6

Highland encounters: Building new partnerships for conservation and sustainable development in the Yangtze River headwaters, the heart of the Tibetan plateau, China

J. Marc Foggin

Introduction

Tibetan pastoralists have lived in the alpine grasslands of the Tibetan plateau for thousands of years. Living close to the land and dependent on the health of grassland ecosystems for their livelihood and well-being, these pastoralists have unique first-hand knowledge of the natural environment (Ekvall 1968; Foggin 2000; Goldstein and Beall 1990; Miller 1995; Wu 1997). Yet, as with many pastoralists worldwide, they have often been marginalized by government planners and development workers alike and their particular needs, concerns and aspirations, as well as their traditional land management practices and environmental knowledge, have been ignored (Bennett 1988; Blench 2001; Galaty and Johnson 1990; Humphrey and Sneath 1996; Loomis 1988; Miller 2000). In an attempt to help redress this situation, I have for many years now investigated how Tibetan herders value and use their natural resources, and how one community in particular, Suojia (pronounced Swo-jya), has worked to conserve grassland biodiversity for future generations.¹ Central to this complex endeavour are the multifaceted notions of community participation, local ownership of projects and activities, and the building of long-lasting partnerships for conservation (Berkes and Folke 1998; Bernard and Young 1997; Brown 2002; Ghai and Vivian 1992; Salafsky and Wollenberg 2000; Stevens 1997; Taylor-Ide and Taylor 2002).

This chapter focuses on the specific efforts in Suojia to protect the native biodiversity of the Tibetan plateau. Two main questions are asked:

- In what circumstances did the community initiate its forward-looking conservation work?
- What features of the community, or of its key individuals, have contributed most to their initial success?

In answering these questions, it is hoped that further insight will be provided into the nature of grassroots conservation in general and the character of innovative communities in particular.

I attempt to answer these questions by first reviewing the regional context and background of the environmental work undertaken by the people of Suojia and providing a description of the project area. This is followed by a brief history of the Upper Yangtze Organization (UYO) and a review of its relationships with several national and international partner institutions. This grassroots organization played the lead role in the nature conservation and sustainable development initiatives undertaken in the Suojia community. I then highlight some of the key innovative features of this community. Finally, a postscript will shed light on several important developments that are still unfolding in the project area.

Regional context and background

The Suojia community is composed almost exclusively of Tibetan pastoralists in the headwaters area of the Yangtze River, in south-west Qinghai Province, near the centre of the Tibetan plateau (see Figure 6.1). For residents of one of the harshest environments on Earth, who depend on grassland resources for their survival, the state of the environment is a matter of significant concern. At the same time, however, policy decisions made in distant Beijing, whether on grassland laws, market integration, infrastructure development or the establishment of national nature reserves, also have a significant impact on the community – sometimes with dire consequences. For this reason, it is important to consider a wide variety of perspectives in order properly to understand the circumstances and key elements of the conservation work carried out in Suojia. The rest of this section provides an overview of various environmental and developmental initiatives undertaken at national and provincial levels that have affected Suojia both directly and indirectly.

Although a large part of the population in Asia lives in urban settings, there are also vast regions of the continent that have relatively low population densities. This is most marked in China, where 95 per cent of the people live in only 45 per cent of the country's land area, and where over 50 per cent of the land is used primarily for extensive pastoralism (MOFA 2000; Xie 2000; Zhao 1994). Furthermore, many of the ecosystems in the sparsely inhabited regions of western China are threatened



Figure 6.1 The location of the Suojia community in the People's Republic of China. *Source:* J. Marc Foggin.

with land degradation and loss of biodiversity (BWG/CCICED 2001: Edmonds 1994; He 1991; SEPA 2001; Smil 1993; Zhang 1998). This means that, although the human population is relatively small in such areas, the areas face serious environmental problems that affect not only the local

people but also the millions more living downstream.

China is specifically composed of three major geographical regions: the Tibetan plateau, the Arid Northwest and Eastern Monsoon China (see Figure 6.1). The focus of this chapter is the Tibetan plateau, which accounts for roughly 25 per cent of the country's land area. Owing to its high altitude, which is on average over 4,000 metres above sea level, temperatures on the plateau are low. Permafrost is widespread, solar radiation is intense and high winds are frequent. Five of the world's largest rivers originate on the Tibetan plateau: the Brahmaputra, Salween, Mekong, Yangtze and Yellow rivers.

Although Suojia is located in the heart of the Tibetan plateau, its people are affected by many external factors. Because China is home to around one-quarter of the world's population, its primary concern is still to provide for the basic needs of the majority of its population. However, the uneven distribution of people and resources (for example, the Tibetan plateau has rich natural capital including oil, natural gas, precious minerals, hydropower and vast grasslands, but it comprises less than 1 per cent of the country's total population) means that these national priorities do not necessarily reflect the needs or particularities of remote mountain areas. Fortunately, however, many national leaders have come to recognize the importance of environmental protection, and the concepts of sustainable development and community participation have become fully ensconced in the country's development rhetoric. They are evident, for example, in the nation's current and most comprehensive drive toward modernization to date: the Western Development Strategy (WDS).

The WDS, which has been renamed by some scholars as China's "Go West" Campaign (e.g. Economy 2002), seeks, in particular, to address the needs of the ethnic minority people in China's vast hinterland, as well as the growing and evolving needs of the much larger population in the east. At the same time, the WDS has as its goal the protection of the environment for the benefit of future generations. In grand terms the WDS is very commendable. Yet its potential to benefit rural communities (what it means to the Tibetan herders of Suojia, for example) is questionable. Although most international agencies understand that the WDS is meant to include not only large-scale infrastructure development projects (or mega-projects) but also social development projects, actual funding almost exclusively targets the former. Some of the largest projects of the WDS include:

- construction of the Golmud–Lhasa railway;
- construction of a 3,000 km west-to-east gas pipeline;
- a colossal south-to-north water diversion project;
- the relocation/resettlement of millions of people in connection with these and other development projects.

These activities are likely to have several impacts on the community of Suojia; for example:

- the railway will bring new immigrants to the area and generally open the region to all sorts of new enterprises (but with the risk of excluding local communities);
- costly state projects will shift funds away from the provision of essential social services;
- serious disturbance to the natural flow of the Yangtze and Yellow rivers will disrupt their ecological balance; and
- relocation and sedentarization projects will bring about dramatic socioeconomic and demographic changes in the region, together with equally insidious ecological problems arising from the sedentarization of pastoral populations.

Although the WDS has also generated some environmental initiatives, these too appear to be mostly mega-projects that rarely engage with local people. These projects may not provide direct benefits to the communities and they may still prove to be associated with as yet unknown pitfalls. Almost all mega-projects carried out around the world have been ill fated and it remains to be seen if there will be a different outcome in China.

Provincial initiatives

Qinghai Province is the second administrative level at which major decisions affecting the people of Suojia are made. As part of its bid to participate in and access the national funding available for the development of China's western regions, the province has also proposed several large initiatives. Noting in particular its unique position as the source of three great rivers – the Yangtze, Yellow and Mekong rivers² (see Figure 6.1) – the province has concentrated primarily on projects framed as "ecological construction" work. So-called environmental projects include, among other things, the extraction of mineral resources; ecotourism development; the "modernization" of pastoral practices (i.e. the abandonment of traditional grazing methods); and the restoration of arid lands via the wide-scale introduction of a woody shrub, *Atriplex canescens*, and other species as part of a national programme to restore degraded land. The most prominent environmental initiative has been the establishment of China's newest protected area, the Sanjiangyuan Nature Reserve (SNR).

Qinghai Province also continues to forge ahead with its poverty alleviation programme, which aims to provide herders with permanent homes, livestock shelters, grassland fencing and winter forage for their domestic animals. Although such plans may give rise to some benefits (e.g. improved living conditions), the long-term benefits are not guaranteed. International development experience has in fact shown repeated failure in both human and environmental terms – from Morocco to Mongolia – in programmes that aim to promote sedentary lifestyles in pastoral or grassland systems (see, for example, Barfield 1993; Blench 2001; Ellis and Swift 1988; Galaty and Johnson 1990; Humphrey and Sneath 1996; Swift et al. 1990; Williams 1996).

Sanjiangyuan Nature Reserve

The Sanjiangyuan Nature Reserve (SNR), in which much of Suojia now unexpectedly finds itself, is one of the country's most publicized attempts to protect the fragile ecology of the upper reaches of the Yangtze River. The SNR aims specifically to conserve Tibetan biodiversity, especially



Figure 6.2 Qinghai Province and the Sanjiangyuan Region. *Source:* J. Marc Foggin.

wetland habitat, and to enhance and sustain the livelihood and well-being of local people. With between 15 and 49 per cent of the water flow for the Yangtze, Yellow and Mekong rivers originating in the Sanjiangyuan region (see Figure 6.2), the SNR is extremely valuable not only for local communities but also for the entire nation. The SNR is divided into three main management zones: core zones for wildlife protection, buffer zones where limited animal husbandry can continue, and a large research area (China Green Times 2003). As a provincial project, the SNR initially included the entire Sanjiangyuan region, comprising 18 counties in southern Qinghai Province with a land area of 318,000 km², or 44 per cent of the provincial area. In January 2003, however, the SNR was upgraded to a national-level nature reserve and it now encompasses only 152,300 km² – with an estimated price tag of US\$307 million (Xinhua News Agency 2003a). Although the delineation of management zones has yet to be finalized, it appears that Suojia is now included partly in the reserve's largest core zone and partly in an adjacent buffer zone. Only time will tell the ways in which local herders will benefit (or not) from the establishment of this reserve.

Each of the above frames of reference, whether it be the national or provincial perspectives on land management issues or the question of the newly established nature reserve, points to the complexity of decisions and their impacts on the Suojia community. How these initiatives will ultimately influence the future of conservation efforts by the Suojia people remains to be seen.

The environment and people of Suojia

The Yangtze River headwaters consist of several habitat types. Alpine and swamp meadows, which comprise mainly Kobresia sedges, provide the best forage for domestic animals. The arid steppe, covered with grasses and a variety of forbs, also provides some forage for livestock, especially horses. Among the wild ungulates, Tibetan gazelle, wild ass, blue sheep and, in lesser numbers, Tibetan antelope, wild yak, argali and white-lipped deer all make their home in Suojia's wide plains and gently rolling hills. Other mammals include large carnivores such as the wolf, Tibetan sand fox, snow leopard, Pallas' cat and brown bear, and a variety of smaller mammals such as Himalayan marmot, Tibetan hare, zokor and plateau pika (see Foggin 2000; Schaller 1998; Smith and Foggin 1999). Likewise, many birds are common even in the heart of the plateau, including many raptors (such as the Himalayan griffon, bearded vulture or lammergeyer, golden eagle, upland buzzard, saker falcon), game birds (e.g. Tibetan snowcock), passerines (e.g. snow finches, rose finches, accentors, larks) and others (see Foggin 2000; Lai and Smith 2003). The internationally endangered black-necked crane is particularly noteworthy, too, because it is found in relatively large numbers in Suojia's wetlands.

Environmental conditions on the Tibetan plateau are generally too severe for agriculture and are favourable only for pastoralism. It should be noted that the Tibetan rangelands developed over millennia under longterm grazing pressure by wild ungulates. Historically, until the early 1960s, several semi-nomadic hunting tribes lived in the region. Animal husbandry was introduced to the area as a new way of life with the establishment of the Suojia Commune in 1972. As one elderly woman in the Suojia community (interviewed in July 1998) recollects:

[&]quot;I'm now 78 years old. When I was around 2 or 3 years old [c. 1920], my father came here with me to hunt wildlife because our family was poor. We weren't nomads but hunters. I don't remember exactly where we lived, but we joined a group of 20 people and we lived and hunted together ... Many years later I moved back to this same place, this time with my own family. That was when Suojia was established [around 1972]. We now live in the fourth brigade [village], Muqu, the last one to be established. Nobody wanted to move here because it's much too cold, but we didn't have any choice. So now this is my home again."³

A quarter of a century later, and three-quarters of a century after her first arrival as a child, this woman still lives close to the land. Every day she collects water from a spring and her daughter-in-law and granddaughters milk the yak and undertake many other daily chores. Her grandsons herd the yak, and her son oversees heavier chores around the tent. Although wildlife is scarcer now than in the past, old wild yak horns are still used as milk pails, antelope horns are used to soften leather and gazelle horns are used to pull yak hair (instead of cutting it), in order to make better-quality rope. Despite the similarities of yesterday and today, many aspects of local livelihoods, and especially the local environment, are changing. For example, the stream that used to run next to the old woman's tent dried up around 1990, and the spring itself dried in 1995. Grassland vegetation composition is also changing, owing in part to regional climatic changes and in part to unsustainable grazing practices and severe soil erosion.

Today, unlike in the past when people hunted and migrated by following wildlife throughout the year, the people in Suojia now manage their own land and over 95 per cent of them herd livestock, mostly sheep and yak. In its basic form, pastoralism consists of several seasonal moves between summer and winter pastures within each family's parcel of land. Some of these herders seek to manage their rangeland in sustainable ways, moving livestock conscientiously from one pasture to another and culling animals in the autumn. Others, however, seek only to feed their livestock for the day and they give little forethought to the longer-term ecological consequences of their actions.

The government is currently introducing new policies that seek to sedentarize the people by providing them with winter homes, livestock shelters and grassland fencing (Richard 2000). Although these policies are aimed at protecting the grassland, it is likely that in many cases they may instead cause further harm to the environment. In fact, when mobility is removed from the grazing systems, as is now being encouraged in most pastoral areas in China, there is an increased risk of grassland degradation, which can result in large-scale environmental and human disasters. The concept of "ecological refugees" has already been used for herders in some parts of the Qinghai Province.

Another major environmental issue faced in Suojia is the decrease in numbers of wildlife as a result of illegal hunting. When gold was discovered in 1984 in the Kekexili desert (see Figure 6.2) – a large uninhabited area north-west of Suojia – nearly 30,000 prospectors made their way into a wilderness that had previously remained largely untouched by humans. Soon after, not only were thousands of people engaged in illegal mining, they also began to hunt Tibetan antelope, wild yak, snow leopard and many other endangered species. At first the poachers hunted only in winter when the ground was frozen and more suitable for vehicle transport.



Figure 6.3 Community-based protected areas in Suojia. *Note*: Six community-initiated protected areas (PAs) have been established in total, five to protect key focal species (as indicated on the map) and one to protect an important wetland habitat (in Yaqu village, but not clearly delineated). *Source*: J. Marc Foggin.

However, particularly as the trade in *shatoosh* (fine Tibetan antelope hair) grew, poachers began to hunt in the summer as well, when female antelope gather in large flocks en route to and from their remote birthing grounds. As a result, by the mid-1980s the decrease in wildlife was one of the major environmental problems facing the Suojia community.

Around 4,000 people currently live in Suojia, divided among four village-level administrative units: Muqu, Yaqu, Jiongqu and Dangqu villages (see Figure 6.3). Each village is further divided into subunits comprising 30–50 households. In terms of the socio-economic development of Suojia, few people have had even basic education and over 95 per cent of women are illiterate. The average household income is relatively low and the quality of people's health, especially that of women and children, is extremely poor.⁴

Development of the Upper Yangtze Organization

One of the main features contributing to the success of environmental management initiatives in the Suojia community is active community participation. This is augmented by enhanced communication among

the herders themselves, between herders and the government, and between herders (or community representatives) and international nongovernmental organizations (NGOs). Improved community participation and communication, particularly in recent years, has been enabled by progressive leadership in township, county and prefecture government⁵ and also in the Upper Yangtze Organization (UYO). The UYO is a grassroots NGO that was established in Zhiduo County in 1998. The UYO has played a critical role in the environmental work conducted in Suojia, both as a designated community representative and as an advocate for culturally appropriate and sustainable change. In particular, the UYO has proven itself to be uniquely able to listen to the people and to mobilize them, and also to liaise effectively with regional planners and government decision makers. In the rest of this section I describe the history and main initiatives undertaken by the UYO. The descriptions and analysis will lend understanding of what has enabled the Suojia community to be successful in carrying out its environmental management work.

Creating the vision

The beginning of environmental protection work in Suojia can largely be traced to the vision and initiative of Sonam Dorje, a local community leader in the 1980s and early 1990s – officially as township leader and later as county vice-governor. Sonam dreamed of protecting Suojia's wildlife because he recognized an intrinsic aesthetic and cultural value in biodiversity, in addition to its economic value. Although he was clearly concerned for his people, what set him apart from his colleagues was his appreciation of nature.

In the mid-1980s, Sonam Dorje first ventured into the Kekexili desert, initially to protect the area's mineral resources from illegal gold miners who had descended upon the area, but also to determine whether these resources could be exploited to meet the financial needs of the county government. As the level of illegal poaching increased, Sonam's understanding of the environment became much broader and more holistic. To him, the wildlife gradually became a resource that was also worth protecting, and he came to consider the native biodiversity of the Tibetan plateau to be a resource that was even more valuable than gold itself.

According to China's first NGO, Friends of Nature, Sonam had made a dozen trips in the Kekexili with the Wild Yak Brigade, a semi-official anti-poaching patrol, and they captured illegal hunters on eight occasions. In November 1994, when they came upon 18 poachers with around 2,000 Tibetan antelope skins in their possession, a gun battle ensued and Sonam was killed. He was 40 years old.

The mission to protect wildlife was then taken up by his brother-in-law,

Zhaba Dorje. In Zhaba's four years with the Wild Yak Brigade, 250 suspected poachers were arrested, and 60 guns, 10,000 rounds of ammunition, 57 vehicles and 3,717 skins and pelts of various endangered animals were confiscated. To achieve this, the Wild Yak Brigade had only the simplest equipment – fewer than 10 rifles, all borrowed, and 3 old jeeps. The patrol ate and slept outdoors, climbed over glaciers and waited out poachers on even the bitterest of days (Friends of Nature 1999; Xu 2001).

After the unexpected death of Zhaba Dorje in November 1998, Sonam Dorje's work was taken over and expanded by his former close friend and colleague Drashi Dorje. Like his predecessors, Drashi Dorje had a vision equally for the place, for a better future with abundant wildlife and for improved living conditions for the people. To enact this vision, Drashi Dorje brought together several friends, and they established a new grassroots social organization, the Upper Yangtze Organization.⁶

Building civil society

Registered in May 1998, the UYO was declared "the first people's organization in the history of Zhiduo County" with a "complete working structure, well-defined goals and objectives, and a representative membership" (Zhiduo County Civil Affairs Bureau 1998). The organization aims to develop the area in environmentally friendly ways and to protect the environment of the Yangtze River headwaters. The UYO was initially made up of six board members and around 100 regular members, over 80 per cent of whom were local pastoralists. Five years later, the composition was similar, with representatives of around 10–15 per cent of Suojia families as well as a growing number of academics and journalists from the provincial capital and from throughout the nation. In 2003, the number of active core members was eight people, although they all also had other full-time salaried jobs and therefore had to carry out UYO activities in their spare time.

Early in its work, the UYO also sought external assistance.⁷ Since 1998, many projects and activities have been planned and implemented, with most funding and expertise coming from or introduced by the Canadian NGO Plateau Perspectives.⁸

The work of the UYO has evolved into an innovative example of a local conservation effort. Despite several requests that it expand its work to neighbouring counties, it has restricted the geographical scope of its work to Zhiduo County in order to focus on establishing a good, replicable model for conservation and development in Tibetan plateau grasslands. The organization has recently further refined its work by designating three working groups for young people's education, culture and environment, and sustainable development.

Although formal establishment as an NGO was an obvious high point for Drashi Dorje and his team, some of the UYO's most significant challenges still lay ahead. An initial challenge was achieving legitimacy in the eyes of the government. Even today, few leaders in China truly understand the concept of "non-government" work and often assume it to be, at best, distinct from government work, or, at worst, in opposition to it. For decades, every development in China has been planned, organized and implemented by the government alone. In the UYO's early days, an unexpected roller-coaster ride ensued, with some people encouraging the fledgling grassroots organization, others watching attentively from the sidelines, and still others questioning its necessity, even its legitimacy. Since the national authorities recognized the country's first NGO, Friends of Nature, in 1994, civil society has come a long way. In less than a decade, over 200,000 organizations had sprouted in almost every corner of China, some working quasi-independently, others in close partnership with governmental agencies (Knup 1997; Viederman 1998). Equally as important, the UYO now also has a proven track record of good projects and thus is accepted as profitable to the area's development.

What makes the UYO particularly special is not only the fact that it is a non-governmental organization, which is a relatively new phenomenon in China, but also that it was founded by local Tibetan herders. Furthermore, one of the UYO's main strengths is that it capitalizes on maintaining and building relationships within the local community as well as with external agencies and advisers. The UYO thus bridges many divisions, enhancing the flow of ideas between a diverse array of people, organizations and bureaus, both national and international, who have a stake in the future of the Yangtze River headwaters. Five years after its inception, it was this exchange of ideas, translated into tangible action, that had enabled the people of Suojia to remain on the land, indeed even to be co-stewards of the land and its biodiversity.

Enhancing capacity for environmental management

The UYO has spearheaded several environmental activities. The first was the formulation of a multiple-use land management plan in collaboration with the Suojia government (i.e. the township, or sub-county, government). The plan was designed to allow for four different local protected areas. The "core zones" were determined on the basis of the abundance and distribution of four focal species: the snow leopard, the Tibetan antelope, the Tibetan wild ass and the black-necked crane. A protected area for wild yak and a large wetland were added at a later stage (see Figure 6.3), and the snow leopard core zone was extended to include its entire relatively contiguous rugged mountain habitat in Suojia. What is particularly unusual in this early work is that many herders were consulted in the process, and all agreed not to hunt – and agreed to discourage others from hunting – within the designated zones.

Although village-level governance in China already has democratic elements (for example, the election of village leaders), the new participatory approach introduced in the initial formulation of a regional land-use plan for Suojia is unique because it scales up the participation of local people to a regional level, across several villages, and engages with them to consider the actual content of projects and plans, not simply the selection of which person will implement policy designed from afar (Kelliher 1997). The UYO and its first international partner, Plateau Perspectives, jointly introduced the notion of public participation as an important ingredient in the process of community development, and the Suojia township government sanctioned the plan by adopting it as its own. Although no comprehensive map of the protected areas has been drawn, local people know the boundaries well and marker stones have been erected. According to local herders, snow leopard and wild ass populations are increasing as a result of this action (based on direct sightings and increased predation of livestock), and there is a sense of pride among local residents that their native wildlife and grassland habitat remain among the most pristine in the Tibetan plateau region.

A second strategic move of the UYO and the Suojia community was to organize, in concert with the township government, a group of local herders to serve as wildlife monitors. This group is now known as Suojia's Ecological Protection Committee (EPC). In practice, it was decided by the UYO and local government that village leaders would serve as the monitors since they generally have better education, they travel more than most people and, as democratically elected leaders, they generally are held in high esteem within the community. Through the establishment of the EPC, an informal environmental extension service has been put in place and valuable data are now being collected on the seasonal abundance and distribution of key wildlife species. This model has been replicated in the neighbouring Qumahe community, which is located north of the Yangtze River, because it resonates well with the government and the Tibetan herders themselves. This approach to conservation (i.e. involving herders in resource management, including the monitoring of wildlife populations) has also been introduced to government leaders as an effective way to carry out and even enhance regional conservation plans, as well as to reconcile, at least in part, local conservation and development objectives through community participation.⁹

A third main area of the UYO's work supported by the community has been the promotion of basic education, with a strong emphasis on environmental education. After long discussion about how best to serve the people of Suojia, the local government, the UYO and Plateau Perspectives agreed that education could play a central role in the community's future. Yet, when the issue was first raised with local herders, the idea of sending their children to school, even to local tent schools, received mixed reactions at best. For example, in Yaqu village of Suojia (see Figure 6.3), most household leaders initially showed little interest in sending their children to school. After the UYO's presentation of the importance of basic education, however, and with further discussions among the community in their own meetings over the next year, community members decided that formal education was critical for their children's future and they took the project forward. The project had become their project. Within a matter of months, the local people developed a management plan to start a new school, which was launched in September 1999 with 20 students studying Tibetan, Chinese and mathematics. Now the school has about 70 students, and children from about one-quarter of the community's households attend. Following two training workshops in 2001 and 2002, ecology classes were begun at the school. Similar tent schools have also begun to appear in other parts of Suojia and elsewhere in Zhiduo County. In Muqu village (see Figure 6.3), over 60 children, representing about 30 per cent of families in the community, now receive basic education. In addition to this, the school in Muqu has become a de facto "community centre", and ongoing vocational training in areas such as primary health care, veterinary care and rangeland management is being planned. In this way, a seed idea taken up by the community can bring about genuine hope and change.

Through the above and other activities, community and individual awareness about environmental issues has been raised, and the capacity for wildlife conservation in Suojia has been considerably enhanced. A sense of hope has emerged as people have seen that they are capable of affecting their own future.

The role of external influence

The Western Development Strategy and an uncertain future

As stated earlier, the most important development now affecting the area may be the onset of China's Western Development Strategy (WDS). In Qinghai Province, the WDS has led to several massive environmental projects, including the establishment of the Sanjiangyuan Nature Reserve (SNR) and projects to restore vast areas of degraded land. Although the WDS has attracted some favourable attention to the conservation work already begun in Suojia (BWG/CCICED 2001), it also has within it the potential to destroy much if not all of the community's work undertaken to date. In China as elsewhere in the world, analyses and planning activities conducted at higher levels will not always reflect the needs or plans of local communities.

In the present case, the main divergence of opinion has arisen in the form of suggestions that the people of Suojia should relocate (or be relocated) to other parts of the province, in the name of "environmental protection". This would not only undermine community structure and potentially lead to many significant social and cultural costs – as witnessed, for example, in past relocations of native groups to reservations in North America and Australia and in the sedentarization of pastoralists in North Africa and the former Central Asian republics. Such moves would also incur severe environmental costs. In Suojia, despite current hardships, almost everyone indicates that they would not wish to move, but want to remain on the grassland where they have lived their entire lives.

Ironically, the suggestion of relocation may have arisen in part because of the initial success of the conservation work in Suojia. Early plans for the SNR had in fact designated a neighbouring township to serve as one of the national reserve's main core zones. During a field investigation in 2001, however, it was discovered by national researchers that several community-based protected areas had already been established in Suojia, over three years previously, and that much more wildlife was present there than in the proposed area. According to local herders, wildlife populations were in fact increasing in Suojia as a result of the UYO's efforts to educate the people about biodiversity and of the community's selfimposed ban on hunting. Thus, because of the success of the wildlife conservation by the Suojia community, the draft plan for the national nature reserve was amended to designate Suojia as one of the largest potential core zones. The question then arose of whether the people of Suojia would be moved out of the core zone, since by definition core zones should have no human disturbance. Fortunately, after months of consultations and discussion within the community, it now seems unlikely that the people of Suojia will be asked to move because of the SNR, although no final decision has been officially made.

The relocation of people to other regions is not ideal for two main reasons. First, the simple presence of people in the area will continue to serve as the best deterrent to poachers, who until recently constituted the primary threat to wildlife in the nearby Kekexili desert and arid steppe. Secondly, the situation in Suojia remains unique, with the existence of a strong desire by local residents – and not just higher-level government plans – to develop the area in ways that maintain and protect the native biodiversity. Therefore, there are possibilities for the local community to develop plans that reflect their own needs and capacities and to collaborate with the higher government authorities in implementing their ideas, such as the training of local herders who will serve as wildlife monitors. Whether the local community will be able to build a genuine long-term partnership with the government and other stakeholders, as well as participate actively in decision-making processes for the management of the nature reserve, remains to be seen.

Partnerships with external agencies

The UYO has been able to access expert assistance and funds from a variety of foundations and NGOs in China and abroad (including financial assistance from the Global Greengrants Fund, Children in Crisis and NORAD, and technical expertise from the Biodiversity Working Group, Lähetyksen Kehitysapu and Fauna and Flora International) as well as from Chinese media and various levels of government. In addition, awards and acknowledgements by external institutions recognizing the initiatives in Suojia were instrumental in building people's confidence in the community. For instance, the government of Yushu Tibetan Autonomous Prefecture (see Figure 6.2) recognized and approved the UYO in August 2001 as a good "home-grown model" of civil society, an example of how local people should promote conservation and development in line with policies outlined by the national government. In addition, at the national level, Drashi Dorje, founder and director of the UYO, received an Earth Award in May 2002, presented by the State Forest Bureau and by Friends of the Earth (Hong Kong) for his outstanding conservation work.

However, there are also problems associated with partnerships with external organizations, whether government agencies or the international conservation community. These problems partly result from varied interpretations of the concept of "participation" (see Cooke and Kothari 2001; Ghai and Vivian 1992; Pretty 1995). In some cases, it is used to involve people in all stages of project planning, implementation and evaluation, and at other times it is used only for utilitarian purposes (i.e. to mobilize the masses for pre-set purposes). At worst, participation can be used to manipulate people and communities to endorse externally devised plans. Likewise, the concepts of sustainability, local ownership and partnership are interpreted and applied in many different ways (Westing 1996). Consequently, one danger for external organizations is that (knowingly or unknowingly) they appropriate for themselves ownership of work that in fact is the intellectual property of other people, often the local or indigenous people. In Suojia, this problem has already occurred on at least two occasions when external agencies acted as though the community had undertaken no previous work of its own and all the efforts made by the community were futile without the external assistance. There also have been problems with a lack of respect given to UYO members by external partners because of their lack of formal education. Although partnerships have continued for pragmatic reasons, lack of genuine participation and mutual respect has led on some occasions to a loss of confidence among the local people, resulting in a loss in project sustainability.

Innovative features of Suojia community

Several important features of the Suojia community, or of key individuals, played critical roles in the success of environmental initiatives undertaken in Suojia, such as the establishment of the community-based protected areas, wildlife monitoring and the establishment of tent schools (see Table 6.1).

The establishment of the UYO has been instrumental in much of the conservation work described in this chapter. Within the context of China, this in itself was extremely innovative because civil society has played little if any role in decision-making processes for several decades. Only in the early 1990s did work by the non-governmental sector finally gain recognition as a legitimate pursuit, and it has taken even longer for the notion to be fully adopted in China's remote inland regions. To undertake such a venture, strong leadership skills and a pioneering spirit were necessary, as found in the UYO director, Drashi Dorje. Because there are no quick fixes to the environmental problems addressed, a **long-term** vision was also required and, perhaps most importantly, an ability to mo**bilize people**, first for the establishment of the organization itself, and secondly to carry out the UYO's plans. It is also noteworthy that Drashi Dorje set early goals for the organization to nurture new leaders, which was done through members' attendance at formal workshops (e.g. computer training, environmental education, policy meetings) as well as through personal mentoring relationships.

Similarly, a **pioneering spirit** and the ability to build a sense of **local ownership** in the work were necessary for regional land-use planning and the establishment of local protected areas in Suojia. Whereas most significant decisions in China are made at the provincial and national levels, in Suojia it was the local community who decided that protection of native wildlife was important and that local protected areas should be established. Given that most of the actual burden of this plan was to be incurred by the herders themselves (e.g. loss of grazing land), their support was essential for success. This was gained by opening **lines of**

Main environmental initiatives in Suojia township	Main international partners				
	PP^{a}	BWG^b	UM ^c	FFI^d	Innovative features
Establishment of the Upper Yangtze Organization (UYO) ^e	From 1998				Leadership, pioneering spirit, ownership, long- range vision, ability to network broadly
Regional land-use planning, including the establishment of community- based protected areas	From 1998	1999–2001			Pioneering spirit, ownership, communication
Biodiversity conservation research (including biological and socio- economic surveys)	From 1998		2001-2004	2001-2003	Strategic planning, desire to learn, communication
Capacity-building (gathering information and other resources, attending environmental conferences, etc.)	From 1998	1999–2001		2001–2003	Strategic planning, desire to learn, communication
Establishment of the Ecological Protection Committee (EPC); i.e. Suojia's wildlife monitors	From 1999	1999–2001			Encouragement, hope for future
Establishment of village-level schools, with an emphasis on environmental education	From 1999	1999–2001			Consensus-building, ownership, encouragement, hope for future
Regional survey of environment and health needs in pastoral areas of Yushu Tibetan Autonomous Prefecture	From 2000		2001-2004		Strategic planning, ownership

Table 6.1 Innovative features of environmental initiatives undertaken in Suojia township

Notes:

^{*a*} Plateau Perspectives (PP) has worked with the UYO since its inception in May 1998 (expertise and funding).

^bThe Biodiversity Working Group (BWG) of the China Council for International Cooperation on Environment and Development (CCICED) has partnered PP and UYO since 1998, bringing both funding and national-level patronage to the work.

^c The University of Montreal (UM), sponsored by the Social Sciences and Humanities Research Council of Canada, has partnered PP, UYO and the Yushu Health Bureau to undertake a regional health needs assessment in Suojia and five other townships.

^dFauna and Flora International (FFI) has partnered the provincial Environmental Protection Bureau (EPB) and UYO, as well as PP in 2001, to help further develop a regional co-management plan for Suojia.

^eA brief description of the UYO's work to date is also summarized in a special report by China Development Brief (Young 2001).

communication among herders, and between herders and government, so that the value of biodiversity protection was properly discussed and all opinions expressed and heard. As a result, a consensus was reached that key wildlife areas in Suojia should be set aside for the protection of special or endangered wildlife species. This has visibly led to improved protection for many native species of the Tibetan plateau. Unfortunately, although these community-based protected areas were subsequently incorporated into larger plans (by their inclusion in, or proximity to, the SNR's largest core zone), the unique work undertaken by the people of Suojia has not always been explicitly recognized.

Another innovative feature of Suojia and the UYO is a **desire to learn** from international experience in conservation and sustainable development, and through this process to equip themselves to make appropriate **strategic plans** for the future. This outward-looking attitude has been cultivated and encouraged largely by Drashi Dorje, himself mentored earlier by the visionary Sonam Dorje. Several other leaders have also worked to enhance the community's vision, for example by organizing a trip for 16 Tibetan herders to Beijing in 1996. Two of them later became founding members of the UYO. An environmental and health needs assessment now nearing completion is also proving valuable for making long-term development plans in Suojia, particularly by differentiating between opinion and fact through standard survey methodologies (see Foggin et al. 1997; Oths 1998), leading to scientifically informed decisions and focused interventions.

According to local participants, the establishment of Suojia's Ecological Protection Committee (EPC) has succeeded largely because of the early **encouragement** given by Plateau Perspectives, expressed in various forms of support including training and donations of equipment necessary for wildlife monitoring activities. The seed of hope that this has engendered for the EPC – in particular, through a realization that it was not alone in feeling its work was important – led the 16 wildlife monitors to persevere in their endeavour despite extremely difficult working conditions. These monitors have since received further training in wildlife survey techniques on several occasions, and they may yet become full and active participants in the management of the SNR. Thus, **hope** can also be a potent driving force for change, directly and indirectly, especially where local people have previously felt helpless, unheard or otherwise unable to help guide their own future (Bernard and Young 1997).

A final area of work that deserves mention again is the establishment of local village tent schools. The most important factor leading to the success or failure of such projects was the time invested in **consensusbuilding** within the community prior to the official start of the project. In this case, the process was facilitated primarily by the UYO. Without such consensus-building and a sense of **local ownership**, the projects would quickly dissolve, just as many externally devised plans in fact do. For each school project, as well as for other community development projects in Suojia, over a year was spent discussing and exchanging ideas with the community. As a result of this participatory approach, the people of Suojia now consider that the tent schools and the environmental education taking place in the schools belong to the community.

In summary, most environmental work undertaken in Suojia has been dependent on effective communication, on a free flow of information between parties and on a sense that all partner agencies are working toward the same goal, that is, biodiversity conservation and sustainable management of grassland resources. The UYO has played a particularly important role in this endeavour, serving both as community representative and as an agent of change. As previously stated, the organization is uniquely positioned to listen to and mobilize the local people, and to liaise with national decision makers and the international community. By seeking to establish genuine partnerships based on mutual respect and learning, the UYO has helped local communities to gain a greater sense of ownership of projects, which is a precursor of sustainability.

Conclusion

In what circumstances has Suojia initiated its work? What features of the community have contributed most to the initial successes observed? The short answer is that, even though civil society is still young in China, the establishment of a grassroots organization, the UYO, has been the primary enabling factor for successful conservation in Suojia. Furthermore, the capacity of the UYO to plan and implement appropriate projects has rested largely on the ability of several key individuals in the organization¹⁰ to draw together disparate stakeholders – including Tibetan herders, government bureaus, national and international organizations, and expert advisers – into working partnerships. Although not all of the resulting partnerships are perfect, they are important steps in the right direction. The main challenge now is to ensure that external agents seeking to join such community-based conservation work, first, do not undermine the local initiatives by usurping the community's rightful ownership of the work, and, second, support the organization and community as equal partners instead of taking the role of leaders. In this way, the people of Suojia stand a fair chance of developing their own culturally and ecologically appropriate conservation strategies, for their own direct benefit as well as that of the nation, now and in the future.

Lessons to be learned for other communities and organizations are

simply to continue learning, to encourage pioneering spirits, and to focus on opening lines of communication, consensus-building and other participatory approaches. In these ways it is possible to maintain and promote local ownership of every initiative, which, together with genuine partnerships among stakeholders, will go a long way to creating the right conditions for successful, innovative, community-based environmental management and conservation efforts.

Postscript, May 2003

Since the first draft of this chapter was written in December 2002, several important changes have taken place that affect the people of Suojia. It seems that they will no longer be relocated in connection with the establishment of the SNR per se, although other large environmental and poverty alleviation schemes of the WDS may affect the herders in similar ways. According to several recent press releases, large areas of grassland in Qinghai Province have been closed for the indefinite future and grazing restrictions placed on even larger areas to allow the renewal of degraded land. In a parallel plan, nearly 28,000 local residents in the province will also be relocated over the next few years (Xinhua News Agency 2003b). The latter scheme has been called "ecological emigration" by some authorities and aims "to shake off poverty" at the same time as it "restores ecological balance" in the "Go West" campaign (China Daily 2003). Permanent residential areas for former herdsmen are also planned, with the explicit aim "to encourage them [local herders] to abandon grazing" (Xinhua News Agency 2003c).

If the Suojia community is asked to move off the land, much of its environmental work to date may become irrelevant (apart from the experience gained and lessons learned). Many local herders have already heard rumours of relocation plans, and they have started to ask their cultural and religious leaders if and when they should begin to sell their livestock. Perhaps the above grassland restoration projects will not come to fruition in Suojia itself but, should they do so, local Tibetan herders may once again, most dishearteningly, become but recipients of life-changing decisions made far away. It is still unclear what final decisions will be made for Suojia, but it is sincerely to be hoped that even now the local community will yet be brought back into the decision-making process, for indeed it is the herders who remain the primary stakeholders, the first people to gain or lose from the changing environmental conditions in Tibetan plateau grasslands.

These factors obviously constrain to some degree the community's ability to be innovative, particularly in managing its grassland resources.

However, as before, the community continues to move forward with a variety of responses. On the one hand, discouraged by increased uncertainty in their lives, some people have retreated into more traditional, passive, even fatalistic attitudes. Other people, though, including the majority of UYO members, are still making plans for the future and even enlisting the support of external agencies for new projects in health, education and environmental protection. And herein lies the greatest innovation for the community and the UYO: by building partnerships that enhance their legitimacy and strengthen their capacity to meet their own long-term goals, and by focusing on the more positive elements of current government plans, each has learnt to move with the ebb and flow of government policies. In this way, within their own unique socio-political context, the people of Suojia have come a long way over the past few years, and they indeed comprise a truly innovative community.

Acknowledgements

I wish to thank the UNU–UNEP Innovative Communities project team as well as Dr Marion Torrance-Foggin and Dr Andrew Smith for their helpful comments on earlier drafts of the manuscript. I would also like to thank the Centre for Research into Environmental and Ecological Modelling (CREEM) at the University of St Andrews for office space and especially for being inspiring colleagues during my sabbatical leave in Scotland in 2002–2003.

Except when noted otherwise, information in this chapter is based on my interviews and informal discussions with Drashi Dorje since 1997, and with other UYO members.

Notes

- Begun as part of my doctoral research, this work is now an integral part of the community-based, integrated conservation and development work undertaken by Plateau Perspectives, a Canadian NGO focused on social and environmental issues in the Tibetan plateau region of China (see http://www.plateauperspectives.org). A more detailed description of this case study is also available in Chapter 8 of my doctoral dissertation (Foggin 2000).
- 2. Known in Chinese as the Sanjiangyuan (Three River Sources) region.
- 3. An interview conducted during a field trip in July 1998 (Foggin 1998).
- 4. Based on my interviews with local leaders (since 1998) and on preliminary findings of the project "Health Status & Risk Factors among Tibetan Pastoralists of Southwest Qinghai Province" undertaken cooperatively by Plateau Perspectives, the Yushu Tibetan Autonomous Prefecture Health Bureau, the Upper Yangtze Organization and the

Department of Geography at the University of Montreal. The data are from 50 household interviews conducted in Suojia in February 2002 (Foggin et al. 2003).

- 5. In administrative terms, Suojia is the western township (xiang) of Zhiduo County, itself the western county (xian) of Yushu Tibetan Autonomous Prefecture (zangzu zizhi zhou). Qinghai Province is composed of seven prefectures. The "villages" and "subvillages" of Suojia are the former brigades (dadui) and work units (xiaodui) of the commune era.
- In Chinese, its name is Qingzang Gaoyuan Huan Changjiangyuan Shengtai Jingji Cujinhui (literally, the Tibetan Plateau Yangtze River Headwaters Ecology Economy Promotion Committee).
- 7. Drashi Dorje first contacted me in December 1997, since when several years of research and reciprocal learning have ensued, as well as much of the environmental work described in this chapter. Initial contact was made fortuitously after a Chinese environmentalist suggested that Drashi Dorje meet "the Canadian biologist" (i.e. me) who was then conducting graduate research in the province.
- 8. I am also founder and director of Plateau Perspectives. Some of the UYO's projects and activities have been undertaken without direct financial cost, whereas others have required US\$100–5,000. Most funding needs from 1998 to 2002 were met from international sources, but in-country assistance is now increasing. More important than funds, though, have been the various forms of expertise and capacity-building and the encouragement given to the UYO at this critical stage in its development.
- 9. Several key recommendations for biodiversity conservation, based on initial field experiences in Suojia, were recommended to provincial and national government leaders at the Workshop on Biodiversity Conservation in Qinghai Province organized by the Biodiversity Working Group (BWG) of the China Council for International Cooperation on Environment and Development (CCICED) in Xining in June 2001. Further details are available at http://www.chinabiodiversity.com.
- 10. Although the UYO's work was initially promoted largely by one person, since then the overall vision has become shared by a larger group of about seven or eight key people and is supported by many families in Suojia. This "decentralization" in UYO leadership was further enhanced in 2002 when Drashi Dorje reduced his direct involvement (as executive director) in the UYO's work in order to support the development of another prefecture-wide NGO, the Snowland Great Rivers Environmental Protection Organization (http://www.snowland-great-rivers.org). This move has led several UYO members greatly to increase their involvement and leadership in their organization, thus further strengthening its foundation.

REFERENCES

- Barfield, T. (1993) The nomadic alternative. Englewood Cliffs, NJ: Prentice Hall.
- Bennett, J. (1988) "The political ecology and economic development of migratory pastoralist societies in Eastern Africa", in D. Attwood, T. Bruneau and J. Galaty (eds), *Power and poverty: Development projects in the third world*, pp. 31–60. Westview Special Studies in Social, Political and Economic Development, Boulder, CO: Westview Press.
- Berkes, F. and C. Folke, eds (1998) Linking social and ecological systems: Management practices and social mechanisms for building resilience. Cambridge: Cambridge University Press.

- Bernard, T. and J. Young (1997) *The ecology of hope: Communities collaborate for sustainability*. Gabriola Island, B.C.: New Society.
- Blench, R. (2001) *Pastoralism in the new millennium*. London: Overseas Development Institute.
- Brown, K. (2002) "Innovations for conservation and development", *Geographical Journal* 168(1): 6–17.
- BWG/CCICED [Biodiversity Working Group/China Council for International Cooperation on Environment and Development] (2001) Conserving China's biodiversity (II). Beijing: China Environmental Science Press.
- China Daily (2003) "Go West' concerns: Poverty, ecology", 10 March.
- *China Green Times* (2003) 20 February; translated and reported in US Embassy, *Beijing Environment Science and Technology Update*, 7 March 2003, "New Nature Reserve in Key River Source Area".
- Cooke, B. and U. Kothari, eds (2001) *Participation, the new tyranny?* London: Zed Books.
- Economy, E. (2002) "China's Go West campaign: Ecological construction or ecological exploitation?", *China Environment Series* 5: 1–11.
- Edmonds, R. (1994) Patterns of China's lost harmony: A survey of the country's environmental degradation and protection. New York: Routledge.
- Ekvall, R. (1968) *Fields on the hoof: Nexus of Tibetan nomadic pastoralism.* New York: Holt, Rinehart & Winston.
- Ellis, J. and D. Swift (1988) "Stability of African pastoral ecosystems: Alternate paradigms and implications for development", *Journal of Rangeland Management* 41: 450–459.
- Foggin, J. M. (1998) *Recent accounts from the source area of the Yangtze River*. Xining, China: Plateau Perspectives.
- (2000) "Biodiversity protection and the search for sustainability in Tibetan plateau grasslands (Qinghai, China)", PhD dissertation, Arizona State University, Tempe, USA.
- Foggin, P., O. Farkas, S. Shiirev-Adiya and B. Chinbat (1997) "Health status and risk factors of seminomadic pastoralists in Mongolia", *Social Science and Medicine* 44: 1623–1647.
- Foggin, P. M., M. E. Torrance-Foggin, J. Torrance and J. M. Foggin (2003) Community health report: Zhiduo County 2002. Xining, China: Plateau Perspectives, April.
- Friends of Nature (1999) "On the frontlines of the battle to save the Tibetan antelope", *Friends of Nature Newsletter* 2: 3–4.
- Galaty, J. and D. Johnson, eds (1990) *The world of pastoralism: Herding systems in comparative perspective.* New York: Guilford Press.
- Ghai, D. and J. Vivian, eds (1992) Grassroots environmental action: People's participation in sustainable development. London: Routledge.
- Goldstein, M. and C. Beall (1990) Nomads of western Tibet: The survival of a way of life. Hong Kong: Odyssey.
- He, B. (1991) "China on the edge: The crisis of ecology and development", San Francisco: China Books and Periodicals.
- Humphrey, C. and D. Sneath, eds (1996) Culture and environment in inner Asia.

Volume 1: The pastoral economy and the environment. Cambridge: White Horse Press.

- Kelliher, D. (1997) "The Chinese debate over village self-government", *The China Journal* 37: 63–86.
- Knup, E. (1997) "Environmental NGOs in China: An overview", Woodrow Wilson International Center for Scholars, Environmental Change and Security Project, *China Environment Series*, Issue 1, pp. 9–15.
- Lai, C. and A. Smith (2003) "Keystone status of plateau pikas (*Ochotona curzo-niae*): Effect of control on biodiversity of native birds", *Biodiversity and Conservation* 12: 1901–1912.
- Loomis, D. (1988) "Desert rangeland livestock management in Soviet Central Asia", *Journal of Arid Environments* 17: 1–12.
- Miller, D. (1995) Herds on the move: Winds of change among pastoralists in the Himalayas and on the Tibetan plateau. ICIMOD Series No. MNR 95/2, Kathmandu: International Centre for Integrated Mountain Development.
- (2000) "Tough times for Tibetan nomads in Western China: Snowstorms, settling down, fences, and the demise of traditional nomadic pastoralism", *Nomadic Peoples* 4(1): 83–109.
- MOFA [Ministry of Foreign Affairs] (2000) China's population and development in the 21st century. Beijing: MOFA.
- Oths, K. (1998) "Assessing variation in health status in the Andes: A biocultural model", *Social Science and Medicine* 47: 1017–1030.
- Pretty, J. (1995) "The many interpretations of participation", In Focus 16: 4-5.
- Richard, C. (2000) "Rangeland policies in the eastern Tibetan plateau", *Issues in Mountain Development* 4: 1–4.
- Salafsky, N. and E. Wollenberg (2000) "Linking livelihoods and conservation: A conceptual framework and scale for assessing the integration of human needs and biodiversity", World Development 28: 1421–1438.
- Schaller, G. (1998) *Wildlife of the Tibetan steppe*. Chicago: University of Chicago Press.
- SEPA [State Environment Protection Agency] (2001) China's second national report on implementation of the Convention on Biological Diversity. Beijing: SEPA.
- Smil, V. (1993) China's environmental crisis: An inquiry into the limits of national development. Armonk, NY: M. E. Sharpe.
- Smith, A. and M. Foggin (1999) "The plateau pika (Ochotona curzoniae) is a keystone species for biodiversity on the Tibetan plateau", Animal Conservation 2: 235–240.
- Stevens, S. (1997) "New alliances for conservation", in S. Stevens (ed.), Conservation through cultural survival: Indigenous peoples and protected areas, pp. 33–62. Washington, DC: Island Press.
- Swift, J., C. Toulmin and S. Chatting (1990) "Providing services for nomadic people: A review of the literature and annotated bibliography". Staff Working Papers No. 8, New York: UNICEF.
- Taylor-Ide, D. and C. Taylor (2002) *Just and lasting change: When communities own their futures.* Baltimore, MD: Johns Hopkins University Press, in association with Future Generations.

- Viederman, D. (1998) "Save the planet, build civil society: Democracy gains from Chinese environmental effort", *Global Beat Issue Brief*, No. 37, 22 June.
- Westing, A. (1996) "Core values for sustainable development", *Environmental Conservation* 23: 218–225.
- Williams, D. (1996) "Grassland enclosures: Catalyst of land degradation in Inner Mongolia", *Human Organization* 55: 307–313.
- Wu, N. (1997) "Indigenous knowledge and sustainable approaches for the maintenance of biodiversity in nomadic society: Experiences from the eastern Tibetan plateau", *Die Erde* 128: 67–80.
- Xie, Z. (2000) The atlas of population, environment and sustainable development of China. Beijing: Science Press.
- Xinhua News Agency (2003a) "China plans big nature reserve at sources of three major rivers", 19 February.
- (2003b) "Degenerate grassland in west China to enjoy recess from grazing", 16 April.
- (2003c) "Saving the Yellow River", 22 April.
- Xu, Z. (2001) "Chiru's guardian angels shedding blood, tears", *China Internet Information Centre*, 18 January.
- Young, N., ed. (2001) 250 Chinese NGOs: Civil society in the making. Beijing: China Development Brief.
- Zhang, W., ed. (1998) *China's biodiversity: A country study*. Beijing: China Environmental Science Press.
- Zhao, S. (1994) *Geography of China: Environment, resources, population and development.* Wiley Series in Advanced Regional Geography, New York: John Wiley.
- Zhiduo County Civil Affairs Bureau (1998) Document of the Zhiduo County Civil Affairs Bureau (1998: 05). Zhiduo County Government, 26 May.