeba trainings);

### *Pendeba Program*

5. Trained over 600 Pendebas since the program began in 1994 in environmental protection, primary health care, and sustainable income generation, most of whom still serve their villages today;
6. In villages with Pendebas in the QNNP, child mortality decreased by 50% and rates of child inoculation rose to 95%;<sup>1x</sup>
7. Villages across the QNNP requested their own Pendebas after seeing the practical benefits that Pendebas brought to their own villages only a few years after the program began;
8. A palpable increase in community ownership of social and economic development and self-reliance in villages with resident Pendebas;

### *Four Great Rivers Project*

9. Unlicensed logging declined in the Four Great Rivers region by 90% after the moratorium on logging in 1998, allowing for forest regeneration of valleys and hillsides;<sup>5</sup>
10. Asked by the government to expand the Pendeba Program into Linzhi and Chamdo Prefectures;

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Generations can take for general improvements in standards of living and environmental protection.

<sup>5</sup> Learned through surveys of logging trucks leaving the area before and after the moratorium on logging

11. Garnered government support for creation of a nature preserve, which will incorporate all of Linzhi and Chamdo Prefectures;

*Tibet-wide*

12. Helped pass the ban on the sale of animal parts, which was ratified by the central government in 1994;
13. Future Generations Tibet programs and ban on sale of wildlife parts helped increase wildlife populations across the QNNP and Tibet: snow leopards and musk deer in particular, have seen huge growth in numbers. Higher incidence of livestock predation suggests higher populations of large carnivores in the QNNP;<sup>1xi</sup>
14. Encouraged and helped government to establish the Lhalu Wetlands Nature Preserve in 2000. Also contributed funding for a wetland educational center at the Lhasa Department of Science and Technology;
15. Conducted X study tours for a total of X officials and scientists that took part.

A 2005 survey of Pendeba communities in the QNNP found that even though Pendebas had not received adequate refresher training and lacked supervision, they still showed interest and dedication to their work and had been working with their communities on projects for years since their training.<sup>6</sup> This long-term commitment to community work without financial incentives should be considered one of the greatest successes of the Pendeba Program. Pendebas have given communities across the TAR the capacity to raise their own standards of living while being part of greater efforts to protect the local environment.

The Tibetan government must also be credited with giving communities a role, through the Pendebas, in securing their own development and aiding conservation of the natural environment. As a communist country that doesn't normally encourage debate and self-sufficiency, it is remarkable that the government has allowed and encouraged this community-based method of conservation in places of such unquestionable importance. The conservation approach that the government has taken in Tibet is extraordinary when compared with other nature preserves throughout the rest of China.

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<sup>6</sup> This was Kevin Starr's survey that led to the government banning Future Generations from the QNNP



## **Discussion - CHINA**

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Despite a long working history in Tibet and good relationships with government partners throughout much of the programs history, Tibet continues to be a complex area to work in for Future Generations. As noted in the previous pages, political instability and sensitivities have hampered our ability to conduct research on the conditions in the field and on communities that we have worked with through the Pendeba Program. The few times that scientific data was collected, Future Generations was reprimanded by the government and agreements with our government partners were put in jeopardy.

Similarly, during periods of forced absences due to political troubles or lack of funding, government partners have continued Pendeba trainings in the Four Great Rivers but have failed to report back to Future Generations what has occurred. Lack of organized and structured reporting by government partners, the Pendebas, and Future Generations staff make it difficult to speak specifically about the impacts of programs and how they reflect Seed-Scale principles.

In absence of hard data it is almost a futile exercise to make statements about the nature of community and county impact. However, a brief discussion of the programs is offered below using the program design and anecdotal evidence of events and conditions in Tibet.

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The process of change that Future Generations espouses, "Seed-Scale" as we have called it, is a process that we attempt to follow in all our own programs around the world. It is also something that we try to teach communities, so that they can initiate their own programs, or seeds, that they can grow to a larger scale. In the Pendeba Program in particular, Future Generations teaches this community-based process for change, along

with health, environmental conservation, and income generation skills. We teach Pendebas the four principles that grow human energy, we teach the six criteria to measure change (equity, sustainability, interdependence, holism, collaboration, and iteration), we teach how to organize, assess, and implement community projects, and we teach how to bring these programs to scale, where the benefits are shared with an ever growing number of communities.

When assessing the Tibet programs against the six criteria for change that we have established, we should remember that the Pendeba Program was created and developed with these criteria in mind. The Pendeba training and the Pendeba Manual also teach the Seed-Scale methodology and the criteria for change. We can analyze our own programs against this criteria, just as we should be able to analyze the work of the Pendebas. Unfortunately, evidence and reporting of Pendeba-initiated projects in their communities is very limited. Nor do we have statistics regarding the conditions of communities with and without Pendebas. Therefore, there is not adequate information available to allow us to make statements about whether Pendeba projects meet the six criteria. At some future time, if restrictions on gathering data are lifted, a study of Pendeba-initiated projects must be undertaken.

*Equity* - Across all TAR programs, in protected area management and the Pendeba Program, one of the main criteria is that communities be involved in protecting and managing their own the local environment. Many villages, particularly in the QNNP, were desperately poor at the start of the Pendeba Program. However, with the tools that they were given through the training sessions, Pendebas have been able to bring new methods of income generation to their communities. Throughout villages across the TAR, communities have been increasing their standard of living without lining the pockets of the rich. Where necessary, government provides seed money for Pendeba projects that help kick start new methods of income generation, such as green houses for kitchen gardening, allowing villagers to increase their monthly incomes without damaging the surrounding environment.

*Sustainability* - The experience of the Pendeba Program can tell us a lot about its enduring impact, or sustainability as a program for change in Tibet. The Pendeba Program was created, as with all Future Generations programs, with the notion that real change can occur in communities across Tibet only if it is

culturally, environmentally, and economically sustainable. In other words, progress in development and conservation had to be able to continue and thrive if Future Generations wasn't present as a source of money or as a provider of expertise.

According to the Seed-Scale theory, for a program to be considered sustainable, it should be able to function and grow without substantial outside-in expertise and resources. It should fit the cultural context, be beneficial to the environment over the long term, and not create large debts that communities cannot repay.<sup>1xii</sup> More concretely, for the Pendeba Program to be considered truly sustainable, it should be able to exist and grow in scale and quality without Future Generations. Over the past few years, political instability and funding challenges have prevented Future Generations from being very active in the Pendeba Program. Particularly in the QNNP, Future Generations staff members have run fewer training programs and fewer refresher courses than in the past. Further, Future Generations has been banned from working in the QNNP (except for Norbu Tsering who has conducted two trainings there since 2006). Future Generations was also the sole source of funding for these two training workshops in 2006 and 2007. This situation provides us with a clear view to see what has happened to the Pendeba Program since Future Generations involvement diminished.

According to the QNNP Pendeba Survey of 2005, the vast majority of the 22 Pendebas that were surveyed were still using their knowledge gained from the trainings to serve their communities. These Pendebas still believe that they are very beneficial to their communities and two thirds had initiated one or more projects in their communities. They also maintained that despite no compensation for their work, they were serving as Pendebas because they wanted to help their communities.<sup>1xiii</sup> This survey proves the strength and the enduring benefit of the idea behind the Pendeba Program. It also proves the cultural viability of the program based on the positive responses Pendebas gave about the program itself. Villagers are motivated to help their communities and the knowledge they gain through the Pendeba trainings can never be taken away from them. Nor does it require a constant flow of material resources and funding. The comparative advantage and sustainability of the Pendeba Program over traditional aid programs, where the donor arrives at a community bringing food and money and creating dependency as a result, is that the "aid" comes in the form of knowledge. Once the Pendebas have received training, the

knowledge they gain and the empowerment they derive from it cannot be taken away from them.

But the survey and the events of the last five years reveal different conclusions about the way the Pendeba Program was designed and how it functions. In the same survey, the QNNP Pendebas expressed concerns that they didn't have enough material resources, their knowledge was too limited to meet pressing community needs, and that they weren't receiving support or refresher training from the government or from Future Generations. Two thirds said that they had never been visited by a member of the Pendeba Program staff. The author of the survey concluded that this meant that both the government and Future Generations were neglecting the program and neglecting the Pendebas. Therefore, the quality of the Pendebas was going to continue to go down and the scale of the program would never grow.<sup>lxiv</sup>

What happened in the Four Great Rivers Pendeba Program was slightly different. The government continued to run its own trainings when Future Generations wasn't there (it did not run trainings in the QNNP). But these trainings focused primarily on income generation (although they did cover other subjects in brief, including animal husbandry and tree planting), and did not provide the same skill set and knowledge of environmental protection that the Future Generations-led trainings did. Furthermore, the government does not use the word "Pendeba" for these trainings, leading us to question the real level of their buy-in, or commitment, to the program.

What all of this suggests that the Pendeba Program has faltered since Future Generations stopped playing a leading role. The program, in its current form, is unsustainable. There are two reasons for this. First, the government in the QNNP never had enough buy-in to the program to continue it without Future Generations presence and money. Although the Linzhi and Chamdo governments have continued it in the Four Great Rivers, they did not sufficiently buy-in to all the primary goals of the program, including nature conservation, to include it in their training programs. The second reason is that Future Generations never planned to exit the program and let it function on its own. From the very beginning, the Pendeba Program should have been planned so that at some point Future Generations could step away. If it had been discovered that the government was not going to support this program and provide the necessary trainings to allow

the program to expand in scale and quality, there should have been other avenues to keep the program functioning.

Looking ahead, the Pendeba Society, in its infancy at present, could be the key. The society aims to create an ecotourism destination and use its revenues to fund the Pendeba Program. Led by Norbu Tsering, a graduate of Future Generations Master Program and a staff member working for the Pendeba Program in the TAR since 2006, the Pendeba Society would be a new NGO that could operate more easily in the TAR. If it is successful in the ecotourism market, it could provide the enabling environment, support, and expertise that the government could not and would provide the financial resources that Future Generations was not able to. If private sector ecotourism could fund the Pendeba Program, with marginal input and support from Future Generations and the government, the program could run and support itself for many years to come. And with Pendeba feedback, it could provide relevant training that meets the changing needs of communities across Tibet.

#### *Interdependence -*

The strategies for nature preserve management and community development that Future Generations espouses in Tibet only function properly when the three-way partnership between the government (or top-down player), communities, and experts are working together. Our programs were designed that way of purpose, based on the idea that positive change cannot occur without interdependence. The structure of the QNNP and the Pendeba Program include equally important but differentiated roles for communities, government officials, and experts. Although the presence of the expert and the government official should scale back over time, as communities develop their capacity to initiate their own programs, particularly in the beginning phases of the Pendeba Program interdependence of all players on each other is necessary.

In no way has the Pendeba Program made communities more reliant on the government or on the donors, like many aid programs have a tendency to do. If anything, it has empowered villagers to identify problems and develop and act upon solutions with the helping of government and experts where needed. Experience proves that the role of government and experts is still very important for continuing to provide up-to-date training and support. But the knowledge that Pendebas receive makes them not

more, but less dependent on outside help and money to solve their problems.

#### *Holism -*

Though the ultimate goal of the Tibet programs began as nature conservation, Future Generations staff always knew that human development needed to go hand in hand with conservation initiatives. The nature preserve creation was the first project, and was essential to securing long-term government support for environmental protection. But Future Generations knew that protecting the environment needed the help of communities. The Pendeba Program was the means to not only help communities be better environmental stewards but also to empower them to be more active in promoting and securing their own development.

In order to help communities develop sustainably, Future Generations teaches Pendebas a wide range of skills. These skills, in health care, nature conservation, and income generation, ensure that the communities can focus on a range of projects to promote their development. Simply teaching communities not to cut down trees does not help them address any of their other pressing challenges, such as health care or income generation, problems which may overtake their environmental projects in importance. This is why it is of great importance that Pendeba trainings maintain a holistic nature, as they have not when the government has run them in the Four Great Rivers.

#### *Collaboration -*

Collaboration is a very important part of any project's success and it is built into Future Generations programs through our emphasis on partnerships. In Tibet, we have always sought the approval and the support of the government, as well as the knowledge and the commitment of communities in building our projects. This has also been the model that guides the Green Long March and the Model Eco-Community Project. Future Generations strives to be exceptionally modest when developing programs and always seeks to address the needs set out by the community and incorporating their own successes and the knowledge of local experts. Our role in the collaboration is to bring our own expertise to the programs, bring in the expertise of others, and to leverage support from all partners, including private sector support for initial start up costs. The government's role is to support the project by dedicating resources such as staff and funds

to see that it can continue. Finally, the Pendebas and the communities are responsible for using their knowledge to engage in community participatory planning that solves local problems.

Collaboration, particularly with the government, has not always been easy in Tibet. In times when agreements have ended or stalled, it has been exceedingly difficult to continue training workshops and field visits, proving the vital role of the top-down, particularly in undemocratic countries like China.

#### *Iteration -*

Over time, our programs in Tibet have changed based on feedback from partners and changing circumstances. As the iteration principle suggests, it is impossible to expect a project to begin and end with the same methods and strategies. Programs must evolve and strive for ever more impressing outcomes. The Pendeba Program, for example, has seen many different changes. It began by solely providing training on health care, but expanded to include income generation and environmental protection when it became clear that communities needed training in these areas too. It changed again when it was brought to Linzhi and Chamdo Prefectures, where it has since focused almost entirely on income generation. In nature preserve management, the strategies taken in the QNNP to establish a preserve could not be directly replicated in the Four Great Rivers and thus the program has progressed very differently than it did in the QNNP.

Iteration is positive, but only when it is used as a chance to take stock and set a new and deliberate path. Each new iteration of a program should be backed up with a rationale and an investigation into new ways to press forward. In Tibet, programs have shifted slightly on multiple occasions, but more care should be taken to ensure that modifications to the programs still strive for the same goals and that they are not compromising too much for the government or foundation or sponsor. In the Four Great Rivers Pendeba Program, switching the focus of the training to income generation techniques had a rationale: communities want to focus on that. But a formal discussion has never occurred as to whether this is the proper path for the program and whether this kind of training alone will ensure the kind of environmental protection and increased community capacity that we envision.

## *Variation in Impact*

Future Generations efforts at nature preserve creation in Tibet in the QNNP, Lhasa Wetlands, and the Four Great Rivers area have met with very different results. In the 1980's, Dr. Taylor established excellent government connections through his father, Dr. Carl Taylor, and his work for the Woodlands Mountain Institute in Nepal. Through these connections he was able to begin a dialogue about a kind of nature preserve, the protection of which would rely on resident communities. Within four years of these initial discussions, the Qomolangma Nature Preserve was created. This was a remarkably fast process: taking a new and relatively untested idea and implementing it on a large scale. Similarly, the Lhasa Wetlands National Nature Preserve was established relatively quickly, after only a few years of planning and discussions between Future Generations and the government.

The situation played out very differently in the Four Great Rivers. All began well; the government and Future Generations jointly initiated the project. Collaboration began in the late 1990's and focused on training government officials in protected area management, conducting study tours, and providing training in GIS mapping techniques. Many studies on the biodiversity of the region had also been conducted by scientists, such as Lu Zhi from the World Wide Fund for Nature and Robert Fleming from Future Generations. Work continued over the years, slowly adding to a foundation of experience and knowledge amongst government officials. At the same time, the Pendeba Program was training villagers across Linzhi and Chamdo Prefectures in improved public sanitation and income generation techniques. Future Generations encountered funding difficulties, but despite this was still able to be regularly present in the region to meet with government officials.

Why then, after more than ten years of work, is there still no protected area in the Four Great Rivers? There is no single answer to this question. But the experience with the QNNP and the Lhasa Wetlands protected areas suggests that it is primarily the government that enabled the swift creation of the QNNP and has hampered the establishment of a Four Great Rivers area. If the government is committed to making a protected area, it will happen. We can assume then that our government partners at the Science and Technology Department have lost the initiative on this project because they are either facing extraordinary difficulties trying to



establish the preserve or are themselves lacking commitment.

When considering the differences in the experience of creating the QNNP and the Four Great Rivers protected areas, as well as the different conditions in the areas themselves, a variety of issues could be acting as roadblocks:

1. Government officials within STD retired or were reassigned and those who had originally supported plans to make a protected area were replaced with officials who had no experience with Future Generations;
2. The Four Great Rivers region is home to more than 800,000 people, as opposed to the QNNP's 89,000 (65,000 at the time of the creation of the preserve). The area of land to be protected was also 400,000 square kilometers, as opposed to the QNNP's 34,480. Managing such a large area and population would be a much more complex undertaking;
3. Natural resources in the Four Great Rivers, primarily in the form of timber and water (1/7 of China's timber reserves are located in these two prefectures), are more abundant than in the QNNP. The total forest cover in Linzhi Prefecture is 37,400 square kilometers and accounts for 70% of the forest cover of Tibet.<sup>1xv</sup> Interest groups and multiple government departments have to be involved and more economic interests would be at stake;
4. Economic development, in terms of infrastructure and tourism, is rapid in eastern Tibet. In Linzhi Prefecture, economic growth was 15.5% in 1996. Just as managing important natural resources is complex, so is managing strong forces of economic development. Many groups and government departments need to be involved and mediating their interests requires skill and commitment; and
5. At the time of the creation of the QNNP, Future Generations ideas were new and innovative. By 2000, more attention was given to environmental causes and more players were involved. Future Generations was no longer as strong a voice for conservation in Tibet, because so many other players and solutions had entered the realm.

For all these reasons, creating the parameters for a nature preserve is more complex than in the QNNP. Just as designating all of Washington State (similar size as the Four Great Rivers with extensive timber reserves) would

be much more difficult than designating a remote region in Alaska as a protected area. A protected area of the size of the Four Great Rivers (over 11 times the size of the QNNP with more than 9 times the population) has never before been created. Whether it is the complexity of the task, the commitment of the government, or the troubled political climate in Tibet, the Four Great Rivers area has proven a greater challenge than the QNNP.

Due to the difficulties discussed throughout this case study regarding restrictions on surveying and research and lack of proper recording from government partners and Pendebas, it is impossible to make claims about variations in success of the Pendeba Program. What is known is that Pendeba trainings have focused on different topics depending on the location of the training, and that to varying degrees, government partners have continued the Pendeba Program in Future Generations absence. Government-run trainings in the Four Great Rivers area have focused primarily on income generation, but since not enough information exists for the QNNP, no statements can be made about the relative success of each area.

#### *Government Policies*

Government policies on Tibet, particularly restrictions on travel and research in the TAR, have hampered Future Generations in recent years. This has affected programs in by slowing progress and having to abandon work in the QNNP, as discussed above. Pendeba Program trainings in the Four Great Rivers, run by Future Generations, have also slowed in frequency, particularly since 2006.

#### *Tibet Programs and Seed-Scale*

The structure of our Tibet programs (the top-down TAR government, coupled with the bottom-up work of the Pendebas, with the outside-in expertise of Future Generations) is a version of Seed-Scale in action. The principles of Seed-Scale, after they were fully developed, guided program development and expansion, although Future Generations did not methodically follow the prescription for scaling up programs, as defined in *Just and Lasting Change*.

The theory of Seed-Scale has been instrumental in the successes discussed above. Our successes in Tibet are so diverse because they reflect the desire of Future Generations to engage communities and government in environmental protection, to change behavior, and to do

this using information about real on the ground conditions. These are all Seed-Scale principles. Positive outcomes have occurred on the community level, on a national level with the government, and within the ecology of Tibet, all contributing to creating healthier communities and a healthier environment in Tibet.

Because of the unique experience of working with the Chinese Government, which is centrally-controlled and sensitive about empowered civil society, particularly in Tibet, Seed-Scale in Tibet had to begin with the top-down influence, meaning that projects there started at Scale-Cubed instead of Scale One or Scale Squared. This has led Dr. Taylor and associates to re-analyze the process of Seed-Scale and conclude that change can begin at any phase of Seed-Scale: Scale One, Scale Squared, or Scale Cubed. Change does not need to be a linear progression beginning with the community to the enabling government. In countries with Communist, or centrally-controlled, governments, those who wish to initiate Seed-Scale projects are well advised to start at Scale Cubed and work towards Scale One and Scale Squared.

One of the greatest challenges to Future Generations in being able to fully implement Seed-Scale in Tibet has been the restriction on measuring behavioral changes. The Seed-Scale theory says that the true measure of success for development programs is whether or not target individuals and communities have changed their behavior. Without being able to scientifically measure behavior change, and without proper reporting over the years by Future Generations and its partners, it is difficult to make claims about whether the Tibet programs have caused behavioral change on the scale that was originally desired.

Another side effect of this information barrier is that we cannot say with any certainty how much progress has been made in our absence. Especially since 2006, Future Generations presence in the TAR has diminished and financial resources have been slightly more restricted than in the past.

#### *Suggested Indicators*

Given the experience in Tibet, it would be extremely useful to develop Seed-Scale indicators that can be used in situations where traditional indicators like child mortality cannot be determined.

Since Seed-Scale is a process that facilitates community empowerment and change new indicators should aim to reveal shifts in community perceptions. Community surveys would collect simple yes or no answers to detect a change in community awareness and empowerment:

Sample Questions:

1. Knowledge of the program in question's existence in their community
2. Perceptions of positive change in the surrounding natural environment
3. Perceptions of rising standard of living in community
4. Perceptions of rising expectations for a better future
5. Awareness of specific projects that have taken place in community and perception of impact
6. Existence of feelings of greater empowerment and integration

These indicators, in the case of the Tibet programs, would be extremely useful in assessing Seed-Scale's success. Numerical indicators don't reflect whether communities are aware of the existence and benefits from programs. Nor do they reflect the level of engagement and empowerment that community members may feel. These indicators would also help assess the impacts of the specific programs being analyzed. For example, due to massive government investment in Tibet, surveying for generic health indicators would not reveal how much credit is due to Future Generations and not government investment.

In the particular case of the Pendeba Program, surveys of community members, not the Pendebas themselves, would be a better reflection of a shift in community empowerment. In addition to the indicators listed above, the following indicators would provide additional insights of the impact of the program:

1. Awareness of Pendeba-initiated projects in community
2. Frequency and up-to-date-ness of projects
3. Involvement of greater community in Pendeba-initiated projects
4. Accessibility of Pendebas and community member's perceived ability to ask Pendebas for help or suggest projects
5. Perceptions in improvements in community of areas where Pendebas have received training, i.e. if

resident Pendeba has received health care training, how have health conditions in village improved?

*Tibet Programs and the Future Generations Mission Statement*

Under the definition described by the Future Generations Mission Statement, programs in Tibet should seek to "...enable a process for equitable community change that integrates environmental conservation and development." All Tibet program documents have stated the dual intention of seeking environmental protection and local community-based development. In years without political limitations, Tibet has also served as one of the four on-site learning stations for the Future Generations Masters Program. Multiple on-site residentials have been held in Lhasa and many graduations have taken place at Mount Everest (not sure about the numbers here).

The Mission Statement also encourages "field-based research, promotion of successes that provide for rapid expansion, and building of partnerships with an evolving network of communities that are working together to improve their lives and the lives of generations to come." Successes in Tibet have substantiated the Mission Statement. Future Generations conservation initiatives were rapidly expanded: nature conservation through integrated and community-based protected area management was adopted and expanded by the government from the QNNP to the Lhasa Wetlands Nature Preserve, the Changtang National Nature Preserve, and in principle will also be applied to a future Four Great Rivers protected area. Similarly, the Pendeba Program was expanded rapidly throughout the QNNP and brought to the Four Great Rivers by government request. Through the expansion of the Pendeba Program, Future Generations has also succeeded in building partnerships with expanding networks of communities. Whether or not these communities are working together, as the Mission Statement suggests, to improve their lives and the lives of generations to come is uncertain. Too little information on the work of Pendebas and their communities exists.

Future Generations has also, through GIS training, enabled field-based research in Tibet, which is undertaken by local officials. This research will be used to inform conservation planners when designating the management zones of the future preserve. Initial surveys were also developed and conducted in the QNNP for

environmental and development conditions. In 2008, "Across the Tibetan Plateau" was published, which was written by Future Generations Robert Fleming and partner Liu Wulin and Dorje Tsering. The book is a description of the ecology of the far corners of Tibet and conservation efforts there. The book's content is based on years of field research and photographs by the authors. Various papers describing ecological conditions in Tibet, many written by Robert Fleming, have also been written and published on the Future Generations website.

Other research efforts, however, have met with government censure and condemnation. One study was undertaken in the QNNP, and because of the sensitive nature of the data (where indicators of human development are concerned, the government is always nervous), the results were never allowed to be published. Another survey to determine the effectiveness of the Pendeba Program in the QNNP resulted in Future Generations being prohibited from returning to the region. Largely for these reasons, research efforts have been stymied. In the last ten years, only X peer-reviewed articles have been published by Future Generations affiliates regarding Tibet.

### **Lessons Learned and Recommendations- CHINA**

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Future Generations has a long history in Tibet and can claim many great achievements. But since this case study should serve as an evaluation and an opportunity for a mid course correction, according to Step 7 in the Seed-Scale methodology, it is useful to discuss lessons learned and suggestions for improvement.

#### *1. Strengthen Documentation Practices*

The very act of writing this case study and attempting to tell the story of Future Generations in Tibet was dependent on finding information that has been collected in people's minds or on paper. In fact, the conclusions about our accomplishments and future directions can only be as insightful as the information we have access to. This information is useful not only for the case study, but for regular program evaluations, scientific research, publicity, and fundraising purposes. What has quickly become apparent during the writing of the case study is that documentation is absolutely necessary for a multitude of different purposes, but in its current form is absolutely insufficient.

Particularly from the early years, when the QNNP and the Pendeba Programs were in their infancy, documentation is abundant. Surveys, planning documents, scientific articles, and annual reports paint a clear picture of the trajectory of the programs. It is unclear whether there was an intention to document programs in a particular way, but the information does allow us to make clear statements about the conditions across the QNNP and the decisions, first the Woodlands Mountain Institute, and then Future Generations made. Over time, although annual Pendeba reports and training reports written by Nawang Gurung exist, it is clear that there was no formal system in place for reporting and that there are huge gaps in information that is vital to self-evaluation.

Community Development Director Nawang Singh Gurung has made valiant efforts throughout his time at Future Generations to document the Pendeba Program and the training sessions that he has run. His reports are informative and insightful, but there are two clear problems that would be very easy to solve that would enhance evaluation abilities:

1. Reports of all events (trainings, workshops, meetings, study tours, signing of agreements, etc.) should be standardized and include the following key information that has often been missing from reports:
  - a. Author and date written
  - b. Brief statement of purpose of event
  - c. Date(s) and duration of event
  - d. Location(s) of event
  - e. List of participants, including names, titles, and affiliation and community name if applicable
  - f. For Pendeba Program: indicate whether participants have received prior training and if so, how many times
  - g. Topics covered (f.e. course material in Pendeba trainings)
  - h. Outcomes
  - i. Future actions or workplans
  - j. Expenses
  - k. Conclusions
2. All documents should be backed up in multiple places, including in electronic and hard form, and should be accessible from at least the North Mountain and China offices. When Nawang's computer crashed a few years ago, vital information, including the comprehensive list of names of all Pendebas that have received training, was lost. So much of the narrative of Future Generations

programs should not be located in just one vulnerable place.

## *2. Establish Monitoring and Evaluation Procedures*

Monitoring progress is a key part of the Seed-Scale methodology. It is included as Step 7 in helping to bring programs to scale. The rationale for monitoring and evaluation has already been explained in detail in other places, so it doesn't bear repeating here. What is important to note is that Future Generations has never formalized a process for monitoring and evaluating our own programs in China. Evaluation workshops have taken place during Pendeba trainings over the years to teach Pendebas how to evaluate their own projects, and participatory evaluations of the Pendeba Program have been conducted sporadically, but these efforts have never become part of a formal process of our own operations.

As far back as 1997, in the Pendeba Program Report, the authors discuss the need for an enhanced information system: "Eventually when great progress is evident there will be interest in telling people from other places what has been achieved. If the data have not been gathered and analyzed appropriately it will be impossible to give convincing evidence showing what Pendebas have done."<sup>lxvi</sup>

In Nawang Gurung's Pendeba reports since 1999, he has also always recommended the establishment of a formal M&E system and a more robust system of reporting and information collection in order to enhance programs. Future Generations also attempted to allocate money to hire a person specifically for this purpose in a 2006 funding proposal, but the funding didn't come through and a formal M&E system still does not exist today.

Without proper reporting and M&E structures in place, Future Generations will continue to find fundraising difficult and will be unable to make necessary mid-course corrections.

## *3. Acknowledge the Role of the Top-down*

As one of the four principles of Seed-Scale, Future Generations has always cultivated relationships with local communities and with local governments. In Tibet, strong relationships with the Forestry Bureau and then with the Science and Technology Department have strengthened our position in Tibet. We have been able to marshal strong support for our initiatives and see them



quickly come to fruition with the help of the top-down government, especially in the creation of the QNNP and the Pendeba Program. With strong partnerships, we have seen that change can come quickly.

Just as strong partnerships foster rapid change, fraught partnerships inhibit change. Our story in Tibet proves this and it proves the correctness of including the three-way partnership as one of the four main principles of Seed-Scale. For reasons already discussed earlier in this report, relationships with the government in Tibet have soured and not only are we not allowed to send foreign staff into the TAR for much of the year, we are losing faith that our partners support our programs and are following through in our absence. Particularly in a place like Tibet, where permits are required and sometimes difficult obtain when the region is unstable or when you are not in the government's favor, it can be extremely difficult to continue to work on programs. Our own program history reflects this: when government relations are good, progress was swift; when relations are poor, progress comes to a standstill (as it is now).

The lesson here is that the top-down partnership is essential for real change and relationships with government must be taken very seriously. When relationships have encountered trouble, such as in 2006 in the QNNP and 2009 with STD, we must act quickly to either rectify the situation, seek out new government partners, or search for other avenues of financial support, such as the private ecotourism sector (potentially Norbu's Pendeba Society). Otherwise, we will not be able to provide the continuing support and encouragement that our community partners need.

#### 4. *Ensure Effective Agreements*

Similar to the lesson on the importance of top-down partnerships, it is vital to create sound agreements with all partners to ensure that program evolution is deliberate and in line with the programs goals. Because of vague terms of agreement, controversies have arisen over data collection, monitoring strategies, rights to permits, and general program strategies. Nawang Gurung, has advised in his reports that all agreements with governments must include the following parameters:

1. Project target area
2. Working strategy
3. Clear definition of partner's roles and responsibilities

4. Reporting obligations, particularly for government partners
5. Permit policies for foreign staff
6. Monitoring and evaluation processes
7. Ability to collect and analyze data from program areas
8. Budget allocation
9. Human resources

An agreement that is specific on all of the above points will reduce the likelihood of conflict with government and drift in program goals and strategies. Of particular importance here is reporting obligations. Future Generations presence in the field is inadequate to oversee all program developments, but the government is there perpetually, as are the Pendebas. Future Generations must be able to know what the government does in its absence, in order to bolster information systems and to grow confidence and trust in partners that they are properly implementing programs. The 2006 survey of QNNP Pendebas discovered that without Future Generations instigating work, entropy had set in. Government partners were not spending enough time or effort on the program to meet the needs of the hundreds of Pendebas across the preserve, proving that the program was not mature enough to survive without outside-in assistance. Only one training session has taken place in the QNNP since Future Generations was asked not to work in the region in 2006.<sup>lxvii</sup>

Future Generations must also ensure that the content of government-run training programs is the most relevant for the area in question. For example, in the Four Great Rivers region, government-led Pendeba trainings have been restricted to income generation techniques.<sup>lxviii</sup> In the Four Great Rivers, communities also need training in environmental conservation and need to understand the importance of protecting local forests and biodiversity. Otherwise, the ultimate goals of nature conservation will not be met.

#### *5. Follow the Steps for 'Self-Evaluation for Effective Decision-Making'*

Self-Evaluation for Effective Decision-Making, or SEED, is the process of communities and officials coming together to evaluate their situation and choose actions that will help them solve local problems. There are 9 tasks, as defined in Dr.'s Carl and Daniel Taylor book, *Just and Lasting Change*. These are:

1. Define the community
2. Simplify the options
3. Select key indicators
4. Select and train the assessment team
5. Gather and analyze the data
6. Set community-wide priorities
7. Casual analysis
8. Functional analysis
9. Role reallocation

Future Generations also strives to follow these tasks in all its own programs,<sup>7</sup> and in reports from the QNNP and the Pendeba Program,<sup>7</sup> evidence suggests that these steps were followed even when the Seed-Scale methodology had not yet been developed. When the focus shifted to the Four Great Rivers area, to scale up the Pendeba Program and to create a large-scale protected area, these steps were not followed according to the proper plan. The Pendeba Program continued as if it was still in the QNNP, and although the training structure changed according to different needs and capacity, there was never an official planning session, where partners came together to follow the first 8 steps of Seed. In other words, there was never the same level of consideration given to gathering and analyzing baseline data and setting community priorities.

Possibly as a result of this, the Pendeba Program has strayed in focus when Future Generations is absent as the government-run trainings concentrate on income generation. Income generation methods may be the proper course for the program, but the shift should have been deliberate. Any time a new geographic area or subject is incorporated into a program, the above 9 steps should be followed and a new set of goals established.

#### *6. Recognize the Importance of Research*

As a graduate school and a NGO, Future Generations seeks to conduct applied research on community-based approaches to development, conservation, and peace-building and initiate actions that promote community-based approaches to change. Research is part of Future Generations mission and it is essential to its role as a graduate school. In

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<sup>7</sup> See reports including: "The Qomolangma Nature Preserve of the Tibet Autonomous Region of China Annual Report," "Qomolangma Nature Preserve Project Annual Report 1991," and the report on the "Workshop to Design a Comprehensive Development program for Tibetan Villages in the QNP - February 6, 1995 - March 3, 1995."

*Just and Lasting Change* the authors suggest that one of the vital roles for experts, or the outside-in partner, is planning and research. Future Generations, as the outside-in expert, could: "conduct basic research to make... conceptual breakthroughs, develop more effective, more accurate assessment tools (particularly SEED key indicators) that communities can use to make their actions more sensitive to local conditions, and publish local successes...[including] systematizing yearly SEED data, aggregating it with other data, and bringing wider attention to local progress and successes."<sup>lxix</sup>

Future Generations, in pursuit of the above goals, has run into roadblocks set up by the government that have prevented staff from conducting surveys that might help indicate what program impacts have been. In light of this, the utmost efforts should be made in all future agreements with the government to allow for some form of data collection, even if it is simple community surveys.

Alternatively, if the private sector becomes the top-down partner, more aggressive steps to research conditions (environmental and human) should be taken. If these opportunities present themselves, Future Generations should encourage and take on scientifically vigorous research projects and when possible, publish peer reviewed research in order to spread awareness of achievements. It would also provide a strong foundation moving forward on fundraising and for enhanced legitimacy in the conservation and development sectors. Future Generations, as a provider of post-graduate education, has the capacity to undertake such research and the obligation to. In Future Generations literature review of community-based conservation for the Gordon and Betty Moore Foundation, the authors concluded that the evidence is favorable about community-based conservation as an effective conservation approach. But they write that there isn't enough documentation as to how to actually do community-based conservation: "Providing clarity for how to do community-based conservation arguably is the most important challenge in conservation after global climate change. Research is needed..."<sup>lxxx</sup>

Future Generations can and should be part of this search for prescriptive strategies for community-based conservation. Experiences thus far suggest that Seed-Scale is an effective methodology for conservation - through community development. More research is needed, however, if Seed-Scale is to become a widely used and acknowledged tool for conservation.

## *Seed-Scale Lessons*

Future Generations experience with Seed-Scale, recorded extensively in *Just and Lasting Change* and the soon to be published *Becoming Change*, suggests that Seed-Scale can be a highly effective and adaptable strategy for change. Achievements in Tibet also suggest that Seed-Scale is adaptable even to places with harsh environments and potentially difficult governments.<sup>1xxi</sup> Experience has proven that Seed-Scale principles are correct, in Tibet's case, particularly relating to the importance of the three-way partnership and ensuring an enabling environment. The Pendeba Program and nature preserve efforts in Tibet serve as good examples for what can happen when relationships with the government are productive and when they are stalled or even bad. Future Generations experience with Tibet argues that Seed-Scale is still a useful paradigm, but the following additions to the Seed-Scale handbook would enhance its effectiveness in areas with difficult governments and restrictions of data collection:

1. Provide further explanation on the role of the top-down partnership, which does not have to be solely with the local government. In Tibet, Norbu Tsering, a student of Future Generations Masters Program and now a staff member of Future Generations China is creating his own organization, called *The Pendeba Society*. The Society will build an eco-hotel and meeting center near the Nepal border and use the profits to fund the Pendeba Program, which Norbu will run in the QNNP. The hotel will also serve as a training center for Pendebas. This arrangement could be the future of the Pendeba Program in Tibet. Instead of depending on a fickle government, the program could rely on a steady stream of ecotourism revenue to fund itself and could function semi-autonomously. Elsewhere, private sector partnerships of other kinds could be key to sustainable community change programs.
2. As a means to measure the effectiveness of Seed-Scale overall and also as a way to measure impacts of a particular program, in places where collecting hard data is difficult, a community survey could be incorporated. This survey, as described above in *Suggested Indicators*, would be a useful part of any community-change program in general and would help evaluate the overall usefulness of Seed-Scale in particular.

## Conclusion - CHINA

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Tibet's conservation successes, which Future Generations has been privileged to be a part of, are remarkable. In 1985, when Dr. Taylor first began visiting the region, less than 1% of Tibet's territory was officially protected. Now, 24 years later more than 34% is protected or 41.26 million hectares in 20 nature reserves, 9 of which are national level reserves.<sup>lxxii</sup> Tibet's human and economic development has also seen great progress. In 2008, per capita GDP was 13,861 Yuan whereas in 1984 it was just 702 Yuan. This is still much lower than the aggregate GDP per capita for China in 2008, which was 22,698 Yuan, but it still represents a huge jump.<sup>lxxiii</sup> Large-scale government investment in industry and infrastructure are primarily responsible for this growth. As are growing industries like the tourism sector, spurred on by the completion of the Qinghai-Tibet railway. In 2008, over 2 million visitors from China and abroad visited Tibet: a number larger than all the tourists that came between 1980 and 1997 combined.<sup>lxxiv</sup> According to government statistics, life expectancy and infant mortality rates have also improved. In 2007, life expectancy was 67 years and infant mortality was only 2.45%.<sup>lxxv</sup>

Economic gains are impressive, but government commitments, coupled with the ideas and expertise of outside-in organizations, have produced particularly significant results in the conservation arena. Jimmy Carter wrote in his forward to *Across the Tibetan Plateau*: "I have learned that achievements like those that have occurred in Tibet are possible only when communities are involved. Experts and money alone do not lead to such change. The participation of the people is one of the most remarkable features about Tibet's conservation success."<sup>lxxvi</sup> Future Generations can rightly claim credit for helping to change the conservation paradigm in Tibet by bringing communities to the table. The organization's goals and methodologies complement the

needs and the conditions of Tibet and partnerships with government have paved the way for swift and impressive progress.

But the work is by no means complete. Successes achieved fifteen years in the past are no less impressive than when they occurred, but new action is required if the Tibet programs are to continue to be as innovative and path-breaking as they once were. In calling for the country program case studies, it is understood that in order to move forward, a proper understanding of the past must occur. It is hoped that the information provided here, as well as the lessons learned and recommendations, will invigorate program discussions and guide the program in new directions.

The first steps should include a re-evaluation of the Four Great Rivers programs, including discussions on our government partners, the current structure and capacity of the Pendeba Program, our available resources, and even the way we present our programs and discuss our successes with the greater community. We must also establish institutional structures, i.e. monitoring and evaluation, information sharing, reporting, filing, and designating indicators for each program, so that future efforts can be documented and analyzed. A serious discussion on the future of the Pendeba Program must also be initiated. What is arguably our greatest achievement in Tibet has floundered in recent years and has not been given the attention that it needs to ensure proper development and expansion. This discussion should consider where the need for Pendebas is greatest, where our ability to conduct the program is strongest, how to focus the program on specific and relevant themes and areas (i.e. climate change adaptation), and what we need to do to raise sufficient funds. Possible linkages with the Model Eco-Community Project could be discussed, as well as how Future Generations will collaborate with the forthcoming Pendeba Society in Shigatse.

These discussions must be concluded before a concerted effort to seek new funding is initiated. Determining new program objectives, creating organizational structures, and deciding how to write about and market our successes, will certainly put us on the right track in Tibet and will be a model to other Future Generations programs in China and across the world.

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