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Tibetan Plateau Grassland Protection: Tibetan Herders' Ecological Conception Versus State Policies

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Tibetan Plateau Grassland Protection: Tibetan Herders' Ecological Conception Versus State Policies

Acknowledgements

Footnotes: 1. At the end of the 1990s, the “Open up the West” socio-economic development campaign started (Goodman 2004; Cooke 2003). 2. During the course of eleven months, I conducted ethnographic fieldwork in many nomadic resettlements and I lived for several months in one of these resettlements. 3. Prior to 1950, the Tibetan world currently under the administration of the PRC was composed of the three regions of Amdo (a mdo), Ü-tsang (dbus gtsang) and Kham (khams). Nowadays, the Amdo and Kham territories are incorporated into the PRC’s Qinghai, Gansu and Sichuan provinces. 4. On the P.R.C.’s contemporary history see Béja 2004; Goldstein 1997; Mac Farquhar 1989; Roux 2009; Samarani 2004. 5. Samarani 2004, 307-313. 6. Goodman 2004 and Cooke 2003. 7. In the Amdo area where I conducted fieldwork, Tibetan people commonly used two words to describe grassland degradation problems. The word brlag is used with the meaning of “degradation” and “something that is corrupted”. The word btshog which commonly means “dirty” is also used with the meaning of “polluted/degraded”. According to my interlocutors, the word “pollution” did not exist until recently. It was introduced from Chinese (wuran) when the P.R.C. authorities started to be concerned by Tibetan Plateau natural environment protection. 8. For a good summary of Tibetan Plateau environmental studies see Harris 2009. 9. For further consideration on traditional Tibetan conceptions relating to the environment see Huber 1991. 10. A medicinal root found only on the Tibetan Plateau the name of which literally means “summer grass, winter worm”. It is so named because the fungus grows out of the body of a caterpillar. For further information see Daniel Winkler’s publications, listed at (Accessed 10 October 2010). 11. Herders’ households lived in units composed of a number of tent/households which moved and camped together. These units, called ru skor in Tibetan (ru means “clan”, but also “bone” and skor means “circle”), set up circular camps, with the center occupied by the flock. They could be composed of different families and lineages, but they should be part of the same clan. The ru skor was the smallest unit of Tibetan herders’ social organization. 12. “Han” is the Chinese name of the biggest population group in the P.R.C., “Hui” is the Chinese name of Muslim Chinese people. They are both often referred to in western countries as “Chinese”. 13. There is of course an important question as to the opportunities for nomads on settlement, but this deserves a study in its own right and will be dealt with in future publications. 14. This information was collected during fieldwork and is also based on prefectural level government documents. 15. The Property Law specified that the land ownership rights are given to land owners for a determined period of time which vary from 30 to 50 years. After this period, the State can arrogate the right to dispose of lands. (Property Law: Article 126). 16. For the analysis of the links between politics and ecology see also Agrawal 2005. 17. Another infamous attempt to sedentarize nomads in the P.R.C. is the Mongolian case (Bulag 2002; Even 2006; Seneath 2000). Acknowledgments I would like to thank all the Tibetan herders, living in the resettlements, who shared with me their life for several months as well as their stories, knowledge and opinions. I would like to thank Ka dbang mtsho and Ama Jomothar for their endless patient in teaching me necessary skills of everyday life. I would also like to thank Jane Caple for her corrections, suggestions and critiques which were indispensable for completing this paper. I would like to thank Ken Bauer for his advice and corrections, Geoff Childs and all the people who took care of the publication and my supervisor Alban Bansa. This paper was firstly presented in August 2010 at the 12th Seminar of the International Association of Tibetan Studies (IATS). The support of the Centre d’Études Français sur la Chine contemporaine (CEFC), the “Louis Dumond” Foundation, the “Paola Sandri” Fellowship, the Institut de Recherche Interdisciplinaire sur les enjeux Sociaux of the École des Hautes Études en Sciences Sociales (IRIS-EHESS) and the

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TIBETAN PLATEAU GRASSLAND PROTECTION: TIBETAN HERDERS' ECOLOGICAL CONCEPTIONS VERSUS STATE POLICIES

The establishment of the vast Three Rivers' Sources Nature Reserve in 2002 has had a major impact on the lives of Tibetan nomadic herders. This paper examines the ecological viewpoints of Tibetan herders, their conceptions of grassland protection and what they believe to be the best strategies to solve grazing problems. According to the Chinese authorities, the Nature Reserve was established to protect the grasslands, as well as the sources of China's three major rivers—the Yellow River, the Yangtze and the Mekong. Grazing bans and flock reduction have been two recurring measures in this ecological protection project. Tibetan herders have also often been forced to settle down in new purpose built villages. These “ecological migrations”, as they are referred to in State environmental discourse, are also related to State policies to bolster security through population surveillance and territorial control. Therefore, in this complex context, ecological strategies are combined with political interests. To provide an alternative reading to the existing expert analyses of ecological problems and State reports on grassland and grazing problems, my paper focus on what Tibetan herders, resettled in new villages, think about these topics. Comparing their views against State discourse and policies, it is evident that herders have a different perception of the causes of the current ecological problems and propose alternative solutions, showing a high degree of consciousness of and active concern over grassland problems. Finally, I argue that the new resettlement villages are the latest step in a much longer process of sedentarization, which started in the 1980s with the grasslands' fencing policy.

INTRODUCTION

During the 1990s, the government of the People's Republic of China (PRC) began to pay more attention to environmental problems and protection of natural spaces. Since then, the western regions of the country have been involved in ecological policies and plans aimed at the protection of these still predominantly sparsely populated spaces. Tibetan herders, who are exploiting a considerable part of the western territories, have been affected by many projects that are aimed at both the acceleration of regional economic development¹ and the protection of the Tibetan Plateau's natural environment.

The grasslands of the Tibetan Plateau are interspersed with many small and large lakes and thousands of rivers run through it. Moreover, the diversity of the flora and fauna of this region is unique (Miehe et al 2009; Dan 2002; Deng 2002). Making a living in this vast territory, Tibetan herders reside in a region that has become one of the focal

points of Chinese government ecological concerns. These ones relate to concrete problems associated with the “degradation”² of the Tibetan Plateau's natural environment. Nevertheless, while intending to provide a solution for ecological urgencies, the Chinese government has adopted several strategies that have also led to a shift in the political order, bolstering its control over territories and local peoples.

This paper focuses on the environmental discourses promoted by the Chinese government. Its ecological policies affect the way people live, work and move on the Tibetan Plateau, transforming the relationship between people and territory. I will compare these official discourses and policies and their implementation with the opinions and behaviors of Tibetan herders who aim to protect, but also to control, the natural spaces in which they

1. At the end of the 1990s, the “Open up the West” socio-economic development campaign started (Goodman 2004; Cooke 2003).

2. The environmental “degradation” of the grasslands of the Tibetan Plateau is a controversial topic since little is really known about the causes and the extent of this degradation. Goldstein in his report about nomads in mGo log analyzes the “general assumptions” made by technical advisors on the state of grasslands, and the actual conditions found in the field (Goldstein 1996). In this article, I always use the term “degradation” to refer to the official technical discourse.

live. The herders' perspectives were gathered in 2009 during ethnographic fieldwork³ in the Chinese province of Qinghai, which includes parts of the Tibetan regions of Amdo and Kham.⁴

Since the Three Rivers' Sources Nature Reserve (Tibetan: *gTsang gsum mgo khungs*; Chinese: *San jiang yuan*) was established in Qinghai province in 2000, the life-style of Tibetan herders has changed radically. They have been confronted with the challenges of many transformations, including their system of production—husbandry in particular—and their place of residence.

Tibetan herders do consider that the grasslands located in the Nature Reserve display signs of environmental problems. However, an analysis of what Tibetan herders judge as environmental “degradation”⁵, its causes and the most suitable methods to avoid it, shows a conception of environmental protection that is very different from that of the State's.

Why is there such divergence in State and herders' perceptions? This paper examines the political nature of environmental discourse by looking at the way in which it is modified by the actors mobilizing it. The arguments used on both sides for or against particular ecological strategies reflect the herders' traditions and the axiom of scientific expertise. Therefore, these arguments need to be contextualized in order to reveal their political nature.

In the first part of the paper, I will introduce the Three Rivers' Sources Nature Reserve and the ecological and development plans associated with it, mainly aimed at territorial control and preservation of water resources. Secondly, I will analyze the Chinese government's ecological discourse, which is legitimated by scientific studies of environmental problems on the Tibetan Plateau (Banks et al 2003; Dan 2002; Han et al 2008; Ho 2000; Ma 2001; Ma 2001; Mihe et al 2009; Wang 2002). I will then compare these notions with the narratives of Tibetan herders, who focus on maintaining pastoral activity on the Tibetan Plateau and support communal control of the grasslands by Tibetan clans. Both the State and the Tibetan

3. During the course of eleven months, I conducted ethnographic fieldwork in Qinghai province's Tibetan Autonomous Districts of Dari, Maqin, Xinghai and Tongde. I visited many resettlements for Tibetan herders and I lived in one of these resettlements for several months. The data and information collected during this period are based principally on discussions with Tibetan herders who have already been settled down in the resettlements. I also interviewed several Tibetan officials as well as some Tibetan herders still living on the grasslands.

4. The Tibetan regions can be divided into three cultural units: Amdo (*a mdo*), Ü-tsang (*dbus gtsang*) and Kham (*khams*). Nowadays, Amdo's territories are split between the PRC provinces of Qinghai, Gansu and Sichuan. Kham's territories are located in Tibetan Autonomous Region (TAR), Qinghai, Sichuan and Yunnan provinces (Gruschke 2001; Tuttle, accessed on internet in March 2011).

5. In the Amdo area where I conducted fieldwork, Tibetan people commonly used two words to describe grassland environmental problems. The word *brlag* is used with the meaning of “degradation” and “something which is corrupted”. The Tibetan herders also use the word *btshog*, which commonly means “dirty”, with the meaning of “polluted/degraded”. According to my interlocutors, the word “pollution” did not exist until recently. It was introduced from the Chinese (*wuran*) when the PRC's authorities started to worry about environmental protection on the Tibetan Plateau.

herders point to similar environmental problems, but they identify different causes. Furthermore, the strategies to repair and protect the environment that are supported by Tibetan herders are opposed to those implemented by the Chinese government. The PRC authorities and ecologists often neglect and trivialize indigenous expertise. However, Tibetan herders own local practical knowledge concerning their surrounding environment. This knowledge is generated in everyday life and preserved by transmission from one generation to the next. The people living in an environment as hostile as the Tibetan Plateau, which has always confronted its populations with enormous difficulties, have to look for solutions allowing them to survive, and thus to preserve the environment from which they secure their livelihoods.

The last part of the paper will focus on one of the consequences of the environmental protection projects—the “ecological migrations” (Tibetan: *skye khams rkyen gyi yul mi gans spo ba*, Chinese: *shengtai yimin*) (Yeh 2003; Cooke 2006) and the resettlement of Tibetan herders. Although these policies officially have “green” objectives, they can also be deemed as the latest stage of a plan for sedentarizing herders, which started in the early 1980s with de-communization and the grassland fencing policy. The resettlement of Tibetan herders thus bolsters the power of the Chinese government over the territories of this region.

THE THREE RIVERS' SOURCES NATURE RESERVE

In May 2000, the State Forestry Administration and Qinghai Provincial Government set up the Three Rivers' Sources Nature Reserve (Foggin 2005). This environmental protection project is concerned with the sources of the three most important Chinese rivers—the Yellow River, the Yangtze and the Mekong—located on part of the Tibetan Plateau that falls under the administration of Qinghai province. The establishment of the nature reserve is the result of a series of nested laws and economic projects aimed at environmental protection and economic development, as well as territorial control.

The nature reserve, instituted at national level in 2003, covers 152,300 km² of Chinese territory (Foggin 2005). The majority of the region's inhabitants, making up a population of roughly 200,000 people, are Tibetan herders. Most of them were, until recently, practicing nomadic husbandry and trade. The Tibetan Autonomous Prefectures of Yushu, Guoluo and Hainan, and the Mongolian Autonomous Prefecture of Haixi are all affected by the establishment of the nature reserve and implementation of subsequent environmental protection measures.

This nature reserve is composed of 18 protected zones located in the “Three Rivers Sources” region, which cover a total area of about 320,000 km². This is roughly half of Qinghai's land area. Each zone is divided into three categories: water protection (eight zones), fauna protection (three zones) and flora protection (seven zones) (Foggin 2005: 6-8).

In order to preserve this territory from potentially

damaging human actions, the nature reserve administration employs different environmental protection strategies according to the assessed needs of each ecological zone (e.g. protection of water, wetland, grassland, forest and wildlife). These include restricting human access to and use of the land to varying degrees. Three types of sectors have been thus created within the zones. In the first type, which in total covers 31,200 km² of the reserve, all inhabitants have to be relocated, husbandry is forbidden and the flora and fauna are protected. This sector is called “no man’s land” (Tibetan: *mya ngam thang*, Chinese: *wurenqu*) and all human activity is banned. In the second sector (39,200 km²), husbandry is limited or grazing is only permitted on a seasonal rotational basis. Inhabitants are only required to relocate in seriously degraded areas. The third sector (81,900 km²) is defined as “experimental”. This means that the grasslands have not been completely closed to human activity and the government encourages the development of ecotourism and ecological factories. However, if areas in the third sector show serious environmental problems, inhabitants can also be relocated and husbandry forbidden.

Despite these official classifications, people living in every sector of the nature reserve can actually be resettled at any moment on economic, as well as ecological, pretexts. Chinese authorities, for example, can decide to relocate people from places where husbandry has not been forbidden for ecological reasons, instead leaning on a rationale that links settlement to the improvement of living conditions (Foggin 2005).

Since the reform and opening up period of the 1980s, Chinese society has experienced profound socio-economic changes. During the 1980s, new laws restructured the PRC politico-economic apparatus. The introduction of the Household Responsibility System (HRS) in 1981 led to the disbanding of the people’s communes (Samarani 2004: 307-313). In Qinghai province, that meant the redistribution of livestock to the household, followed by the division and distribution of land (Goldstein 1996; Pirie 2005; Yeh 2003). This brought important social changes, especially at the level of the production system. Moreover, the allocation of land to the households also led to a new territorial reconfiguration and a new relationship between herders and territory (Pirie 2005; Yeh 2003).

During the 1980s, the Chinese government took steps to strengthen the management and protection of the environment through the Rangeland Law (Chinese: *Zhonghua renmin gongheguo caoyuan fa*) (1985) and the Forestry Law (Chinese: *Zhonghua renmin gongheguo senlin fa*) (1984). Two other projects followed these laws: the “Open up the West” Campaign (Goodman 2004; Cooke 2003) in 2000 and the Property Law (Chinese: *Zhonghua renmin gongheguo wuquan fa*) (2007). The reorganizations of social space caused by the introduction of the market economy and the HRS, and the new laws which were aimed at the managing of natural spaces contributed to the conception of the Three Rivers’ Sources Nature Reserve project.

ENVIRONMENTAL PROTECTION DISCOURSES AND STRATEGIES: OVERLAP OF POLITICS AND ECOLOGY

The establishment of the nature reserve is characterized by the correlation of ecological strategies and projects with power and territorial control over a vast and sparsely populated region in which the authority of the Chinese government sometimes seems rather weak. This is evident when scientific studies (Dan 2002; Han et al 2008; Ma 2001; Ma 2001; Wang 2002) are compared with Tibetan herders’ narratives concerning the natural environment in which they live.

The large body of literature analyzing the causes of grassland “degradation” and recommending ways to protect the rangeland indisputably shows the concern of the Chinese government, as well as the scientific world, over the natural environment of the Tibetan Plateau. Nevertheless, diversity in the findings of these investigations also reveals their political intent.

The Chinese government, many ecologists and Tibetan herders express quite similar observations about the environment of the Tibetan Plateau. However, what they perceive “to be in a degraded condition” and what they mean when they use terms such as “degradation” varies considerably from one actor to another. Who exactly employs a certain kind of environmental discourse? In what context and focusing on which objectives? The adoption of environmental protection strategies does not only mean that action is taken in a “neutral” natural area. It also signifies an intervention in a “milieu” of complex relationships between people and between people and territory. The Three River’s Sources Nature Reserve project can be conceptualized as a Foucauldian milieu (Foucault 2004: 3-29), where nature, power, and social elements are circulating and interacting. Focusing on the understanding of the issues linked to the interconnection of these different elements, which constitutes the complexity of ecological policies, I will analyze them taking into account their interactional “milieu”.

What does “degradation” mean?

Recent studies on the environment of the Tibetan Plateau show that there have been significant changes to soil, water, flora and fauna levels over the past 50 years.⁶ According to these studies, grassland degradation became problematic in the 1960s.⁷ Subsequently degraded natural spaces grew by 15 percent every decade (Han et al 2008: 233). This rate has increased during the last ten years, in the case of Qinghai from 17 percent in 1990 to 39 percent in 1999 (Han et al 2008: 235).

The grasslands of the Tibetan Plateau are experiencing increasingly rapid desertification. According to environmental

6. For a good summary of studies on the environment of the Tibetan Plateau see Harris (2009).

7. Goldstein, mitigating the analysis of the experts, argues that these changes will not necessarily result in the collapse of the Tibetan Plateau ecosystem (Goldstein 1996).

experts, this process is contributed to by increasing sand storms. The rangelands are affected by soil erosion and an impoverishment of the soil because of a lack of chemical elements, such as carbon and nitrogen. The reduction of certain chemical elements in the local soil is also contributing to soil exhaustion (Han et al 2008: 234; Wang 2002; Dan 2002). These changes have been linked to the reduction of humid zones, such as glacier surfaces, rivers and lakes (Han et al 2008: 234; Wang 2002; Dan 2002). Moreover, soil erosion, caused by deforestation, resulted in a rise of debris in the inferior basins of the Nature Reserve's rivers. This eventually led to a series of floods in the eastern regions of the PRC in the 1990s (Yeh 2006).

The productivity and diversity of vegetation on the Tibetan Plateau are decreasing (Han et al 2008). The extinction and overall reduction of flora is often used as a general measure of grassland degradation: the productivity of rangeland grass is only 50 percent of 1950s grass productivity (Han et al 2008: 234). Furthermore, the number of animal species on the Tibetan Plateau has significantly decreased over recent decades because of hunting and the transformation of flora. At the same time grasshopper and rodent infestations have considerably increased (Dan 2002).

Tibetan herders are aware of the changes to the grassland of the Tibetan Plateau over the past fifty years, but do not use the term "degraded" to discuss them. They possess an empirical and detailed knowledge concerning the environment in which they live, linked to their personal experiences. This practical knowledge is derived from working, living and exploiting the resources of the grasslands. It has contributed to the configuration of an approach to dealing with environmental problems that differs from that of environmental experts and the Chinese government.

This way of analyzing environmental problems, based on concrete observations, has not been taken into account by official and scientific discourses. On the contrary, they often discount the knowledge of Tibetan herders as "backward" and "not scientific", thus not worth further consideration. Knowledge can be arrived at either theoretically or empirically. These two different approaches have arrived at a common conclusion: there are environmental problems. However, the conclusions they reach about what should be done about this are completely different (husbandry reduction and nature reserve vs. previous forms of husbandry practices).

When herders evaluated the grassland situation, they always pointed to specific problems closely linked to their work as herders and rarely used the word "degraded". They emphasized that the grasslands were not more "degraded" than in the past, but they noticed that over the last decades environmental changes had occurred. When they discussed ecological policies and the Three Rivers' Sources Nature Reserve project, they confirmed the official discourse concerning environmental problems. However, they immediately focused on specific issues, rather than making generalizations. They argued that the grassland suffers from

serious problems concerning grass growth and confirmed that the quality of rangeland grass is worsening: weeds grow faster than in the past and take over space needed for grass to feed the flock. Moreover, grass quantity is now more frequently insufficient to satisfy flock needs⁸. Another problem often outlined by the herders is that the grass is growing more slowly than in the past.

In general, herders' perceptions of pollution are quite fuzzy and the parameters used for their evaluations vary considerably. This could well be linked to the confusing messages conveyed by government actions, such as the opening of mines and waste-dumping sites in "protected" areas. The herders are told that their flock is damaging the grassland and are taught to not use plastic bags because they pollute. Yet they are experiencing problems caused by mining and waste-dumping in the "protected" grasslands.

Moreover, Tibetan herders relate soil pollution to their religious beliefs⁹: an area becomes polluted once people start to dig and "bother" the soil because of the soil's *lha* (deities) (Stein 1986: 174-183; Tucci 1976: 205-260). This explains why the herders perceive the grassland, where they rear flock, as generally unpolluted, with the exception of some specific valleys where, in recent years, the Chinese government has opened mines or used the land to dump waste. Herders were conscious of the fact that, as experts have pointed out, important changes are happening in the region's ecosystem. On the other hand, their pragmatic way of looking at the problems has enabled them to find alternative explanations for the ongoing degradation, and to offer completely different strategies of intervention.

The causes of degradation

Studies of the Tibetan Plateau's environmental problems also link grassland "degradation" to multiple factors, which include global ecological problems such as climate change. Nevertheless, the grassland "degradation" is mostly imputed to exclusively local factors, such as the "culture" of Tibetan herders (Wang 2002; Tu et al 2008).

Within the scientific literature, the most widely accepted cause of degradation is overgrazing, which is traced back to the 1950s, but has increased since the 1990s. While at the beginning of the 1990s Qinghai's grassland was not judged to be overexploited at all, by the end of the decade, 31 percent of the province's grassland was assessed as overgrazed (Han et al 2008: 235). The increasing exploitation rates are thought to be due to the fact that husbandry was not carried out according to "scientific criteria" (which are not further clarified in these studies) and livestock was held in a way which caused overcrowding and consequent exhaustion of rangeland.

These studies also link degradation and overgrazing to

8. A lack of grass for feeding the livestock is also linked to others factors: i.e. grassland fencing and the obligation to stay all year in the same pastures. See also Pire (2005) and Yeh (2003).

9. On Tibetans beliefs about the natural environment see Huber (1991).

population growth in grassland areas and a growing demand for meat in the PRC's eastern provinces. Both would lead to larger flocks grazing the same amount of grassland. They do not mention the problems caused by grazing on different sized allotments over different time intervals. As a result of the fencing policy and sedentarization, the herders graze flock in reduced sized allotments for longer periods (Pirie 2005; Yeh 2003). Moreover, during the Cultural Revolution (1966-1976), demand for new plots led to an intensification of land clearance and (often failed) attempts to cultivate the grasslands (Banks 2003; Ho 2000). Forestry zones have also been exhausted in the drive to develop and promote the economy of these remote areas. Clearance and resource exploitation—tree cutting, mining and intensive exploitation of grassland—accelerated desertification and soil erosion (Han et al 2008).

Grassland degradation has also been considered to result from the harvest of medicinal plants (Wang 2002; Dan 2002) such as caterpillar fungus (see Sulek, this issue). This activity damages the fragile soil, which, according to Tibetan herders, often does not revitalize, and the medicinal plants and grass hardly recover. Nevertheless, the caterpillar fungus trade has become very profitable in recent years, with massive demand from China's eastern provinces. The value of this root increased by 900 percent from 1997 to 2008 (Winkler 2010). This is why, during the harvesting season, a growing number of people come to the Tibetan Plateau to dig for this root.

Generally, scientific studies accuse Tibetan herders of being the main party responsible for overgrazing and overcrowding because they use grassland in an inefficient way. These studies underline that, although modern techniques of husbandry exist, Tibetan herders still rely on ancient systems based on local beliefs that do not maximize productivity or consolidate the quality of their products. They are therefore judged "inexperienced" and "backward".

All the arguments discussed above have been used to justify the establishment of the Three Rivers' Sources Nature Reserve and the strategies implemented to protect the Tibetan Plateau's flora and fauna. While the Chinese government generally holds Tibetan herders directly responsible for grassland degradation, its policies do not only reflect State concern with environmental problems. As I will argue in the last part of this paper, they also overlap with political priorities, such as territorial control, the surveying and use of rangeland, and regulation and management of water.

Tibetan herders generally acknowledged that the reasons for current environmental problems are similar to those mentioned above. Nevertheless, they named different causal factors. In their view, degradation is not the result of a lack of experience on the part of the herders, but of erroneous grassland production policies and inept exploitation practices. Despite official and scientific discourses, Tibetan herders believe that the environmental problems are rooted in a specific and quite recent moment of PRC history: the division of the grasslands among herders' households.

The introduction of the HRS (Household Responsibility System) at the beginning of the 1980s was the most important transformation in land organization and the PRC's system of production since the establishment of People's Communes during the Maoist period (Bauer 2005; Béja 2004; Goldstein 1997; Samarani 2004). The communes were progressively dismantled and, at the lowest level, territorial divisions were substituted by the administrative village and township (Clarke 1989). In the Amdo region, flock ownership at the level of single households was already practiced before 1956, but lands were communally, not individually, owned (Goldstein 1996). The encampment¹⁰ constituted the lowest level in the division and ownership of land (Clarke 1989).

In the 1980s, the household became the smallest production unit to which the Chinese government assigned a legal status. The financial and welfare systems were restructured according to this economic unit. Released from communes and becoming an autonomous production unit, the household could buy and sell self-produced products in the market.

As a consequence of this transformation, livestock and farming tools previously held by the commune were redistributed to households. Moreover, the Qinghai province government pushed forwards this process and restructured the rangeland's division, dividing and allocating the grasslands to individual households (Goldstein 1996).

The government allocated grassland plots to Tibetan herders who became responsible for land management. With the end of the common sharing of the grasslands, the government hoped to avoid overexploitation, sometimes referred to as the "tragedy of the communes" (Hardin 1968; Ho 2000; Banks et al 2003). Single households were given responsibility for grassland management and husbandry practices. According to this policy, Tibetan herders, as managers of the pastures, were responsible for setting up economic and productivity strategies and for maintaining the fertility and sustainability of their assigned plots. Assigning responsibility in this way was supposed to stimulate herders to undertake a kind of husbandry that would maximize profits while keeping up productivity and preventing soil exhaustion.

In Qinghai, the division of the grasslands took place on the level of production teams (the present administrative villages), which then distributed the land among all households following two main principles: the number of livestock a household obtained during decollectivization and the size of the flock when the pastures were divided (Goldstein 1996). After this division and distribution,

10. Herders lived in encampments composed by several households/tents, which moved and camped together. These encampments called *ru skor* in Tibetan (*ru* translates the Mongolian term for "banner" and *skor* means "circle"), were set up in circular camps, with the center occupied by the flock. They could be composed of different families, but of the same lineage or *tsho ba* (literally "group", referring to a kinship and territorially based group). The *ru skor* was the smallest unit of Tibetan herders' social organization. See also Clarke (1989) and Pirie (2005).

herders were asked to build fences around their pastures and to respect the established boundaries. The official aim was to regulate pastoral practices (Pirie 2005). Inside their clan's (Tibetan: *sde ba*) territory, herders no longer had the right to let the flock graze freely:¹¹ livestock had to stay on the grasslands distributed to the household. My interlocutors claimed that even the flock's movement between summer and winter pastures was sometimes no longer possible.

Consequently when the pastures were fenced, two kinds of territorial conflict quickly emerged: within clans, at *ru skor* level, and sometimes inside a single family group. When the grasslands were divided, disputes between households sprang up because the government criteria for dividing pasturelands, according to my interlocutors, did not take into account the quality and kind of pasture (winter or summer) and soil or water resources. Once the division became effective, herders' households, previously part of the same *ru skor* or of the same family, started to fight because the borders separating pastures were not well defined.¹² In addition, herders did not acknowledge official boundaries that did not take into account the territory's previous divisions at the level of *tsho ba*. These had corresponded to production team (Clarke 1989: 399).¹³ This was another source of conflict as herders claimed property rights over parts of neighboring plots. Between townships, at inter-clan level, fights arose concerning the juridical admission of clan territory since some of the land owned by one clan sometimes fell under the administration of a township in which another clan was living.

As a consequence of rangeland division, seasonal movements from one pasture to another were no longer possible. This means that herders had to graze their flocks using the same pasture all year round. Whereas the government consistently focuses on overcrowding and overgrazing as the main cause of grassland degradation, Tibetan herders understand the prohibition of shifting between different pastures as the principal factor. They believe that this has slowly led, during recent years, to the

11. According to my interlocutors, before the grasslands were fenced, the herders could graze their livestock "wherever they wanted inside their clan (*sde ba*) territory and sometime even in others clans' grasslands." According to Pirie (2005: 18), even single households could move quite freely between different groups' territories. Nevertheless, I am persuaded my interlocutors made these claims to emphasize the problems caused by actual immobility, rather than to assert the absence of coordination inside the clan and between the clans (Clarke 1989).

12. Pirie (2005) criticizing Yeh (2003), argues that conflicts and disputes between Tibetan herders and between herders' clans were not caused by rangeland division in Amdo, but had existed since ancient times. I agree partially with Pirie's argument because there were, previously, territorial conflicts between Tibetans herders and between the different populations sharing this region (Gruschke 2001; Ekvall 1977; Chen 2003). Nevertheless, I also think that there are some new dynamics in the recent conflicts between herders for control over the grassland, i.e. intra-familial conflicts. My interlocutors also stressed this point: according to them, the division of the grasslands also created a serious danger of rifts within families. See also Clarke (1989: 405).

13. According to Yeh (2003: 514), the Chinese government did not even maintain the *tsho ba*'s names when it created the administrative districts.

current state of degradation.

According to the herders, therefore, the degradation of pastures should be associated with the grassland fencing policies, which forced them to abuse the grassland by letting flocks graze uninterruptedly in territories that were too small. Before the fencing of the grasslands, problems such as pasture overcrowding and overgrazing did not occur. Therefore, according to the herders, they are not responsible for current degradation problems because they were just obeying Chinese government orders. It is not a matter of their inexperience or so-called backward husbandry techniques, but of inept political choices.

Tibetan herders, like the scientists, believe that the harvesting of caterpillar fungus is closely related to the degradation of the Tibetan Plateau. However, in their view, this is because people coming from other Chinese provinces to harvest this root do not know the right harvesting techniques and consequently inflict irremediable damage to grassland soil.

The herders employ similar reasoning over the issue of mineral resource exploitation. They accuse the Chinese government of neglecting its responsibility to protect the Tibetan Plateau. Chinese authorities have indeed granted mining licenses to migrants from other provinces and profited from mining activities on the Tibetan Plateau. Tibetan people, therefore, often blame the government for tolerating unregulated exploitation that leads to the pollution of several valleys which belong to the Nature Reserve. In my fieldwork areas, the herders also claim in vain the right to gain at least part of the profits associated with mineral extraction.

Tibetan herders commonly hold the Chinese State responsible for environmental problems, drawing on the same kind of reasoning found in the State's environmental discourse. Deregulated use of plateau resources, such as hunting, overharvesting of medicinal plants, depletion of forest resources and extensive exploitation of mineral resources are problems that, herders say, result from the large-scale in-migration of Han and Hui (Muslim) people and the absence of official rules to protect the plateau's resources.

Such mutual accusations regarding the plight of the Tibetan Plateau highlight official intervention strategies that reaffirm State power. On the other hand, they demonstrate that the Tibetan herders have themselves appropriated State ecological discourses to legitimate their own political claims, for example in the case of caterpillar fungus digging, which will be discussed below. An analysis of the strategies implemented by the Chinese government and the proposals of the Tibetan herders which share the goal of recovering the Tibetan Plateau from "degradation", reveals the politics concealed behind environmental discourses.

Strategies of environmental protection or political affirmation?

The distance between the positions of the Chinese government and the herders concerning environmental

problems increase substantially when improvement strategies and suggestions concerning the implementation of ecological projects are analyzed. Policies for environmental protection implemented by the Chinese government and the actions that Tibetan herders suggest should be taken to tackle degradation are fundamentally opposed. The Chinese government promotes projects that push forward the implementation of rangeland fencing, while the herders support an oppositional strategy calling for a return to former practices that allowed the sharing of grassland between encampments (*ru skor*) belonging to the same *sde ba*.

After the opening of the Three Rivers' Sources Nature Reserve, State environmental protection plans imposed a further reduction of flock size and compulsory herding of the flock on one pasture for a fixed period. As noted above, in some parts of the nature reserve any kind of exploitation has been forbidden. Not only is husbandry prohibited, but the mere presence of persons is not sanctioned.

Following revisions to the Rangeland Law (2002), fencing has been further encouraged. Governmental exhortations to adopt a "scientific" form of husbandry are presented as the key for safeguarding the grassland from further degradation and overgrazing (Yeh 2003: 500).

In environmental protection strategies, particular emphasis has been placed on the so-called "ecological migrations" and the resettlement of Tibetan herders, who are relocated close to existing settlements or principal roads. Tibetan herders were asked, but equally often forced, to abandon their pastures and settle down in these special resettlements. The Chinese government holds that, by banishing human activity and husbandry for periods varying from one decade to perpetuity, it intends to revitalize the degraded grassland.

According to Tibetan herders, the official goal of the Chinese government cannot be reached using the means described above. Given that pastoral degradation commenced with the enforcement of rangeland fencing during the 1980s, their logic runs, the solution to the Tibetan Plateau's environmental degradation cannot possibly be the further implementation of fencing policies that, in extreme cases, lead to grazing prohibition. The key solution to environmental problems lies, according to the herders, in looking to pre-1950 husbandry practices. Settled Tibetan herders claimed that the prohibition of animal husbandry is not the right method to revitalize the grassland. Rather, they believe that the abolition of territorial fencing and the restoration of nomadic husbandry will help to repair the natural environment of the Tibetan Plateau. The restoration of seasonal migrations, practiced three or four times per year using three or four different pastures, should provide sufficient time for the grass to recover from grazing.

The restoration of nomadic practices would also allow herders to pursue a way of life for which they possess the necessary skills and expertise. Practicing husbandry would enable them to live self-sufficiently because they would be able to produce the majority of products needed for everyday consumption. At present, they often depend on government

subsidies, for which they are deemed eligible for a period of ten years beginning from the date of settlement.

Caterpillar fungus harvesting policies: alignment of State and herders' interests

The establishment of the nature reserve and associated environmental protection policies mean that the protected areas are closed for people coming from other provinces of China to harvest caterpillar fungus. This governmental step to preclude non-indigenous people from using the plateau's resources aligns with indigenous discourse. The herders support certain policies and discourses that enable them to pursue their own political objectives related to territorial control and management. The prohibition on outsiders harvesting caterpillar fungus creates an important distinction between indigenous people and outsiders which has significant economic but also political consequences.

The profits coming from this business are considerable: those involved in it can realize as much profit in the space of a few months as the average herder could make after working on the pastures for a long time (see Sulek, this issue). The interdiction of harvesting by non-indigenous individuals means that immigrants have to obtain a license and be officially admitted to the region. That means that they have to pay taxes. The Chinese government thus controls this business through the distribution and withdrawal of licenses and gains significant profits.¹⁴ Tibetan herders have a kind of exclusive harvesting right since they are indigenous people; therefore they do not have to compete with immigrants, at least in the first step of this business.

This prohibition seems to restore a certain degree of autonomy and control over this part of the Tibetan Plateau's territories to the herders. With the intention of preventing outsiders illegally harvesting caterpillar fungus, indigenous people are invited by the Chinese authorities to survey their grasslands. This role in controlling the comings and goings of outsiders on the grasslands and the above-mentioned exclusivity of land usufruct have the effect that herders view themselves as rightly entitled to these territories. Moreover, caterpillar fungus becomes a catalyst for greater social cooperation to ensure effective monitoring of widespread resources.

On an economic level, one of the consequences is corruption. During harvest time, herders receive payments from immigrants who bribe them to gain access to restricted areas. At the political level, this environmental policy restores a certain degree of power to the herders over their ancient territories by returning to them the responsibility of managing the influx of individuals and allowing them to be in charge of the circulation of outsiders on the grasslands.

14. This information was collected during fieldwork and is also based on prefectural level government documents.

The politico-territorial impact of environmental protection plans

Environmental protection plans and strategies, such as the nature reserve and the resettlement of indigenous people living in it, also have political implications. According to Tibetan herders, current environmental problems correlate with a specific moment in history: when several erroneous political decisions triggered the process of pasture degradation. Moreover, they also criticized the lack of adequate regulation and the absence of governmental control over the commercial flow of extracted items such as medicinal plants and mineral resources.¹⁵ This simultaneous absence and presence of the State in pastoral areas can be analyzed from an environmental

the establishment of the Three Rivers' Sources Nature Reserve certainly provide a dispositive to safeguard the ecological well-being of the Tibetan Plateau. However, they also interfere with the local political and territorial equilibrium. They affect practices of control and surveillance of the indigenous people, and they also influence the local system of production.

In the last section, I will examine the mechanisms of territorial control, which derive from the creation of the nature reserve's protected "milieu." I will conclude by analyzing the "ecological migrations" and the resettlement of herders. I will also show how these resettlements are, temporally speaking, simply the latest in a series of strategies to sedentarize Tibetan herders dating back to the 1980s.



Yak Herders, Qinghai. Photo: Elisa Cencetti

perspective. Nevertheless, when we talk about the governance of a specific natural "milieu," ecological discourse develops in concomitance with and overlapping the powers existing in this "milieu." Environmental protection plans and the establishment of nature reserves also reflect political issues. Focusing on matters of power, ecological discourses and policies have to be contextualized at the local level, where they are fabricated and implemented.

The programs conceived for environmental protection and

15. The absence of government intervention in regulating problems on the Tibetan Plateau is also pointed out in the case of disputes and conflicts between herders (Yeh 2003; Pirie 2005).

Three Rivers' Sources Nature Reserve and territorial survey

The establishment of the nature reserve began in the wake of a period characterized by particularly strong confusion over the territorial division and control of the Tibetan Plateau as a result of rangeland partition. Territorial conflicts emerged from grassland distribution due to the complex and fuzzy legislative situation. The legal owner of land, which according to the Chinese Constitution is either the State or collective (the latter is never precisely defined), allocates its territories to households or groups of households, which hold usufruct rights. This legislative situation fixed land distributions

effectuated during the 1980s for long periods (Goldstein 1996: 8-9). Households were able to rent these plots, but they still could not sell or buy them (Rangeland Law 1985), since they were not the landowners.

While the nature reserve project added to this already complex framework, the Property Law (2007) provided for the first time since the dismantling of the communes, a legal framework for the distribution and ownership of land. Tibetan herders gained ownership rights over pastureland and could autonomously sell and buy the land (Property Law: Articles 126, 127, 128). This law should help to solve further escalation of territorial conflicts through better definition of the authorities charged with the settlement of territorial disputes.

However, when Tibetan herders living in the “Three Rivers’ Sources” region became grassland owners, they were constrained by the establishment of the nature reserve. In practice, lands rights often cannot be claimed. By establishing a nature reserve, the State affirms its right to protect the natural environment of its territories. Therefore, even if a herder has pasture rights, these are inferior to the rights of the State as the legitimate owner.

In the Property Law, it is specified that land ownership rights¹⁶ oblige owners to protect and develop the natural potential of the owned lands. If institutions (managed by the government) responsible for environmental protection, assess that the grasslands are damaged and have to be protected, the herders cannot object to these ecological requests and are therefore forced to obey the State’s instructions.

Land ownership rights exist inside the judicial frames set by the State, which continues to use its power to reclaim its lands at any given moment. Through its ecological policies, the Chinese government does acknowledge the property rights of its citizens, but it maintains sufficient sovereign authority over its territories so as not to have to take into account indigenous claims.

Since herders do not possess mastery of the languages (Chinese and English) and scientific discourse of the academic elite, they are not recognized by the Chinese government as holding any generally acknowledged scientific expertise. They are therefore marginalized from discourses concerned with environmental protection and cannot contribute to debates leading to the formulation of ecological policies concerning the territories in which they live.

From the practice of fencing rangeland to new resettlements: “green sedentarization” policies

The biggest changes that Tibetan herders consider that they have had to cope with over the last three decades were introduced by rangeland division and the fencing policy during the 1980s: the interdiction of seasonal flock

16. The Property Law specified that the land ownership rights are given to land owners for a determined period of time which varies from 30 to 50 years. After this period, the State can arrogate the right to dispose of lands (Property Law: Article 126).

movements and the restriction of grazing to the assigned household’s grassland.

In the mid-1990s, a new poverty reduction program was introduced (Yeh 2005: 15). Called *sipeitao* in Chinese, it awarded subsidies to herders who engaged in the construction of houses and shelters for flock, fenced their pastures and cultivated a portion of their pasture with forage. This program reinforced and accelerated the changes experienced by herders after land distribution. Nomadic husbandry practices were slowly transformed due to the constraints of the sedentary husbandry methods introduced by the *sipeitao* program.

When they were asked about the most important and profound changes they had experienced over the last few decades, Tibetan herders living in the resettlements said that rangeland fencing and immobility were the most radical changes in their lives. When they spoke about changes and transformations, they never mentioned the relatively recent “ecological migrations” and resettlement plans. Instead, they brought up the 1980s, when decollectivization and the fencing policy were implemented; according to them, new kinds of territorial conflicts emerged from these transformations¹⁷.

The division of the grassland directly obstructed nomadic practices of husbandry for the first time. Subsequent poverty reduction programs, requiring herders to build houses and shelters, marked another important step toward sedentarization. Herders did not perceive the “ecological migrations” and resettlement, which in the Three Rivers’ Sources Nature Reserve have occurred since 2003, as radical changes in their life-style. They had to move, sometimes ending up in areas far from their previous homes. Some herders also had to sell part of or all of their flock. However, these changes were not as upsetting to them as the division of the grasslands and the fencing policy, which they had been confronted with in the 1980s and the 1990s.

Settling down in resettlements as planned by the “ecological migrations” program is indisputably a further step in the sedentarization process. Nevertheless, it seems wrong to consider this politico-ecological plan the catalyst of the Tibetan herders’ sedentarization process, as it is often presented in Western academic studies and press articles. Rather, the “ecological migrations” of Tibetan herders have simply made visible, through these new resettlements shooting up on the grasslands, this phenomenon of sedentarization, which has been slowly developing since at least the 1980s.

The end of nomadism, which is the most radical change in Tibetan herders’ life-styles, stemmed from fencing and the limits imposed on seasonal movements. Moreover, by the 1980s Tibetan herders were building houses on the grasslands with government subsidies. In addition, a process of government dependency, especially in terms

17. I am aware that my interlocutors might not have wanted to discuss the recent resettlement plans and therefore pointed instead to the grassland divisions of the 1980s. Nevertheless, they always suggested to me that they have been settled down for a long time and that the recent resettlement is more a change of residence than a “life-style” transformation.

of medical and education services, has been driven by the creation of township and county headquarters accompanied by infrastructural development. All of these factors have influenced the trend toward sedentarization.

The political implications of the “ecological migrations” project are linked with territorial issues of land and water control as well as population surveillance. These issues led to the original policies to divide and fence the grasslands and, more recently, to establish the nature reserve project and impose restrictions on grassland exploitation. The “ecological migrations” program provides the Chinese government with a new tool to assert its sovereignty over regions with large national minority populations. The politic of this program is concealed under the discourses of environmental protection, which are presented as purely “scientific,” thus justifying the program’s implementation.

Yet, the resettlements are indeed a way to bolster the State’s power over people spread across a vast area that is difficult to control. Surveillance of and control over people are facilitated by gathering and settling them in defined places (Scott, 1998). The resettlements are particularly “visible” zones for administrative forces: the houses are all identical, enumerated and organized one after another similar to the structure of a chessboard. The PRC’s president Hu Jintao’s vision of a “harmonious society”, which has recently become the main aim of PRC policy, is mirrored in these new resettlements. These places in which the activities of the inhabitants in their well-aligned and identical houses are visible from a birds-eye perspective, spatially reproduce the abstract concept of “harmonious” society.

The resettlements are thus a Chinese government response to problems associated with both environmental protection and control and surveillance of the population. The resettlements are part of wider strategies to protect and control the Tibetan Plateau’s natural resources, including the establishment of the Three Rivers’ Sources Nature Reserve. Nevertheless, they also enable the State to exert its power in a defined “milieu.” This power, interfering in the junction between a geographic milieu and human being, creates the conditions for its sovereignty (Foucault 2004: 3-56). Resettlement zones also serve to alter husbandry practices and force Tibetan herders to lead a sedentary life, thus bolstering territorial control. The resettlements reflect a multipronged strategy adopted by the Chinese government to solve problems of environmental and territorial governance on the one hand, and problems of sovereignty over the Tibetan highlands on the other.

CONCLUSION

This paper has shown how ecological conceptions in the PRC are closely tied to the political discourse of territorial control. The ecological conceptions of Tibetan herders and State ecological policies were explained and analyzed through political contextualization and “microanalysis” of the local milieu.

Although a shared view of the Tibetan Plateau’s

environmental problems does exist, Tibetan herders’ interests and aims do not match those of the Chinese government and vice-versa. This difference of objectives generates different kinds of ecological discourses and policies. The Chinese government, on the pretext of environmental protection, is reducing and gathering the inhabitants of the Tibetan Plateau, thus allowing better control and surveillance over a troublesome national minority. Tibetan herders, on the other hand, appropriate State ecological discourse to advocate a turn towards previous husbandry practices linked to a nomadic life-style. This clashes with the PRC’s political agenda.

The last part of this paper described the milieus where ecology and politics overlap. It showed how ecological discourse and environmental protection projects are used as tools to impose ecological but also political wills, the latter concerned with the control of the territories and peoples of a strategically important region, rich in natural resources.

From a Foucauldian perspective, the Three Rivers’ Sources Nature Reserve can be viewed as a “milieu” because it is located at the point of intersection where power intervenes in the tangle between the natural and human worlds. The scientific discourse nourishes a political discourse that influences the people and the natural environment examined by this scientific discourse.

I use the term “green sedentarization” to refer to this tangle between what is related to power and what is linked to ecological discourses.¹⁸ Sedentarization, in political terms, is not something new within the Chinese government political agenda¹⁹, but the combination of this objective with environmental protection discourses is.

The switching from political to ecological frames arises from the ambiguity created by the State’s intervention in a specific “milieu”. This fixed space is “naturalized” by this switching process and, by doing so, its political character is masked under ecological frames. This prevents Tibetan herders from raising any kind of political claim linked to these policies because they are introduced in the apparently “apolitical” field of ecology. At the same time, the privileging of scientific expertise and discourse and the assumption of the backwardness of Tibetan herders in this regard, prevent the herders from participating in discussions relating to environmental projects on the Tibetan Plateau.

State action wearing a “green” label minimizes the importance of and disguises its political objectives of control and surveillance. Analyzing ecological discourses, which are frequently employed in current Chinese and international debates, we should not forget the nature of governmental “green” interventions. Although “green” is a trope often mobilized to justify actions to preserve nature both on a national and global scale, supposedly “green” plans and policies to protect “natural” environments also have far-

18. For an analysis of the links between politics and ecology see also Agrawal (2005).

19. Another infamous attempt to sedentarize nomads in the PRC is the Mongolian case (Bulag 2002; Even 2006; Seneath 2000).

reaching consequences for local political equilibriums and local people's access to subsistence resources and commodity products.

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