A STUDY ON THE RATIONALE AND CONSEQUENCES OF ECOLOGICAL MIGRATION IN THE SANJIANGYUAN OF THE QINGHAI TIBETAN PLATEAU[1]

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ABSTRACT

Ecological migration, *shengtaiyimin* (生态移民), is mainly a government-led initiative to develop the western regions of China, allow degraded landscapes to recover, and to improve the living standard of its inhabitants (Du,F.C.2006). According to the official government document *Settlement Project for Tibetan Nomads in Qinghai Province,* all Tibetan herders in Qinghai province who have not yet 'settled down' – over 530,000 people – will now be settled (urbanized) within the next five years (*People's Daily,* 11 March 2009). This paper focuses on some of the critical issues related to eco-migrants, including the social, economic, and ecological rationale and consequences of ecological resettlement. Moreover, it will examine the environmental effect of eco-resettlement and local herders' perspectives on migration and grassland protection.

提要

从大的移民分类上，中国牧区的生态移民是政府主导型的"非自愿性移民"。其主要目的是为保护某个区域特殊的生态或让某个地区的生态得以修复，并减缓牧民贫困（杜，2006）。许多地方的生态移民强调"群众自愿、政府引导"，但有的地方是"牧民在自愿情况下的被动选择"，搬迁牧民对政府有着较大的依赖性。根据青海省的官方文件，从2009到2014年，约有53万游牧民要实现定居。本文以青海省南部"三江源"地区为例，简要探讨生态移民的动因和社会经济后果，生态移民的环境效果，当地牧民关于生态移民工程和环境保护的一些看法。关键词：三江源，生态移民，藏族牧民，移民管理

I. ECO-MIGRATION POLICY IN SANJIANGYUAN

Sanjiangyuan refers to the source region of the Yangtze River, the Yellow River, and the Lancang River (the upper stream of Mekong River), which is popularly known as the "Water Tower of China" (and even in Asia at large) due to its annual water supply of 60 billion m^3 to the lower streams. Located at the southern part of Qinghai province with an average elevation of 4200 m asl, Sanjiangyuan has four Tibean autonomous prefectures, including Yushu, Golok, Hainan and Huangnan; 16 counties; as well as 127 xiangs and towns. Its 363,000 km^2 area accounts for 50.4% of the total area of Qinghai. Tibetans constitute 90% of Sanjiangyuan's population, with the other 10% comprised of Han, Hui, Sala, and Mongolian nationalities. The regional economy relies heavily on agriculture. According to statistics from 2006, Sanjiangyuan's population of 650,000 represents 11% of Qinghai's total population, while its 450,000 herders represent 69% of the region's total herders.

Historically, Sanjiangyuan region used to be a plateau meadow with fertile grassland, abundant water resources, and many wild animals. However, over the past fifty years, as a result of climate change and some unreasonable human

activities, large areas of grassland have become degraded and rendered arid. Glaciers, jokuls, lakes, and wetlands have been shrinking and have dried up, the habitats of wild animals have been destroyed, and the biological diversity of the region reduced. The serious degradation of the ecological environment of Sanjiangyuan Region and the issue of ecological security attracted the attention of China's government and the international community. In order to restore and protect the ecological environment of the Sanjiangyuan region, China's government established the Sanjiangyuan National Nature Reserve in 2003, with a total area of 152,300 km^2, which is 42% of the total area of Sanjiangyuan region. The nature reserve is divided into three functional areas: core zone (31,200 km^2 - 20.5% of the total nature reserve), buffer zone (39,200 km^2 - 25.7% of the total nature reserve), and experimental zone (81,900 km^2 - 53.8% of the total nature reserve). In 2004, the State Council approved a project to protect and construct the Sanjiangyuan nature reserve. This is a seven-year project (2004-2010) with a total investment of ¥7.523 billion RMB or $1.1 billion USD, which was divided into three categories - ecological protection and construction, farming and herding production infrastructure, and ecological protection support — as well as 22 sub-projections. According to the *"overall plan for protection and construction of Sanjiangyuan nature reserve in Qinhai"* ("Overall Plan for Sanjiangyuan" for short),[2] the ecological protection and construction project involves converting grazing land to grassland, converting cropland to forest, controlling the ecologically degraded land, fireproofing of forest and grassland, controlling the grassland plague of rats, conserving water and soil and establishing protection facility, with a total investment of ¥4.925 billion RMB. The infrastructure project for farmers and herders involves an ecological migration project, the establishment of a small town, a relevant project for grassland protection and a drinking water project for humans and livestock, with a total investment of ¥2.223 billion RMB. The ecological protection support project involves an artificial rainfall project, scientific technological support and ecological monitoring, with an investment of ¥0.359 billion RMB.

In the "Overall Plan for Sanjiangyuan", ecological migration and converting grazing land back to grassland were combined, involving the resettling of 55,774 herders from 10,142 families from Sanjiangyuan Region, either locally or to small towns, with the aim of reducing 3,184,000 sheep units. A grazing ban will be implemented in the grasslands of emigrant herders, with a grazing rotation for 10 years. The herders will receive subsidies according to the set standard: the government will build a free house of 45 m^2 for the migrants, investing ¥800 RMB per m^2.; a 120 m^2, barn costing ¥200 RMB per m^2; as well as provide ¥400 RMB per person as a moving subsidy. Moreover, the migrant herders with a forage subsidy for converting grazing land back to grassland over 10 years can be divided into three types: households under a permanent grazing ban with an annual subsidy of ¥8,000 RMB or $1176 USD per family; odd-moving households with grassland use certification receiving an annual ¥6,000 RMB or $882 USD per family, and for households without certification, ¥3,000 RMB or $ 441 USD per family annually.

After the project started, all levels of local government in Qinghai province devoted considerable manpower, material resources and energy, and achieved some results. However, for the herders and relocated communities, some socio-economic problems emerged.

II. THE PRACTICE OF ECOLOGICAL MIGRATION AND CHALLENGES

Within the migrant category, the academies categorize ecological migrants following government regulation as "non-voluntary" migrants. Globally, non-voluntary migrants are susceptible to serious social and economic risks. In the research, the Sanjiangyuan ecological migration process is effected through government intervention: the local government is responsible for the migrants' livelihood and the migrants depend on the government and have high expectations of it. The government's responsibilities include organizing the project; promoting the importance of protecting Sanjiangyuan among the herders; promoting the advantages of the moving policy among the masses; persuading the herders to "sacrifice the small family for great country," and so on.

Based on my field work and interviews with local herders and officials over the past four years[3], migrant herders can be divided into three types: first are those herders from the rural area who used to be poor , named "lack of livestock family" and "no livestock family", who make up 70% of the population of migrant village; second are the families who have already accumulated some wealth- they did business in the rural region, or are local village employees with many yaks and sheep at home- and are named "rich family", making up 10% of the migrant population. This group aspires to leave the nomadic lifestyle and become villagers through the migration project. The third type of family, named "education-brought migrant" makes up about 20% of the migrant population. So that their children may receive an education, these families sell what they own in the rural area and move to town.

In my point of view, the ecological migration in Sanjiangyuan is not a simple population movement, but rather a concentrated process of traditional Tibetan nomadic society shifting to village settlement, carrying with it deeper issues such as the radical reform of rural

production modes and herding lifestyles. Migration and the subsequent urbanization process have had a great impact on natural ecology, social and economic structure, and the inheritance of ethnic culture in the Sanjiangyuan region. There are many problems and serious challenges:

Firstly, migrants' standard of living is declining significantly. Although after moving, migrants' children have improved opportunities in education, housing, health and transportation, the overall living standard of migrants has decreased. Interviews with migrants revealed that many found it difficult to live on the country's forage subsidy alone. "Just giving me a house doesn't solve the root problem." This quote is very representative: although the government arranged some labor output in Tibetan blanket weaving and vegetable plantation, the outcomes are insufficient because production in most of these businesses is suspended. Moreover, the necessity of milk, meat and fuel, which used to be available through livestock breeding, must now be purchased in the marketplace. Most migrants cannot afford village life with their very limited incomes. The government has taken some measures to train migrants in order to increase skill and labor output, but a realistic alternative industry is hard to establish. Furthermore, in the established migrant villages, young people have grown up and got married, but cannot have their family homes because they do not have incomes or receive migrant subsidies as new households. Some rural regions have not included certain nomadic groups in the compensation scale of the ecological migrant. These all affected the migrants' living standard. After the grazing ban policy was put into effect, every migrant household was provided with an annual ￥8,000 RMB subsidy. Since an alternative industry hasn't been established, most of the migrants rely entirely on the subsidy, which does not even cover their daily expenses such as food, water, electricity, clothes, transportation and religious activities. Moreover, inflation further renders the subsidy inadequate. To compensate for their meagre incomes, some migrants find work in cordyceps-digging, blanket-knitting, small business, or as security guards, taxi drivers, migrant laborers, etc. The fluctuating income from odd jobs and the poor salaries they receive in low-level technical jobs further contribute to the decline in their living standard.

Secondly, it is hard to identify the ecological migrants' identity. Many ecological migrants are unsure of their identity after moving. They call themselves "four-nots" in jest: they are not herdsmen (no longer having grassland to use); nor farmers (holding no cropland and therefore unable to cultivate), nor city dwellers (they are not registered villagers because they remain registered inhabitants of their ancestral farming area), nor are they workers or members of a cadre (thus unemployed). Some migrants are on the "margin of the margin" of society and belong to "the underprivileged of the underprivileged". At the same time, conflicts exist between migrants' villages and the original local communities related to issues of infrastructure construction, land management, school education and social security. Villages concerned include the Kunlun ethnic cultural village in southern Germud City (from Qumahe and Yege Village of Qumalai county in Yushu Autonomous Prefecture), the new migrant village of Guoluo of Batan, in Tongde county in the Hainan Tibetan Autonomous Prefecture (from the Heihe and Huanghe villages of Maduo county in the Guoluo Autonomous Prefecture).

A third issue is the return of migrants to their native regions. Some of the project's objectives and certain official promises have not been fulfilled or fully fulfilled by the government, which has resulted in the disappointment, dissatisfaction, and bitterness of some migrants towards their government. Some examples of problems are: the sub-standard quality of migrants' homes; failure to provide migrants' subsidies on time; lack of access to facilities such as water, electricity, road and cable TV etc. in certain migrant communities; the communities' distance from or lack of schools; a lack of lodging at school; and a lack of local temple, etc. Because some herders cannot live in the town, they are forced to rent or sell the house supplied by the government at a very low price and return to rural areas where they can work as shepherds for friends or relatives, or seek new livelihoods. These returning migrants account for 20% of the total resettled communities in the Sanjiangyuan. Most of them are seasonal returnees, which means they spend summers in grassland areas and return to the settled village in winter, especially during the period of Chinese New Year (January-February).

A fourth problem is a loss of ethnic culture. After ecological migration, Tibetan herders' traditional nomadic practices and their traditional knowledge of grassland ecological systems are lost. There are therefore challenges in the inheritance and protection of the ethnic culture.

All the above issues are interconnected, with some related through cause and effect. For example, the ecological migration project and the anti-poverty policy lead to an increase in migrants' dissatisfaction and bitterness toward the government, which in turn caused instability within migrant societies and thus the different levels of return to native regions.

III. THE ENVIRONMENTAL EFFECT OF ECOLOGICAL MIGRATION

As mentioned above, the ecological rationale for ecological migration – from a governmental perspective - is "to reduce the pressure on natural grassland and protect grassland ecology effectively" (Qinghai Engineering

Consulting Company 2003. What was the environmental effect when this policy was carried out? Based on my field work and interviews with local herders and officials, we found out that after a 5 to 8 year grazing ban (2003 to 2010) in the core zone of the Sanjianyuan region, with the expansion of a grazing ban area and habitat for wild yaks, the ecology of some pastures and the number of wild animals has been slightly restored., However, a significant improvement has yet to be seen while new problems continue crop up.

Firstly, there are difficulties in the management of grazing ban pastures. According to the *tuimuhuancao* project, the local government (specifically county-level government) should carry out the grazing ban policy for the pastures left behind by migrants. However, due to a lack of special funds, these pastures were plunged into disorder through poor management. Moreover, the disorganized location of pastures added compounded managerial obstacles. In other words, the difficulties of managing grazing ban pastures hinder the success of ecological restoration in the Sanjiangyuan.

Secondly, there is a dispute over grassland. The implementation of the ecological migration project increased the grassland dispute and conflicts between Qinghai and Tibet, resulting in social instability. Since grasslands form the basis of herders' livelihood and lifestyle, they pay considerable attention to their rights over grassland. According to the herders, after some ecological migrants refugee moved out, their grassland was occupied by another group who raised large number of livestock, resulting in an increase in the scale of livestock raising. This not only ran contrary to the goal of reducing animals, but also created the new phenomenon of herding across district lines and invading and occupying grassland. This resulted in new disputes over grassland boundaries, especially between Qinghai and Tibet.

Thirdly, a fairly good pasture faces the danger of degradation after being fenced. The government-funded chain link fence erected around degraded pastures indicates a grazing ban or a limited grazing policy, designed to restore the grassland in Sanjiangyuan. However, some herders erect the chain link fence around fairly good pastures, either used as winter pastures for livestock or pastures for weak and sick livestock. While the eco-environment of fairly good pastures faces the danger of degradation, the grazing ban's goal of growing grass and restorating local ecology can hardly be achieved. Due to the fact that the chain link fence is government-funded, herders readily support the grazing-ban and limited-grazing policy in order to obtain the fencing. The chain link fence separates one pasture from another, which not only puts an end to the mixing and loss of livestock, but also prevents the disputes arising from cross-border grazing and trampling (after the implementation of production quotas for individual households, all pastures have rough boundaries). Although fenced pastures liberate herders from having to monitor the grazing livestock, the consequent idleness brings about other problems, such as alcohol abuse, fighting, mischief, etc. Some young herders even seek out material diversion in neighboring towns.

Fourthly, only an appropriate number of livestock can stimulate the growth of grass. Compared with open pastures, fenced pastures cover a relatively smaller area (several thousand metres rather than several square kilometers). The repeated trampling and grazing of livestock in the limited area causes further degradation of the pastures. Although the fenced pastures can bring about temporary ecological restoration, they will fade and wither in two or three years. Due to eco-resettlement and the grazing ban within fenced pastures, these areas without livestock and herders are rendered lifeless, while neighboring pastures are full of vitality. It is said that pastures should be frequently grazed by livestock; periodic grazing or a complete lack of grazing will produce bad grass that the livestock will, in turn, refuse to even taste. Tests made by driving livestock into abandoned pastures showed that the animals avoided such pastures and instead searched for fresh grassland. According to herders, a new pasture is created by driving different livestock into it, which will produce a mature field after years of grazing. However, it is very difficult for herders to cultivate such pastures because livestock don't like new grass and often die in great numbers.

Specialists (JA Klein J Harte, and Zhao XQ 2007)[4] as well as herders conclude that the eco-environment of pastures is closely related to factors such as climate, rainfall, the number, type and grazing of livestock, and thus the outcome of a long-term relationship between herding and nature. A grassland with an appropriate number of livestock can stimulate the growth of grass, while a new pasture requires years of grazing before entering its mature period. While grass will grow in a fenced pasture where grazing has been banned, in the long run, degradation will show. Herders explained that while livestock graze, their manure is scattered in the pastures. This not only provides fodder for the pastures, but also stimulates the growth of microbes in the soil, further nourishing it. It also allows for undigested grass seeds in the manure to be scattered over the pastures and grow into strong grass. Fenced pastures with no livestock, by contrast, lack the manure and nutrition, causing both grass growth to stagnate and the quality of the pastures to be degraded.

CONCLUSION

Eco-migration is aimed at protecting and restoring rural ecosystems so as to improve the lives of herders. However, the progress of the eco-migration project and the relocation of Tibetan herders from their traditional lands raises several key issues. In particular, the ecological rationale for this policy and its social implications requires careful examination. Ecological migrants face challenges such as geographical resettlement, occupational transition, adaptation to urban life, and maintaining cultural traditions. My suggestion to policy-makers is to find alternatives to moving people, namely by reasonably controlling the scale of livestock so as to achieve the balance between grassland, livestock, and the human beings.

FOOTNOTES

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[2] Qinghai Engineering Consulting Co.2003. "A General Plan of Ecological Protection and Construction of Sanjiangyuan National Reserve Area of Qinghai Province", printed not for public, May 2003.

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[4] Klein JA, Harte J, Zhao XQ. 2007. Experimental warming, not grazing, decreases rangeland quality on the Tibetan Plateau. Ecological Applications 17(2): 541-557. Foggin, J. Marc. 2008. Depopulating the Tibetan Grasslands: National policies and perspectives for the future of Tibetan herders in Qinghai Province, China. Mountain Research and Development 28(1): 26-31.