Pastoralism, Development, and the Future of Tibetan Rangelands: Experiences in the Development and Provision of Social Services and Environmental Management

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Introduction

In the heart of the vast Tibetan Plateau, the Yushu area is home to nearly 380,000 farmers, herders and town dwellers (2010 national census data). The three western counties of Yushu Tibetan Autonomous Prefecture – Qumalai, Zhiduo and Zaduo counties – jointly cover approx. 110,000 km^2 (excluding the Kekexili region, western Zhiduo county), which is about the area of Bulgaria or three times the size of Bhutan. Until recently, around 90 percent of the people were engaged in livestock husbandry and almost entirely dependent on the environmental resources in the source area, or headwaters, of the Yellow, Yangtze and Mekong rivers for their livelihood and well-being. Historically, the local people were organized largely along tribal and clan lineages with collaborative management of resources and traditional community support mechanisms. However, with the advent of the modern state over the past few decades, a variety of new forms of social service provision have been trialed – including medical, veterinary, educational and other services. Unfortunately, similar to what has occurred in many other arid pastoral regions of the world, central government generally has considered extension of such social services too problematic in the remoter parts of the country; and it has instead sought to relocate herders to new towns. We contend, however, that services can be provided even in very remote regions of the Tibetan Plateau – and that such social services can be provided cost-effectively and, moreover, in ways that do not require major cultural shifts or other significant changes in people's traditional/current livelihoods. It also has been assumed in many parts of the world that effective conservation requires either a *laissez-faire* approach to interaction with nature, best supported by the removal of local people from the so-called conservation equation; or a more active engagement in wildlife and habitat management, yet still with the assumption that 'ecology vs. economy' conflicts will lead to environmental degradation – and hence, once again, that the best way forward is to constrain or limit traditional land use practices. The recent establishment of large protected areas (nature reserves) in the plateau region risked moving in the same direction, but current trends are encouraging with the adoption of more people-friendly, collaborative management approaches. A more synchronized integration of the environment, economy, society and culture is suggested as a proper basis for 'sustainability' in the region.

In this chapter the authors summarize their key experiences, observations, concerns and insights, both as development practitioners and researchers from 1998 to the present, based on their involvement in the planning, execution, monitoring and regular (re)assessment of an "integrated development project" in a remote, high grassland area of Yushu Tibetan Autonomous Prefecture, Qinghai Province, China.

Project Background

The authors (project leaders) are an ecologist and conservation biologist (Foggin) and a consultant pediatrician specialized in community child health (Torrance-Foggin) from Canada and Scotland, respectively. The development project that provided the primary context in which they trialed rural-based, community-oriented approaches to the provision of critical social services and environmental protection initiatives in nomad (pastoralist) environments was developed incrementally over several years, becoming formally recognized in 2003 when the government of Zhiduo County invited them to begin the *Yangtze River Headwaters Sustainable Development Project*. This work was initially envisioned by the authors in concert with friend and colleague Zhaxi Duojie. Earlier in 1998, to assist in the planning and execution of their joint ideas, an international non-profit organization was established, Plateau Perspectives. Registered first in Canada, the organization is now also recognized in Scotland and China. Plateau Perspectives' mission is to promote community development and environmental protection in the Tibetan Plateau region. At a more local level the Upper Yangtze Organization (UYO), a grassroots NGO comprised mostly of Tibetan herders also was established in 1998.

Together, both organizations jointly carried out a variety of conservation- and development-oriented activities from 1998 to 2002. This was followed by the afore-mentioned 5-year collaborative project, begun in 2003. Throughout this first decade, the UYO – and hence also the high grassland region and local Tibetan communities of western Yushu – were made known (publicized) widely by Plateau Perspectives. For example, the UYO was introduced to the Biodiversity Working Group of the China Council for International Cooperation on Environment and Development (BWG/CCICED); national NGO Friends of Nature was invited to participate in the first environmental education workshop in the Tibetan Plateau region, co-hosted by UYO and Plateau Perspectives; and the provincial Environment Bureau learned of the organizations' partnership and long-term plans through a memorandum submitted to them for information, which later transitioned into a biodiversity conservation research and planning project supported by the UK Department of Environment Food and Rural Affairs (DEFRA). More can be read about these (and other) conservation and sustainable development initiatives in the region in Breivik (2007), Cyranoski (2005), Hao Xin (2008), McBeath and McBeath (2006), Morton (2007a, 2007b), Phillips (2009) among others.

Since 2006, support from the Government of Norway (Norwegian Agency for Development, NORAD) as well as several foundations and private donors has allowed us to broaden further our integrated development work, and thus to engage more directly with the *Sanjiangyuan* National Nature Reserve, on the one hand, and to expand our work into neighboring counties as well, on the other hand. This latter work, still on-going, has seen both the creation of a network of communities spread throughout the headwaters of the Yangtze and Mekong rivers interested to

participate in conservation and development; and the adoption by conservation authorities of a new approach to conservation, i.e. collaborative management (or co-management) with local communities of the area's ecological important grassland, wildlife and other natural resources.

Stepping back once again to the earlier phases of this integrated work, it should also be clarified that nearly every step taken – whether in the selection of broad directions or the organization of specific activities – has been, by choice, led primarily by local partners comprised of herder communities, local NGOs and government. That is, while Plateau Perspectives has brought expert advice, experience, and funding, it nonetheless also has sought from the beginning of its involvement in the area *to support local initiatives*; rather than simply to appropriate for itself local participation in support of its own (external) objectives. While this has meant that some project work may have been slower than desired (since activities should proceed at the speed of the community, rather than to be donor-driven), such an approach has increased the probability that project outcomes will be both sustainable and replicable.

In order to scale-up lessons learned in this work, Plateau Perspectives also has begun to engage regularly with academic institutions – serving as a bridge between practical field experience and research (policy) perspectives, and seeking also to promote and provide more specialist training to enhance future leaders' ability to understand and respond to the opportunities and challenges faced by local communities and government in the Tibetan Plateau region.

Tibetan Herders in a Globalizing World

As outlined in Foggin and Torrance (2011), there are at least three main 'contexts' that affect the lives of Tibetan herders: (1) local histories and traditional socio-cultural practices; (2) official policies on development and conservation; and (3) global and regional climate change. With regard to the first, it is important to remember that even while some adaptation is needed and recommended for people in all societies to more effectively engage with 'others' in a globalized world, there are still many valid reasons why local people and communities have adjusted their livelihoods over time to respond to the needs and constraints of their surrounding bio-physical environments. The tribal (group) management of natural resources that was practiced for centuries prior to the present, more individualistic form of resource use, for example, was a reflection of the extensive landscape used by wildlife through the different seasons, which required people (who practiced mainly hunting) to track and follow the wildlife through their seasonal movements. In more recent times, with the introduction of animal husbandry in the 1950s, the unit size for land management has decreased considerably, first with the introduction of cooperatives, then of communes, and finally with the introduction of a household-level management structure adopted from lowland farming areas of China (and applied across the country from 1985 onward, as the Household Responsibility System). Yet there remains (or remained until recently) in most herding communities a strong sense of community identity that goes well beyond village-level elections and recalls past tribal and clan affiliations. This has several important ramifications, especially in terms of decision-making processes and local leadership, on the one hand, and people's acceptance and adoption (or not) of possible alternatives or variations on current land use practices, on the other hand. Understanding history, and cultural backgrounds, is thus a very important factor to consider and incorporate into any policy- or development-intervention,

in order to increase their likelihood of successful adoption and implementation by community members (see Foggin 2000, 2005a).

Moving beyond traditional practices, another way that 'globalization' can affect communities is through policy, whether directed toward conservation or development outcomes. The reason is that, from a local perspective, national (even provincial) decisions are all 'external' and distinct from every-day life decisions that people have made for generations; and thus both the application and the effects of such policies can properly be attributed to a new and larger scale category of factors affecting people's lives – a form of globalization. The relative impact of such regional/national policies on Tibetan herders has increased rapidly over the past several decades in China with the expansion and integration of communication and transportation infrastructure as well as the promotion of regional/national development goals throughout the country (Foggin 2008). These include *inter alia* policies of ecological migration and collaborative management of natural resources (Foggin 2011a, 2011b).

A third factor affecting Tibetan herders, whether recognized by them or not, is climate change. As clearly illustrated in the documentary work of Asia Society (http://www.asiasociety.org/chinagreen), the environment is changing very rapidly in China – most rapidly in the Tibetan Plateau region. In addition, environmental/climatic changes on the plateau will affect not only local Tibetan herders and farmers, but indeed millions of people downstream. With numerous major Asian rivers arising on the plateau, nearly 40 percent of the world's population now depends on, or is influenced by, the state of the environment on the Tibetan Plateau (Foggin 2008). Local herders' decisions and national policy decisions are thus interlinked – reflecting the increasingly integrated and globalized world we live in. Zhao (2009) further explains the global significance of the plateau region: "Meteorological scientists warn that the changes in heat composition and air pressure over the Tibetan Plateau may have implications beyond Asia's river basins, as shifting dynamics of the atmospheric circulatory system over the plateau could change wind and monsoon patterns across much of the world. There is still yet no model to predict what will happen, but there's plenty of evidence to warrant immediate action to avoid a crisis that would imperil billions of people across Asia." In more specific terms, the rapid melting of glaciers, changing rainfall/snowfall patterns, decreased flow of rivers, etc. – all point toward an uncertain future.

Overview of the 'Yushu Integrated Development Project'

From the outset of our work in Zhiduo County (and more widely in Yushu Tibetan Autonomous Prefecture), in order to determine how best to assist local herder communities improve their quality of life, we carried out a needs assessment followed by a prioritization of possible development interventions in coordination with local colleagues, both individuals and organizations. Over a period of two years we listened to the community and discussed their beliefs, hopes and aspirations. At one point, we were in daily discussion with a local expert, Zhaxi Duojie, for three consecutive months – seeking to verify and/or counter, as necessary, any preconceived notion or perception we had, based on the situation as explained to us by the afore-mentioned community member and leader. We also carried out a formal household-based survey in a remote community (focused primarily on people's health; see Foggin et al. 2006) in cooperation with the Upper Yangtze Organization and the prefecture health bureau. Over time, project direction was further

refined based on the outcome of focus group discussions, which targeted both rural health care and natural resource management practices in the project area.

Of all possible areas of assistance – divided broadly into three categories: community health, education, and environmental protection – we consistently were requested to focus first on people's health, with most immediate benefits; followed by education, with its longer-term generational outlook; followed by environmental protection including education, awareness and conservation-oriented capacity building, all intuitively recognized as important but with less apparent direct or immediate impact on daily life.

Permissions to collaborate with local partners on such a comprehensive program came first from the county government and prefecture foreign affairs office. More recently, we also have built collaborations with nature reserve authorities (administered under the provincial forest bureau), the provincial bureau of industry and commerce, the provincial academy of social sciences, and two provincial universities.

Project Goals

With numerous changes affecting (or potentially affecting) the lives of Tibetan herders – not least policies and programs encouraging people to move away from a grassland-based livelihood and into new towns – a new theme, indeed a new goal or purpose, of our integrated development project also began to emerge. Not only were the provision of social services and advances in conservation important project goals, but now also the tangible *demonstration* that (a) local herders can live sustainably on the land, not harming the natural environment (and indeed, even assisting and promoting conservation), and (b) they can receive good services, including health care and education, without the need to relocate away from their traditional homes in grassland areas. Such demonstration is the main focus of this paper – namely, to describe (and thus to demonstrate) how social services, particularly in health and education, have been developed over the past decade cost-effectively and with the support of the government in rural herder communities; and also to describe how local people have become critical partners in efforts to conserve biodiversity and the ecologically important grasslands and wetlands in the largest conservation area (i.e. the Suojia-Qumahe area) of the *Sanjiangyuan* National Nature Reserve, in Yushu Tibetan Autonomous Prefecture, Qinghai Province, China.

Project Interventions

The key development interventions analyzed in this chapter are efforts (1) to improve both access and quality of education and health services for rural communities, and (2) to enhance cooperation and mutual assistance between government conservation authorities and communities, such that both parties may benefit from such cooperation. Through this process, it also is hoped that local herders may be increasingly recognized for their positive contributions to national environmental goals, rather than as harmful for the environment as often (wrongly) assumed. More extensive background about the following community projects and activities can be found in Foggin (2005a).

Basic Education

In the two separate cases in which village education was supported, one succeeded and one (temporarily) failed. In the first instance, local people at first did not particularly value education, wondering how it would contribute to the betterment of their own or their children's future. They were, after all, "only nomads". However, after 12–18 months of discussion and debate within the community, supported and encouraged by Zhaxi Duojie and the Plateau Perspectives team, the community began to shift … and soon they considered that it would be best if they could begin to produce "their own leaders". Thus greater value was recognized in obtaining more formal education, even if generational in timeframe. For the first few years, a tent-school was operated, which moved several times as community members tried to agree on a good central location. Long discussions were held, often lasting well into the night. But the final outcome is that the school is indeed theirs, not an externally or foreign-owned enterprise. A need for change was thus noted, and by spending sufficient time to let the community make its own decision the village school remained operational for a decade, a community-owned and -operated venture.

In contrast, in another village in the project area, although the community began along the same road, their sense of ownership disintegrated when their school project was co-opted by a higher-level bureau together with another foreign organization. Even the colloquial name of the school quickly changed, from being the village's own school to "the foreign organization's school". With such change in perceived ownership, local community support eroded – leading to fewer and fewer families sending their children to the school. Only when the school was eventually left to operate largely on its own did it begin to regain its sense of independence, also community pride, and equally greater local initiative in its operation and maintenance.[1]

An insightful video made by local members of Muqu herder community (facilitated by NGO Insight, with Plateau Perspectives and the Upper Yangtze Organization) can be seen at http://www.insightshare.org/video_ladakh.html. The video presentation exhibits both hope and despair. Most important, though – similar to the process of planning and establishing a local school – in the process of creating the 'participatory video', the local people were given greater voice, and thus increased their involvement in development dialogue and the overall decision-making process.

Community Health

Regarding the provision of health care services, Foggin et al. (2009) present the project's interventions as follows:

"Village doctor training
Given the trust in the local doctors [we trained] the village doctors to diagnose and treat common conditions and to have a good understanding of medicines (including their side effects) in order to improve health care and avoid inappropriate use of medication.

1 Education policy changed dramatically in 2008, leading to a closure of all village-level schools in the county, in favor of more centralized education measures. See Shamo Thar, this volume. However, at least one person from the first cohort of students to attend the tent-school in 1999 began his university studies at Qinghai Normal University in 2011.

The training also includes: methodologies to help enable communities to seek ways to improve their health; disease prevention targeting the commonest illnesses, the most serious preventable diseases and the uptake of immunizations; training in immunization, including the development of a good understanding of their purpose, their administration and the cold chain; woman and child health including the early detection and management of problems in pregnancy and delivery.

Given the large number of households who have recently contacted their village doctor (which indicates that some do have access to, and use, the services of the local doctor), the main starting point for training purposes needs to be these doctors whom they see on a regular basis. As many of these doctors do have experience assisting women in delivery and pregnancy, it is important that they receive further training to improve the quality of their care and allow them to detect difficulties early. However, as they are men, in the framework of strict (limited) gender relations within the Tibetan nomad cultural context they tend only to be called upon if problems arise, and this almost always later on in the process. Women express a desire for female health care workers to assist in pregnancy."

"Training of women's health workers

Furthermore, in response to a request from the county health bureau, young women were gathered from every village to come for training in women's health work (around 25 women in Zhiduo county and 15 women in Zaduo county). The training modules were given by two doctors and a midwife. The students enjoyed the course, participated well (e.g. writing health songs and engaging in role play) and made considerable progress in terms of knowledge and skills gained over the course of the two-week teaching workshops. Some of these women were invited to the village meetings (usually only attended by men) to give training in health and hygiene. Further training of these women's health workers has been requested and there is still a great need to train some women to a higher level of competence. However, the women who have been trained will be the vanguard of a new kind of health worker in the county, perhaps more attuned to the needs of MCH [mothers' and children's health], and particularly of women in general."

"Establishment of village clinics and the introduction of a health insurance scheme

When the initial request came to assist in the construction of clinics, the first main question asked was how this would improve the health of the community or even the quality of health provision. However, both the community leaders and the health bureau leaders put forward strong arguments:

(1) The health bureau leader explained that for most people and for most conditions, the county hospital and township clinics were inaccessible. The most accessible level is that of the higher village level (*dadui*). Here local leaders appoint the best trained doctor from each area, and pay him a salary such that he could always be available. With the construction of a clinic building the health bureau would be able to administer a government health insurance scheme. They would also be able to store, administer and keep track of medicines. It should be noted that, currently, many local village doctors give out medicine from their own pockets, given the fact that the patients are either close friends or relatives and, consequently, it is difficult to ask for payment. A well-organized local clinic should enable them to overcome this problem.

(2) The community leaders agreed with the above and added that the clinics would provide a center for the community. They also offered that a village committee would organize the purchase and selling of medicine so that the doctor's prescribing practices would be unaffected by this. The doctor would have no direct personal gain from the sale of medicine. The clinic could also provide beds for the more seriously ill who had travelled further from home.
(3) In addition to this, the administration of immunizations has been made possible from these centers.

The health bureau and the village (*dadui*) communities have consistently appointed the best doctors from the training courses. They have continued to run these clinics in such a way as to leave the doctors free to see patients. Furthermore, some of the communities have set the women's health workers up within these clinics such that they can go out to work from these health centers, while having back-up and support from the village doctors. These clinics have proved more successful than even Plateau Perspectives had predicted. With such community support behind them and with the backing of the health bureau, the clinics are being run well. By adding a very small increase to the price of medicine (to pay for the transport of the medicine and the operating costs of the clinic) village leaders are running the clinics at no loss and utilization rates are high. Many of the village doctors are highly motivated and invest a lot into improving the health of the people who come from the community."

Over the past two years, however, a significant new feature has emerged in the socio-cultural landscape – the movement of a large proportion of local communities to towns, driven largely by national ecological migration policy. This has included many village doctors previously trained and employed in the countryside. It also is leading to new physical (and psychological) health challenges. With possibly one-third of herders in some parts of the province now "off the land," the observed recent flow of people to towns might begin to slow down, but many of the challenges will remain (see Foggin 2011a).

Environmental Protection

Regarding conservation-oriented project activities, our main goal has been twofold: to demonstrate the positive contribution that can be made by local herders for the protection of endangered wildlife species, and to help mitigate the increasingly serious human-wildlife conflict occurring in the area. The former seeks to change people's attitudes about local herders, including attitudes of policy makers and other decision-makers. The latter seeks to minimize financial losses for herders, on the one hand, and to avoid a potential erosion of local people's support for conservation initiatives, on the other hand. A current example of increasing human-wildlife conflict is given in Worthy and Foggin (2008).

Specifically, the authors (and Plateau Perspectives) have worked with the *Sanjiangyuan* National Nature Reserve since 2005 to introduce and develop a new, more people-oriented approach to management, namely "community co-management of natural resources" (Foggin 2005b). Through this approach, a team of local herders has been strengthened throughout the project area, with their key responsibilities ranging from raising local people's awareness about

conservation, including functions at local gatherings such as annual festivals and input given to local teachers and school children; to anti-poaching patrols; to seasonal monitoring of the population of several wildlife species including Tibetan wild ass, wild yak, snow leopard, and black-necked crane. Training workshops also have been organized to assist with monitoring protocols and species identification (e.g. bird identification in the Tsozhoton wetland). Outdoor clothing, binoculars, cameras and ID badges (to provide the wardens with proper authority to carry out agreed duties) have been provided, as well as shared use of a project vehicle. An educational outreach center has been built, adjacent to the Suojia Environmental Protection Station; and an environmental training and research center also has been built in the Muqu mountainous area, near the village school and clinic equally supported by Plateau Perspectives. All of these inputs and activities over the past few years are now seen to have laid a solid foundation for genuine cooperation between local communities, government, and external agencies (which can provide expertise, facilitation, and/or funding) – and thus the project has helped to promote more sustainable practices in natural resource management including wildlife protection, as well as increase the likelihood that local communities shall at least in part be allowed to continue living in their home areas.

Discussion

One of the over-arching themes of the authors' work has been to help give local people greater voice, and hence greater opportunity to be involved in the decision-making processes affecting their lives. Local people are part of the solution, not the problem… yet this is not always recognized (see Foggin 2008). The project work that has been described briefly herein has contributed to increased sustainability in the region, through adoption of a development approach that supports integration of people and place, development and conservation, co-management of natural resources (between communities and government). The project also has worked closely with a large number of administrative levels and sought to promote collaboration between different agencies or bureaus. All of these factors help to promote sustainability, as more stakeholders are involved in the process of sustainable development and implementation of activities (see Foggin and Phillips 2013).

In addition, as within the context of climate change discussions, to date most development dialogue and interventions focus on mitigation of impacts, with less time effort or investment given to the area of adaptation to change, whether natural or anthropogenic, especially in grassland areas (Tennigkeit and Wilkes 2008). In a clearly globalizing world, adaptation (and development of one's ability to adapt) will be critical to the future – for individuals and communities, all the way to the national and global scales. As discussed at length during the LEAD International Session in Beijing in November 2009, there are several broad categories of adaptation-oriented interventions that can (and should) be included in development programs – and over the past few years, at least the following five categories have been incorporated, both directly or indirectly, in our project work: (1) integrated natural resource management, (2) incorporation of traditional wisdom, (3) poverty alleviation, (4) preservation and restoration of ecosystems, including ecological services, and (5) regional cooperation for planning and decision-making. When such integrative approaches are well integrated into project design and implementation, the overall

resilience of the human-environment system is maintained, allowing communities and society as a whole to adapt more effectively to the increasingly rapid changes now occurring all around us. For Tibetan pastoralists, if and when they are given a chance to participate in both conservation and development, to share some of their experience of living in the ecologically valuable (and vulnerable) headwaters of China's great rivers, and to participate in decision-making processes through co-management, there is enhanced opportunity to achieve sustainability in the rural grassland areas of the Tibetan Plateau.

Postscript

The Tibetan Plateau region continues to develop and change rapidly, both as a result of climate as well as human (e.g. policy) induced changes. Tibetan herders' livelihoods will always depend on natural resources, yet some level of diversification of socioeconomic strategies and empowerment can help people and communities to adapt to change and become more resilient to external pressures. Following the major earthquake that devastated Yushu in April 2010, Plateau Perspectives was requested to help strengthen provision of health care in the region with development of rehabilitation services, which was promoted with the active involvement of people with disabilities. Other sectors such as tourism and affiliated service industries also have been promoted in recent years with an increasing involvement of local enterprises.

Within the project area, the Kegawa Herders Cooperative is a particularly promising example of community-owned and -driven entrepreneurship, with ventures in 'ecological animal husbandry' (as promoted by the government), handicrafts development and community ecotourism (Foggin 2016). The cooperative also carries out environmental monitoring, to ensure its activities do not harm the grassland resources and demonstrate ecological sustainability – an approach that could help position the group in the future to request eco-compensation funds for its contributions to maintaining ecosystem services in Tibetan rangelands.

National recognition of the ecological value of the *Sanjiangyuan* region is increasing as well, especially as climate change threatens the region's role as 'water tower' for a large portion of the world's population. With primary aim to protect biodiversity and ecological services, protected areas are amongst the most important tools available for societies to adapt to climate change. For this reason, a central part of the *Sanjiangyuan* National Nature Reserve is now being upgraded to National Park status. However, unlike many parks globally, one herder from each family will be hired as a salaried ranger. The region's prior experience with co-management for conservation will have contributed significantly to this decision (see Foggin 2012), as it is already recognized that communities are best welcomed as partners rather than adversaries. The important role of small-scale farmers and pastoralists for conservation of vast arid landscapes of the world and for global food security also is highlighted in Hodges et al. (2014). In the long run, a key to sustainable development will be to ensure that the full range of members of society, including pastoralists, can participate in planning and decision-making processes, and have access to and derive benefit from the rangeland's ecosystem services and biodiversity.

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