

# Individual land tenure and the challenges of sustainable land use and management in a semi-arid region in China

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## Resumo

A política de desenvolvimento rural da China com um foco na posse individual da terra dirigida pelo Estado ainda tem que enfrentar os desafios prementes da pobreza rural e degradação dos recursos naturais em regiões semiáridas. Incongruente com as condições ecológicas locais, sociais e políticas, o atual sistema de posse da terra não foi capaz de oferecer incentivos aos camponeses para seguir as políticas do governo. Pelo contrário, tem contribuído para crescentes tensões sociais e políticas. Este estudo de caso é baseado em um município pobre que está apresentando agravamento da aridez do solo e desastres naturais no norte da China. Ele examina as ligações entre a posse da terra, pobreza e governança dos recursos naturais. Ele enfatiza como os camponeses locais percebem estas questões e lutam pela sobrevivência. Ele argumenta que a adequação de um sistema de posse da terra só pode ser alcançada se a natureza fragmentada da posse individual puder ser corrigida por meio de desenhos institucionais inovadores. Contribui

## Abstract

*China's rural development policy with a focus on state-led individual land tenure has yet to address the pressing challenges of rural poverty and natural resource deterioration in semi-arid regions. Incongruent with local ecological, social and political conditions, the current land tenure system has failed to offer peasant incentives in following government policies. Rather, it has contributed to rising social and political tensions. This case study is based on a poverty-stricken county that is experiencing the aggravation of soil aridity and natural disasters in North China. It examines the linkages between land tenure, poverty and natural resource governance. It emphasizes how the local peasantry perceives these issues and struggles for livelihoods. It argues that the appropriateness of a land tenure system can only be achieved if the fragmented nature of the individual tenure can be redressed through innovative institutional designs. It contributes to a critical understanding of China's agrarian reform by articulating the need for land tenure diversity*

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para uma compreensão crítica da reforma agrária da China, articulando a necessidade de diversidade de posse da terra que sirva ao objectivo global de uso e gestão sustentável da terra e conforme sadias relações entre o estado e os camponeses.

**Palavras-chave:** regime de economia familiar com responsabilidade, pobreza, relações de terra, mudança institucional.

*that serves the overall goal of sustainable land use and management and shapes sound state-peasant relations.*

**Keywords:** household responsibility system, poverty, land relations, institutional change.

## 1. Introduction

Land desertification is one of the major environmental challenges for the Chinese government to achieve its sustained rapid economic growth through tackling poverty and unsustainable natural resource use and management in vast regions especially in northern China. It is in this region that dust storm is affecting the capital Beijing and other major cities. Dust storm is concentrated in the agro-pastoral zone in this region, where farmland and grassland constitute the major landscape patterns under semi-humid and semi-arid conditions. In this area, dust storm has occurred frequently, for instance, 9 times in 2000, 13 times in 2001, 17 sandy days in 2002 and 4 times in 2004. Thus, the management of land desertification has become a major environmental agenda of the government (WANG et al, 2005). This region is also among the most noticeable ones that have experienced sharp reduction of cultivated land (LIN & HO, 2003).

Greening the region through ecological construction is a major policy initiative of the central government to drastically improve the rural environment by enhancing vegetation cover (Jiang, 2006). However, this effort is severely undermined by the adverse effects of economic development on the natural resources, as most reform policies have accelerated, rather than, averted, rural land degradation (MULDAVIN, 1997; SANDERS, 1999; WILLIAMS, 1996). Ironically, it is argued that it is the local government's aggressive efforts to improve grassland and pasture that have resulted in this failure, for they disregard the ecological processes of the dry region. By focusing on greening or equating ecological construction with intensive land-use practices, such a pursuit of short-term gains has not led to the accomplishment of policy objectives and has met unintended consequences (JIANG, 2006).

Furthermore, the organization of ecological construction is predicated on land tenure reform in the post-reform era during which the former communes were replaced by the Household

Responsibility System (HRS) in the early 1980s. The HRS allows for the distribution of commune-held land and production resources to households who are entitled to use the resources for a long period by following the rules of government, while land ownership rests with the village collective. As a common practice, farmland is distributed among households, and fencing or enclosure of grassland for grass rehabilitation and tree planting is taken as a profound approach to distill the incentives of the householders in the process under the assumption that they will have ample space to exercise their rights and gain direct benefits (JIANG, 2006). To a certain extent, it has stimulated peasants' incentives in production and thus agricultural development. As a result, until the mid-1980s, total agricultural output grew by no less than 7.4 percent per year (HUANG, 1998). Chinese peasants had enjoyed greater freedom to sell surpluses after fulfilling obligatory grain quotas as compared with the commune era.

However, since 1985 agricultural growth has slowed down by 3.8 percent per year. And rural environmental degradation and depletion of natural resources have made many poor people fall back to poverty (LI et al, 2005). Many scholars hold the assumption that the retarded growth and continuing poverty are caused by the lack of clear-cut private titles to land as farmland ownership remains with the village collective. Such a form of ownership is often viewed as ambiguous in light of the mounting evidence of illegal land expropriation, land conflicts and more importantly, unsustainable land use and management. Furthermore, collective ownership obstructs the development of a healthy rural land market, which is the key to the realization of economies of scales in agricultural production and poverty reduction. This two-tiered rural land system that combines public ownership with private land use rights is also prone to corruption and rent seeking of local elites. To capitalize on the advantages of the current HRS, China would need a more individualistic institution that facilitates the development of tradable land rights or a rural land market under the rule of law (CAI, 2003; CHIN, 2005; LAI, 1995; also see HO, 2005; SZIRMAI, 2005).

Bramall (2004) argues that one should not overestimate the role of HRS in the Chinese agriculture. Rather, government intervention, technological advancement and natural conditions have played a more important role. The current small-size household farming system has caused major problems. These include fragmentation of land, land lost to paths and boundaries and conflict over access to irrigation systems among village groups. Moreover, it makes large-scale agricultural production extremely difficult. Access to land has not been the basis for China's agricultural prosperity. Land is valuable because of price support for agriculture rather than the greater efficiency of small-scale farms.

Transforming the HRS into more individualistic land tenure may not provide a viable solution. As Hu (1997: 175) points out, the current land tenure system has encouraged short-sighted decisions and irresponsible use of land resources by the peasants. Peasants pursue immediate and short-term gains, and this is exacerbated by land fragmentation. The latter hampers

irrigation and drainage and leads to the degradation of China's agro-ecological environment. Local governments do not function effectively in organizing agricultural production and overall rural development due to a lack of resources and democratic governance. On the one hand, the lack of resources and good governance has hindered their role in sustainable rural development. On the other hand, slow agricultural development has generated insufficient resources for local governments to deliver basic rural services and thus win the support of the peasantry. Moreover, the Chinese peasantry, to a large extent, has not been organized in a way that their land can be better utilized and managed. As a result, they have not managed to gain substantial benefits from their land except for the purpose of subsistence.

In semi-arid regions in China, in applying the individualist land tenure reform characterized by the HRS, the government's goal of averting the tragedy of the commons (HARDIN, 1968) has not been met as it is interwoven with complex ecological, social and political conditions, which underlie the appropriateness of a single land tenure system. Thus, this paper challenges any preconceived model of land tenure with an attempt to explicate its linkages with natural resource governance and rural development. Moreover, it aims to throw light on how the HRS actually fragments rural social and political relations, which are pillars of natural resource governance and rural development.

Drawing on the case study of a nationally designated poverty-stricken county, this paper explores the underlying institutional constraints especially concerning the changing property rights institutions and discusses the major pitfalls of the HRS in governing the use of land resources by the poor whose livelihoods have become more vulnerable to the degradation of these resources—grassland, forestland and farmland. It manifests the linkages of peasant livelihoods, land-induced conflicts among different actors and their contestations over resource utilization. It ends by indicating the need for policy changes to allow for peasants' collective choice over more appropriate land tenure systems that contribute to sustainable land use and poverty alleviation in semi-arid regions in China.

## 2. Ecological conditions, poverty and agricultural policy response

This case study is based on the fieldwork conducted in Guyuan County, Hebei Province, in 2008. The research methods were mainly qualitative, as it was extremely difficult to gather data from household survey and scant data published. I used participant observation as the most effective tool of research as it enabled me to get closer to the interviewees and learn about their livelihoods and land use practices. But most of the interviewees were reluctant to speak given the sensitivity of the research topic. I managed to gather the views of 30 informants from

county and township governments and local peasants in 8 villages of slightly different economic and natural conditions. The field results were supplemented by government published and unpublished reports and policy documents.<sup>1</sup>

The mountainous Guyuan County has a total area of 3,654 square kilometres and a population of 230,000 in 124 villages. It is situated to the northwest of Beijing—the capital of China (just 400 kilometres apart), and in the southeast of the Inner Mongolia Autonomous region (see Map). The county also falls within the ecologically-strategic region under the Three North Shelterbelt Programme that is to protect China's semi-arid and arid land from degradation. The Chinese government started this programme in 1978 and planned to spend 40 billion Yuan (1 US Dollar = 6.78 Yuan) over 70 years to create 35 million hectares of human-made forest. Perhaps as the largest government project to re-engineer the rural landscape (JIANG, 2006: 1913), the programme is also aimed at preventing sand storms from entering the inner regions such as Beijing. Average precipitation remains 392.3 mm (WANG et al, 2005: 2403). As a result, the shortage of water is a major threat to farming. Hebei, together with other provinces in North China, produces almost 25 percent of China's total agricultural output, although it has at its disposal only 5 percent of the county's water resources. Irrigation is extensively used in agriculture (KAHRL et al, 2005: 13). Moreover, large part of its soil is covered with sparse vegetation as a result of salinization and alkalization (WANG et al, 2005), although large tracts of grassland and forests spread out in certain parts.



**Map 1** – Guyuan County, Hebei Province, China

Guyuan is highly prone to natural disasters that affect an average of 30 percent of the farmland. Drought occurs almost every year, which causes much damage to the farmland. This damage is exacerbated by the continuous reduction of annual precipitation rate; as a result, local peasants have to increase their reliance on irrigation for farming. Economic development has caused

<sup>1</sup> Names of interviewees, villages and local government departments are omitted.

the increasing loss of farmland, land degradation, loss of grassland and forests. Accordingly, the natural resource base especially soil fertility and groundwater level has declined dramatically. The local economy is constrained by unsustainable natural resources use and management. Poor access to public infrastructure and technical services has precluded many peasants' pursuit of better farming and marketing of their produce (GUYUAN COUNTY GOVERNMENT, 2003: 97).

The county features a combined economy of cultivated farming, animal husbandry and tourism, while the presence of industries remains minimal due to its various natural and infrastructural constraints. With an average of 0.43 ha of arable land per capita, it has been a nationally designated priority poor county since 1994. A total of 124 villages with a population of 93,069 or over 40 percent of the total population of the county are targeted for poverty alleviation. Despite the progress made especially in the promotion of large-scale vegetable farming since 1998, there are still 78,600 people living on an average annual net income in the region of 100 US Dollars. Poverty reduction continues to be a major task of the county government (GUYUAN COUNTY POVERTY ALLEVIATION OFFICE, 2007).

To address poverty, since 1998, the county government has spearheaded the development of agribusiness enterprises on the assumption that this trajectory would enable different villages to develop their economies of scales. Animal husbandry and vegetable farming have been promoted as the two most important enterprises for poverty reduction. It has become a well-known region for supplying milk, beef and vegetables to other parts of the country, especially the North. In 2007, for example, 80 percent of the villages or 40 percent of the population were involved in vegetable farming, which occupied 15 percent of the arable land. Till now, this sector has remained the most important sector in agricultural development (GUYUAN POVERTY ALLEVIATION OFFICE, 2007).

However, before 1998 cash crop farming in the county was not mainstreamed. Instead, traditional crops such as oats and flax were widely planted for both domestic use and the market, although profits for the peasants were minimal. These crops are still planted today on relatively small scales, but they are not as profitable as vegetable farming. Paradoxically, they are more drought resistant than vegetables. The introduction of vegetable farming by the local government as an alternative was assumed to be a quick fix to prolonged poverty, yet the extent to which poverty has been reduced is limited. While peasants shifted their traditional farming to the "modern" forms, the majority of them have not benefited from this switch. Natural disasters, water shortage and a lack of collective organization of farming constrain peasants' efforts in maximizing farming efficiency and market access. Both the county government and the peasants have voiced their concerns about the sustainability of the current farming methods in light of these challenges. Above all, peasants' lack of information on the market, choice over farming and off-farming employment opportunities has further complicated their difficult livelihoods.

### 3. Changing land relations: from mutual help to conflicts

Understanding the history of land tenure reform in this county is important to the analysis of the changing land relations which are central to rural development and village governance. Before 1949, most agricultural land in Guyuan County was owned by landlords, rich peasants and merchants. Ordinary peasants owned little or no land at all. Only a small number of poor peasants managed to become smallholders after many years of hard work and savings. The ratio of land occupation between the rich and poor was nearly 8:1—an indicator of a high level of social and economic inequality. The majority of the peasants maintained their livelihoods through renting the land of the landlords and other rich peasants. And land transactions took different forms which included land leases, sales, mortgages and the hiring of farm labourers by landowners.

The land revolution led by the Communist Party called for the abolition of the exploitive feudal land relations with a view to uniting the poor peasantry to overthrow the Nationalist government. Many landlords' landed properties were confiscated and redistributed to the poor peasants. The victory of this revolution faced an immediate challenge for agricultural development, since it was a drastic process of severing the old productive relations. The peasants with redistributed land could hardly cope with the shortage of labour, livestock and machinery, which were all essential to efficient farming. Peasant cooperation became a necessary institution to deal with these problems. After 1950, many temporary and year-round mutual help groups were established based on voluntary principles. These groups with varying numbers of participant households played an important role in offsetting the shortage of human and technical capital through the exchange of labour, livestock and machinery. During this period the number of the mutual help groups increased substantially. For instance, in 1950, only 2.8 percent of the households were involved; but in 1954, this number reached 81.7 percent (GUYUAN COUNTY GOVERNMENT, 2003: 197).

The establishment of peasant production organizations would not have been easy without government dominance and intervention. Their transformation went through three stages. At the first stage, in 1952, primary agricultural cooperatives were piloted and rolled out to the whole county. Individual households remained as the landowners, but also as cooperative members who received the benefits based on their labour contribution. Land use, management and agricultural production were all arranged by the cooperatives. At the second stage started in 1956, the primary cooperatives and earlier established mutual help groups were transformed into advanced agricultural cooperatives. Collective landownership replaced the old private ownership. All peasant households automatically became members of the cooperatives, which arranged farming and distributed production materials to the members. At the third stage, these cooperatives were transformed into communes, a larger institution that displayed more features of collective ownership of landed resources than the previous regimes. Underscored by

a high-level of planning and bureaucracy, the commune quickly showed its ineffectiveness in farming organization and rural development. The local government attempted to improve its efficiency, but it did not provide incentives to the members to stimulate agricultural production. Yet, this failure did not fully lie in the commune itself. The Cultural Revolution (1966-1976) as characterized by fierce political struggles contributed to the destruction of social and economic relations at all levels, which obstructed and did not leave space for further development of the commune (GUYUAN COUNTY GOVERNMENT, 2003).

The land reform agenda led by the Communist Party across China marks a fundamental shift from private landownership to collective ownership that is continued to this day to maintain the egalitarian principle. One can probably argue that the collective institution marks the watershed of the Communists' policy from the Nationalist regime. As Wong (1973) points out, when the Communist Party came to power, its 1950 Agrarian Reform Law contained no major policy innovation because all the important issues had already been tried out by its predecessor, especially the founder of the Nationalist Party—Sun Yat-sen. Sun's overall programme for "equalization of land ownership and the control of capital" was followed by the Communists who used the commune as an alternative to achieve similar objectives.

In Guyuan County, the HRS was first introduced in 1979 in pilot villages with great difficulties. Similar to the realization of the previous policies on the models of cooperatives and communes, its adoption was through strong administrative measures, without full peasant consent. Land, labour, livestock and machinery were allocated to individual households that were given the responsibility to meet production and other economic quota and tax set by the local government, while keeping the residue for themselves. On the assumption that the HRS would provide the peasants with more incentives to cultivate their land, its outcome has not been prominent in light of poverty and natural resources degradation. Moreover, the HRS from the very beginning cultivated the seeds of inequality, as large farms were leased to the so-called capable households. During the 1970s and 1980s, these farms were run with a huge loss of profits and property due to mismanagement and weak governance. They were returned to the management of the collective. In 1993, the whole county followed the call of the central government to stabilize and improve farmland contracting relations by granting 30 years of land use rights to the households. And in 1997, a second round of farmland leasing was carried out with a view to clarifying and documenting land contracting rights and improving land tenure security. The latter was assumed to be important to stabilize land relations and encourage land use rights transfers among the households, as some of them would prefer leasing their land to others while undertaking off-farm employment (GUYUAN COUNTY GOVERNMENT, 2003). In short, the egalitarian principle and practice concerning agriculture gradually receded with the introduction of the HRS whose alignment with state policies on agricultural output to be met by households does not always suit peasants' needs for livelihoods and social services (CHANG, 1994).



The practice of farmland leasing quickly triggered land conflicts among contractors, village collectives and local government after 1997. Affected peasants lack the power to hold the local government accountable and to negotiate terms of conditions with it. Village collectives are sometimes accused of corruption in village affairs especially concerning unequal land allocations. Those households with close relationships with the village leaders sometimes receive more and better quality of land than the others and even do not fully comply with their contractual terms. In some cases, the land of those who have migrated to cities is intentionally kept and redistributed to others, which contravenes the 2002 Rural Land Contracting Law. The latter provides a rigid stance on upholding land tenure security and equity (GUYUAN COUNTY DISCIPLINARY INSPECTION BUREAU, 2005). But, when the migrants wanted to return to their homes when they were unable to find a permanent stay in the cities, they discovered that their land had been taken away. This is the most critical factor for disputes and conflicts between peasants and village leaders.<sup>2</sup>

Obviously, how to manage appropriate land use for the benefit of the poor presents a daunting challenge for local governance. This challenge also exhibits the weakness of the HRS in securing peasants' land use rights. This historical account shows that none of the land tenure regimes have worked effectively. Rather, they have undermined the power of the poor and led to rising social inequality and conflicts in the countryside as will be discussed in the following sections.

## 4. Fallacies of land law and policy

### 4.1. The grassland enclosure policy

As Guyuan County is listed in the provincial and national ecological construction plan, the county government's goal for the optimized use of its fragile natural resources such as grassland have become paramount. It bears a strong burden to effectively preserve the degrading grassland given its past failures especially after 2002. A major highlight of their efforts is to roll out the grassland enclosure and animal husbandry prohibition policy, as the carrying capacity of the grassland is claimed to have reached the lowest level, which is beyond government control. In this regard, the local government determines to ban the traditional method of grazing deemed to be disorganized and attributable to the tragedy of the commons. It equates this policy with revolution, which implies the daunting challenges ahead. To a large extent, this measure has

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<sup>2</sup> Rural outmigration may not contribute to rural development to a large extent given the fact that enormous urban employment creation is needed to accommodate the migrants. However, it is never an easy task. For rural development to take off substantially, 75 percent of the peasants have to leave the countryside, and this is almost unrealistic (see Kahrl et al, 2005). Information on village disputes and conflicts is based on interviews with local township government staff in July 2008.

followed the overall goal of the Chinese government in putting in practice the so-called scientific development concept that emphasizes human-nature harmony, among other aspects.<sup>3</sup>

Moreover, this policy represents a major move towards the implementation of the 2002 Grassland Law of China that sets a strong mandate for local governments. This law stipulates that the ownership of grassland rests with the state which assigns use rights to the village collective. The latter is allowed to lease the land to individual households. In particular, Article 33 states the following:

Contractors for grassland management shall make rational use of the grasslands, and they may not exceed the stock-carrying capacity verified by the competent administrative department for grasslands; and they shall take such measures as growing and reserving forage grass and fodder...in order to keep the balance between grass yield and the number of livestock raised (GOVERNMENT OF CHINA, 2002: 7).

In essence, this law reiterates the government's call for the arbitrary management of the grassland in use of the carrying capacity concept. In addition, it marks no difference from the 2002 Rural Land Contracting Law in terms of granting land use rights to individual households. Thus, large part of the grassland in Guyuan has been partly contracted out to individual households that are required to sign their use rights contracts with the county Agricultural and Animal Husbandry Bureau. In principle, their grazing rights are set against the numbers of livestock to be kept by them, which is hard to implement. In practice, for the local government, the delimitation of household-based grassland will automatically lead to the reduction of the number of livestock. This measure is assumed to be useful to land preservation, as the peasant users should be made responsible. In a few cases, some parts of the grassland are kept in the hands of the village collective purely for the purpose of nature conservation. This land is fenced off for rehabilitation, as either it had been exploited to almost extinction or it is prone to further degradation. Apart from the contracted and preserved grassland, there is only a small proportion of the land left open to communal grazing.

However, the administration of grassland protection is too costly and difficult to manage, since the peasants can still find ways to cut the fence and enter the prohibited areas. The grassland contract management has not succeeded in fully registering the peasants, some of whom have not applied for the contract certificate as required by law. For those who have the certificates, they are only allowed to graze appropriate numbers of livestock; but in practice, one can hardly tell whether these numbers have been followed.<sup>4</sup> Furthermore, there is a lack of institutional

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3 Interviews with county Agriculture and Animal Husbandry Bureau officers in July 2008.

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mechanisms for effective monitoring as county and township governments and the village collective do not have clear roles to play and thus do not think that they are solely responsible for it. They often blame each other for this rather than putting forward more coherent policies for sustainable land management.<sup>5</sup>

The ineffectiveness of the law in the view of the local bureau is due to peasants' lack of "modern knowledge" of livestock rearing and grazing. To influence peasants' grazing behaviour on the basis of ecological science (see Jiang, 2006), the bureau further attempted to introduce new methods to prevent the peasants from grazing outside their homes. However, as these methods require improvements in the use of fodder and feed, it was too costly for the peasants to follow them. The peasants have continued to ignore these calls and managed to avoid the inspection of the local bureau staff regarding the use of the grassland. Some rehabilitated sites, despite being well protected for some time, have now become degraded again due to a peasant "invasion". According to a news report, some large parcels of grassland contracted out were found to be used for cropping, grazing and other functions, which were not allowed by law. Nonetheless, with the implementation of the 2003 Decree of Grazing Prohibition by the local government, access to grazing has become more and more difficult for the peasants, who complained that their income from farmland cultivation was so limited that they had to rely on grazing to supplement it. The lack of adequate access to grassland further contributes to their vulnerable livelihoods (XINHUA NET, 2006).

The widespread grassland degradation indicates that relevant grassland laws and policies place overt emphasis on management issues rather than linking it with viable options for peasant livelihoods. To the peasants, the traditional method of grazing has certain cost-effective advantages, including easy management of the livestock. As their own grazing rules are not considered by the government, they do not believe that the "exotic" method of grassland enclosure is in their best interests. In fact, as in other regions, grassland enclosure has contributed to overgrazing and thus land degradation (JIANG, 2006). Furthermore, when there is not much leeway for them to use even their own contracted grassland as it is small in size, grazing on the preserved grassland becomes unavoidable. For instance, 95 percent of the informants acknowledged that they knew what was happening, but did not know how to deal with it. The rest simply did not believe that they themselves should be blamed. Above all, they saw livestock husbandry as a better way to fight poverty than other practices such as vegetable farming. And when they saw the immediate benefits from it, they simply wanted to forgo other scarce options.

The lack of effectiveness of policy instruments indicates the fact that as in many other parts of the country grassland preservation programmes are not coupled with appropriate poverty

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5 According to county magistrate Zhang Cong's unpublished speech notes in various events.

alleviation strategies. Moreover, no community-based land management models based on household tenure are found (see Banks et al, 2003). In Guyuan, grazing remains as the most profitable means of livelihoods for the majority poor, as they cannot rely upon farmland production due to environmental and economic constraints as seen in later discussions. They showed discontent over the county government's grassland reclamation policy which caused an increase in poverty and rising social conflicts in the village (*XINHUA NET*, 2006). Their views on and participation in grassland use and management have not been at the top of the development agenda of the local government.

Furthermore, grassland management is often arguably compounded by the fuzziness of the heterogeneous and hybrid property relations, where village collectives and even local governments have more power to determine land uses than the peasants, and where lines of responsibility of grassland management are not clearly demarcated among different state and non-state actors (see HINTON, 1990; Yeh, 2004). These factors contribute to poor grassland governance, which has had a direct impact on the perceptions of the peasants regarding grassland use. A prominent example is the Ministry of Agriculture's national circular in 2006 on its decision to penalize the misconduct of Guyuan local government staff and land contractors in grassland use.<sup>6</sup> It was reported that the county government and a village committee had contracted the land owned by the government and village collective respectively to local businessman and certain peasant households without transparent procedures made known to the local community. The latter group had no idea of how local government line agencies played a key role or were involved. This led to the conversion of large pieces of the grassland into other land usages. According to the 2002 Grassland Law of China, land contractors must maintain the original status of the land. In the two reported cases they managed to cover up their purposes by stating that they wanted the land for eco-tourism development and would take care of the land to abide by the law. Only at a very late stage did the local community notice that they had changed large plots of land into cropland and fenced these parts off from the rest of the community. In fact, the two contractors even occupied the land before the local bureaus formally approved their applications (MINISTRY OF AGRICULTURE, 2006). This means that to a certain extent, the current tenure system has favoured the powerful groups in their uses of the land for their own benefits, which is commonly found in other parts of China.

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6 According to the Grassland Monitoring and Supervision Centre of the Ministry of Agriculture, this circular sends a clear message to corrupt officials involved that the Grassland Law must be upheld. For the details of the cases, see <http://www.grassland.gov.cn/grasslandweb/Article/ShowArticle.asp?ArticleID=103>

## 4.2. Collective forestry reform

Tree plantation and preservation are regarded as equally crucial as grassland preservation to ecological restoration. The county government has made the forest a fundamental natural resource to be preserved and to be free from illegal logging by establishing forest protection teams in each township. To a large extent, their measures have been effective in this respect. But the peasants are not offered strong incentives in any of the forest plantation programmes. For instance, the most prominent land conversion or “green for grain” programme aimed at dramatically increasing forest coverage to combat soil erosion and flooding<sup>7</sup>, as in the other parts of the country, has proved to be unsuccessful due to many factors, one of which is a lack of linkages between tree planting and direct benefits from it for Guyuan. For instance, in recent years peasants received only an estimate of 160 Yuan annually per mu (1 ha = 15 mu) of their land converted to forest land. And this included both compensation and a subsidy from the local government. This tiny amount was just impossible for the peasants to maintain their livelihoods when their land was devoted to forests. Given the climatic conditions in this dry region, it takes approximately 15 years for the trees to grow. Also, the planted trees had not been well cared for, and some even died off a few years later. Furthermore, as reflected by the county Forestry Bureau<sup>8</sup>, peasants’ lack of ownership over the trees put the sustainability of the forest programme at risk. This also applies to those trees under the direct management of the village collective. In the end, this programme was suspended. Obviously, balancing the interests of state and peasants in this sector poses a difficult challenge to decision-makers (see Strauss, 2009).

To address disincentives and to encourage the peasants to take an interest in the forest land, the Forestry Bureau follows the example of the collective forestry tenure reform in southern China, where cases of success are documented.<sup>9</sup> In fact, this initiative adopted elsewhere was taken up by the State Council, which promulgated the 2008 Opinions on Comprehensive Collective Forest Land Tenure Reform. Essentially, this policy is to emulate the HRS in the management of collective forestry land and peasants’ ownership of wood across the country. It is seen as a major measure to boost the enthusiasm of the peasants, increase their incomes and make forestry sustainable. It stipulates that production and management of forestry should be entrusted to peasants by issuing extendable 70-year forest land use contracts, while the nature of collective ownership should be maintained. It calls for ensuring equal access to peasants’ forestry land rights and guaranteeing their rights to know and participate in any decision-making process affecting their land rights.

7 Officially started in 2002, this programme has been the largest programme in the Chinese ecological protection history that covered 25 provinces, 1,897 counties and 97 million peasants (CUI & WANG, 2006).

8 Interviews in July 2008.

9 Since 2003, collective forestry reform had been piloted in Fujian, Jiangxi, Liaoning and Zhejiang provinces. China has 2.55 billion mu of forest land (equivalent to 60 percent of the country’s total) under village collective ownership with more than half of the population living in these areas (XINHUA NEWS AGENCY, 2008).

Moreover, peasants are allowed to transfer, lease or mortgage the forest land use rights within the tenure period. Local government is asked to extend financial institutional services to the needy and establish forestry insurance to protect the peasants from natural disasters. This reform also makes an explicit call for strengthening public services to support forestry cooperatives and enterprises, which can play a leading role in forest management and production to promote economies of scale. It is set to be completed over a 5-year period, during which forest land rights certificates should be issued to the individual households based on the registration of their contracted forest land (GOVERNMENT OF CHINA, 2008; XINHUA NEWS AGENCY, 2008).

In fact, long before the promulgation of this policy, the Forestry Bureau had tried to emulate similar measures to undertake collective forestry reform — with very limited success. The slogan of strengthening individual households' awareness and forest management ownership was used to rationalize the policy and to motivate the peasants. However, the latter did not perceive this policy as something new, as the forest had already been under the management of the collective. Moreover, granting long-term use rights might incur more institutional burdens to shoulder for the households, since they do not expect to gain benefits from the forest products which are not as marketable as in the past. As a staff member of the bureau indicated,

The collective forestry reform here cannot be compared with the South, where the peasants can simultaneously plant other economic crops with the forest. Here, the climatic conditions just cannot allow this. That is why it is not attractive to the peasants. So, we may not be able to continue the reform later on.<sup>10</sup>

Whilst the use rights for a large proportion of the collective forests were said to be granted to individual households, the latter were reluctant to receive the use rights certificates. How to divide and redistribute the collective forests to individual households is never an easy task for the Forestry Bureau. To a large extent, the forest land is supposed to be redistributed to the peasants on the basis of equitable conditions in terms of the quality of the land and the number of household members. In cases where the land with poor quality cannot be redistributed easily, it should be done through lease, tender and auction to the needy. When this cannot be realized, it rests with the village collective. All these steps require sound planning and participation of the community in deciding on how the forest land can best be used and managed. Moreover, the peasants need to know whether the forests contracted to them are of economic value to them. Otherwise, they will lose interest in it (Bai, 2007). The lessons from this county and other regions indicate that in most cases, local governments pay insufficient attention to the needs of the households and collective efforts (MIAO & WEST, 2004). As a result, the reform can easily incur discontent and even conflicts among various stakeholders involved, which deserves further studies.

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<sup>10</sup> Interviews in July 2008.

The lack of capacity of the Forestry Bureau to control inappropriate forest land use overshadows its overall forestry reform agenda. Some staff blamed grazing as the number one threat to forestry and emphasized the need to put a complete stop to it by severely penalizing those responsible especially the households with a big number of livestock. Obviously, a lack of coordination between different line agencies further constrains any conceived efforts in sustainable forest land management. These factors are further compounded by the latest reform agenda and the ongoing process of forest decentralization (see LIEBERTHAL & LAMPTON, 1992). However, this policy does not differ from other laws on the issue of the abuse of power by the village collective as the latter retains the most power in decision making. What mechanisms should be established to empower the peasants to keep the local cadres in check remain unclear. As a result, "the leadership of the rural collective, including the Party secretary, the village head and other village committee members, may cooperate and pursue personal interests as a collective" (CAI, 2003: 668).

In short, policies of grassland and forest protection and utilization have been mutually exclusive. The local peasants could only resort to short-term gains, sometimes at the cost of these resources (CUI & WANG, 2006). A lack of coordination in land use planning and management contributes to the failure of the programmes in which the peasants are caught in a vortex of uncertainty regarding the changes in land use imposed by the government. The relationships between natural resource tenure reform, poverty and the environment have not been sufficiently addressed in an integrated manner by the local government. The reform of land resource tenure from collective to household-based institutions signifies a simplistic approach that departs from the biophysical, economic and political constraints.

## 5. Farmland use, conflicting interests and peasant contestations

### 5.1. Farmland for livelihoods

Rural development for the local peasants is nothing more than the maximization of the utilization of the available resources in the pursuit of quick results in the reduction of poverty. Their attachment to land, pasture, forests and other resources embodies their pragmatic values towards their livelihoods as discussed earlier. Yet, peasant relations have become less dynamic than the commune period in the 1960s and those found in traditional ethnic minority groups. With the market-oriented policies infiltrating their communities, individual interests override the mechanisms of collective choice and decision-making on the use of the resources for the benefit of all.

Vegetable farming is commonplace and constitutes a primary source of income for most households. This is found mostly in areas where soil conditions are favourable, although the increasing level of water scarcity has becoming a problem. The varieties of vegetables grown are limited across the county, and this unavoidably leads to competition over sales and marketing outlets. Only those households with relatively larger sizes of land manage to gain reasonable profits. However, this type of farming is seasonal, as winter temperatures can drop below -30 degrees Celsius. Thus, extensive farming is carried out in other seasons.

Vegetable farming requires reasonable capital inputs in terms of time spent in the field, use of water, chemical fertilizers and seeds. Where there is a lack of technical and funding services provided by the local government, the growers are vulnerable to various natural and economic risks. Unpredictable natural disasters can cause damage to the crop. The growers are incapable of effectively dealing with these risks. Since they have no other ways to sell their produce than relying on the middlemen from other provinces to collect it, quite often they are in a weak position to bargain over the prices offered.

With the introduction of the HRS, random growing of vegetables for the peasants to gain high economic returns has replaced traditional cropping to a large extent; as a result, grain production has reduced substantially. In China, between 1995 and 2001, the production of vegetables nearly doubled (LICHTENBERG & DING, 2008). Although the HRS has stimulated agriculture and promoted peasants' incentives in and choice over farming, in Guyuan, farmland fragmentation has reduced the efficiency of farming. Vegetable farming as carried out by the peasants is akin to "digging the soil and land without caring about the kind of resources they will leave for the future" (HU, 1997; ZEN, 1991: 79).

Village life is unlike that in the past when unity and mutual help played an essential role in organizing the peasants, which is partly due to fragmented land relations. "Everyone is helping himself. We do not know about the future — we just try to make ends meet anyway. Nobody will help us", as some peasants claimed. Similar remarks were also made by the local government staff.<sup>11</sup> Despite the HRS's partial success in poverty reduction, it displays an increasing weakness in uniting the poor as land becomes fragmented. The peasants have less space for the social organization of agricultural production. And when the village collective mostly represents the interests of the local state, the role of the peasants in voicing their concerns over land use and agricultural development becomes minimal. As a result, land is nothing but a means of livelihoods for the peasants. All the informants agreed that they were not sure whether the land belonged to them. When their land use contracts expire in around 30 years, they wondered whether their land rights would be altered by the local government. Facing uncertainty over

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11 Interviews in July 2008.



land use and other associated rights and a lack of public support, many informants viewed the Chinese peasantry as the most vulnerable group in the country.<sup>12</sup> These institutional constraints pose severe challenges for the sustainability of vegetable farming in the county.

## 5.2. Conflicting interests in farmland use

Fragmented farmland use caused largely by the introduction of the HRS underpins complex peasant-local state relations as both have different or even conflicting interests in the land. As the value of the land increases with the local government gaining increasing control over it, local peasants see their land as their last resort to maintain their livelihoods.

The national policy on farmland protection places strict conditions on farmland use and prohibits its conversion into non-agricultural uses. Accordingly, the local government set the mandates for the village collective to demolish all the buildings such as pigpens in the field. And peasants' ignorance of this call would lead to forced demolition of their properties. However, when the peasants built their houses years ago, they were not informed of whether it would contravene any government policies. In fact, their ideas were even approved by the village collective. As these households are small in scale and only occupy the tiny plots unsuitable for cropping, thus literally, this act has nothing to do with farmland conversion. Seeking the support of the village committees was futile. As many of them are women, children and the elderly left behind in the village, they could not form a unified force against possible land evictions. They also knew that the peasants' weakness had led to the eviction of many of them as new land development takes place on a regular basis.<sup>13</sup>

In fact, this example also reflects that land use planning and management has never been an easy task for the local government which has been under mounting pressure to both preserve and utilize the land to promote economic development. The county does not have any foreign companies operating in it at the moment. To attract business development, when conditions allow, the local government must provide the necessary basic infrastructure, and this requires a huge amount of funds to be put aside. However, this is extremely difficult for a nationally-designated poor county like Guyuan. In the end, the acquisition and consolidation of land has become a necessity in favour of corporations and real estate developers. While creating space for this development, the local government has to restrict the use of farmland for "non-agricultural" purposes by the peasants in order to strike the overall balance between farmland preservation and conversion.

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12 Interviews with local peasants representing different ages, gender and occupational groups in different villages in July 2008.

13 Interviews with local peasant households in July 2008.

The county government line agencies are trapped on the path towards economies of scale in agricultural production, making the maximization of land use and land acquisition unavoidably difficult for them. They all seemed to agree that the county had no other options but to introduce the “dragon head” agribusiness (*longtou qiye*) to take the lead in organizing scaled production. They complained about the peasants’ backwardness of ideas, knowledge and skills in adjusting to the demands of the market economy. However, for the peasants, the lack of secure land rights and the mechanisms for transparent and effective partnership with agribusinesses could only make them cast doubt on every arrangement concerning the use of the farmland, grassland and forests. As the local government has the mandate to push further ahead economic development, its conflicting interests with the peasants are expected to arise.

The dilemma for sustainable rural development may indicate the need to reorganize the peasants who can collectively decide on how their land and other resources can be used properly. This is also a prerequisite for the healthy growth of agribusinesses. Like those pilot schemes taking place in southern China, the county line agencies staff pointed out that they should allow the peasants to become land shareholders and benefit from agribusinesses.<sup>14</sup> Thus, the village collective should play a bigger role in uniting the peasants and assuring them better economic returns on agricultural production. Ultimately, this requires the establishment of specialized business-oriented peasant associations. However, the current policy on these organizations requires a substantial amount of capital to be registered, and this would simply mean that for the poor peasants it is impossible. Moreover, the rural societal structure is fragmented and it is extremely difficult to bring the peasants together. This also demonstrates the failure of the village collective and government policy in revitalizing the social and political dynamics of the Chinese countryside since the market reform of the late 1970s. Nearly 50 percent of the local government staff held the view that the trend of the rural economic reform should reverse the HRS into genuine collective land use and management. And this was thought to be a way to revitalize the Chinese countryside and help the peasants cope with their vulnerabilities to various social, political, economic and natural risks associated with land use. However, how to convince the peasants and give them an incentive to form relevant agribusiness groups or associations remains a challenge, for these associations may become the cause of conflicting interests rather than representing collective efforts.

### 5.3. Peasants’ contestations of farmland use

The scale of peasants’ self-organization of economic, social and political activities is rather limited due to the institutional constraints as already mentioned. But they are not passive recipients of

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14 However, shareholding cooperatives have their limitations, since the mechanisms for mutual supervision and self-restraints are often inadequate, representation of the vulnerable poor is not strong, and the interests of capital may predominate (see Clegg, 1998: 81).

government laws and policies. Changes in the central government policy that favours agriculture, on the one hand, have created more incentives for the peasants to care about their land; on the other hand, they also spur local conflicts. Land-induced conflicts between the peasants and local cadres have become a thorny governance matter. A recurring example is the tension between returning peasant migrants and local carders over land reallocation. Village collectives and township governments are often complained of purposely reallocating the land when the original legal users migrate to the cities. In this case, Guyuan resembles the rest of the country, where large numbers of impoverished rural people have become migrants as part of the “floating population” of 200 million to seek temporary work in cities (Solinger, 2002; Zhang, 2001). To the township government, the land left by these migrants should be redistributed to accommodate the needs of other groups. Paradoxically, this practice is no longer permitted by law that aims to ensure land tenure security and explicitly calls for an end to land readjustments.<sup>15</sup> As one member of the local township government staff remarked,

The current land law and policy do not really take into account the local conditions seriously. And it is sometimes contradictory in terms. For instance, it enshrines women’s land rights. But if land readjustments are not allowed, how can we give land to the women who marry men in our villages? Besides this, the recent favourable agricultural policies have actually extended the invitation to the migrants who want to return to farming. When they migrated to cities, they left their land idle and let us manage it. We then leased it to others who could farm the land. How can we return this land to them when it is in others’ hands? Their discontent with us has led to skyrocketing cases of petitions, but we find it hard to meet their demands.<sup>16</sup>

These conflicts do not indicate that the local peasants have more systemic concerns over how their land can be utilized in a sustainable way. Yet these conflicts show the peasants’ growing concerns about their rights, livelihoods and ineffective policies in the context of widening social inequality between different groups. As a result, land readjustments may privilege some while marginalizing others due to the practice of personalism, clientelism and networking tactics carried out by the dominant group (see Nonini, 2008). Moreover, peasants’ struggles for land use are sporadic and seldom organized systematically in terms of the creation of effective groups that can maximize their influence and collective force. This may indicate that the current HRS is inextricably linked to this, with its nature of fragmentation of agricultural production as well as social cohesion, which is a difficult area of research as power dynamics in a given setting

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15 Article 27 of the 2002 Rural Land Contracting Law states that land adjustment is prohibited during the contract period. Even so, Article 28 states that land adjustment should be done on the land returned by the contracted households to accommodate newly increased households. Thus, it leaves space for ambiguous local interpretation, as it is hard to tell which land belongs to the returned migrants.

16 Interview in July 2008.

can hinder in-depth investigations as this case studies encountered. Paradoxically, 90 percent of the interviewees indicated that they would rather keep the HRS, as they did not trust the collective. The rest either preferred the old commune system or simply had no preferences. But they all thought that development policies and laws concerning their land rights should be strengthened. Some even expressed their inclination towards land privatization, which would ideally enshrine more secure rights for the peasants. But all of them expressed their concerns about the absence of viable property relations for sustainable land use and management and poverty alleviation as a whole.

## 6. Conclusions

This study indicates that the conventional individualistic approach to land resource tenure has not brought about viable solutions to addressing the complexity of rural poverty and its underlying institutional constraints. Relying on market-oriented development models, China's economic success has incurred severe social and environmental costs. To a certain extent, the replacement of the collective institution such as commune with the HRS has exacerbated its developmental dilemma. The serious flaws of this approach and the rhetoric of development policies are not responsive to local biophysical, political and economic realities (Gupta, 1998). As a result, the current land tenure regime is attributable to short-term development gains rather than sustainable resource use in the long run. Moreover, it is interwoven with the absence of appropriate institutional mechanisms for effective sustainable land use and management in a region where poverty and natural resource degradation prevail.

The HRS as an embodiment of modern management institution has been a contributing factor for the fragmentation of social relations and is an example of the lack of capacity of the local state and lack of collective action of local community in local development processes. The local state puts overt emphasis on meeting higher-level state demands rather than serving the community needs first (Kung, et al, 2009; Christiansen & Zhang, 1998). This is reinforced by the HRS whereby communities are marginalized in land use planning and broader-level of village governance. In the context of rising social inequality across the country, it becomes more difficult for the state to organize the peasantry. The fact that some peasants support the HRS actually implies that they mistrust other possible measures imposed upon them by the state. In other words, they are not given the space to explore other better systems of land tenure by the state.

The social fabric of the rural society is not simple. It is important to understand how mechanisms of power have been able to function within the society and between society and state in order to investigate the agents responsible for social constructs (Foucault, 1986). In this sense, this

case study shows that although mechanisms for peasants' collective action remain unclear and even weak, their daily struggles are omnipresent in their disorganized and silent contestations. However, their resistance is not "genuine" in the sense of being organized with clear motives and goals as defined by Scott (1985). This individually-based, and seemingly passive resistance to the land use institutions reveals the absence of the mechanisms for genuine peasant participation in policy-making processes concerning their land use and governance.

As the peasant-local state relations become more murky and complex, and social dynamics among different social groups become more intractable, how to revitalize the Chinese countryside by making the complex social, political and economic relationships work for the goal of sustainable land use and rural development remains an ultimate challenge for policy-makers, who need to rethink their current institutions governing farmland use and natural resource management. It is essential to tackle the structural barriers to law and policy-making mechanisms that put constraints on the representation of the peasants whose need to participate in the process should be nurtured and empowered (Cai, 2003; Li, et al, 2004).

In a nutshell, no single type of land ownership, be it government, private or community, is a blueprint for sustainable land use and management (Dietz, et al., 2003). A new form of land tenure congruent with local economic, ecological, political and social conditions should be explored and tested by policy-makers. This form of land tenure has to serve the needs of sustainable land use and management, which is largely impinged on state-peasant relations. In retrospect, these complex relations are shaped by land tenure arrangements. Thus, future land policy developments should be based on sound analyses of the interconnections between land tenure, land use and management and socio-political relations, the implications of which are critical for China's transition to ensure the accomplishment of sustainable development goals in semi-arid regions in particular.

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