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Improving the Sustainability of Pasture Use in Kyrgyzstan

The Impact of Pasture Governance Reforms on Livestock Migration

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This article reports on a qualitative case study about pasture governance practices in Naryn oblast in Kyrgyzstan. It investigates the relationship between shifts in pasture legislation and herders' mobility. The article

describes a study of the outcomes of 2002 pasture management legislation that introduced pasture lease agreements. It specifically looks at the implications of dispersed administrative responsibility for livestock mobility. Contrary to what other studies have found, results of this

study suggest that, in the case study, municipality, administrative hurdles were not a major cause of the abandonment of seasonal migration. Based on this finding, the results of the study suggest that a second reform approach, which started in 2009 and replaced the previous administrative arrangement with community-based pasture management would not necessarily improve the sustainable use of pastures and boost livestock mobility. The author points to the importance of designing effective local enforcement mechanisms for seasonal migration.

Keywords: Community-based natural resource management; governance reform; pasture; Naryn; Kyrgyzstan; Central Asia.

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Introduction

Agropastoralism is a key agricultural activity in Kyrgyzstan (41°00'N; 75°00'E). An average altitude of 2750 m (Fitzherbert 2000: 2.2) and about 9.1 million ha of natural pastures make transhumance the most important livestock production system in the country. Over the past 50 years, the procedures and responsibilities for the allocation of usufruct rights to pastures have experienced considerable modifications. As a consequence, herders' migration patterns changed. Before independence in 1991, large-scale livestock production was managed by *kolkhoz* (collective farms) and *sovkhoz* (state farms), which organized annual migratory livestock movements. Winter grazing locations were pastures or harvested crop fields close to settlements at lower altitudes. Between May and October, herders travelled to summer pastures at altitudes of about 1500–2500 masl (Farrington 2005) or higher (Fitzherbert 2000). On their journey during spring and autumn, they passed pastures at intermediary altitudes. Migration of livestock was compulsory and strictly enforced by *kolkhoz* management (Wenzel 2004). After independence in 1991, the *kolkhozes* and *sovkhozes* were dissolved, and the pasture-use management structure became fundamentally altered.

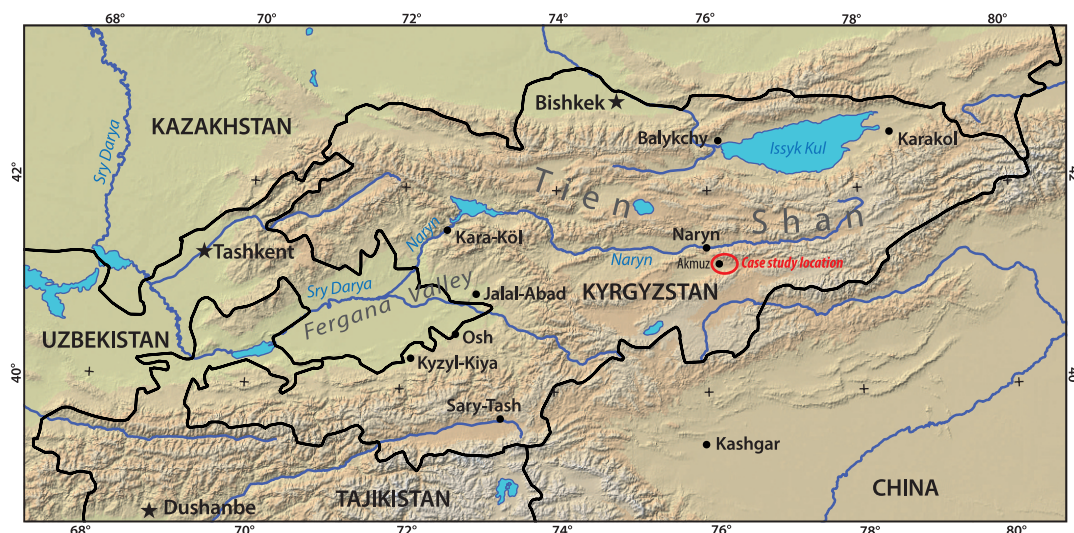
In the post-Soviet era, formal procedures for allocation of usufruct rights to pastures have significantly

changed twice. In 2002, reform legislation introduced individual pasture lease rights. This reform was influenced by classical property rights theory (Demsetz 1967), according to which the commons are considered open-access areas and are subject to inevitable overexploitation by free riders (Hardin 1968). In 2009, a new law introduced a system of community-based natural resource management, under which pasture access is to be managed by local user groups. This reform followed a new "policy consensus" (Mosse 1997; see also Agrawal 2001; Pincus 2001; Blakie 2006), which builds on common-pool resource theory influenced by the works of Wade (1988) and Ostrom (1990). This theory acknowledges the possibility of sustainable self-governance of common-pool resources by user groups if specific success factors that prevent free riding and allow for community participation are met (Ostrom 1990; Agrawal 2001; Dietz et al 2003; Gruber 2010).

The debate on migration

Different legislation can have different effects on the mobility of agropastoral households. The post-Soviet pasture legislation in Central Asia has had different impacts on households' migration decisions. Important factors were found to be local conditions, such as grazing pressure, household economic status (Kerven et al 2004;

FIGURE 1 Location of case study. (Map by Thomas Breu)



Farrington 2005; Robinson et al 2010; Steimann 2011; Steimann 2012), and local administrative practices (Behnke 2005; Dörre 2012). However, post-Soviet pasture management reforms are generally seen as having limited livestock mobility (Robinson et al 2003). In particular, privatized pasture use has been discussed as an obstacle to migratory movements because it is seen to lead to a permanent fragmentation of pastures that is inconsistent with the flexible use patterns of mobile herders (Robinson et al 2010). This argument has also influenced the debate on the Kyrgyz pasture legislation.

During the debate on the second pasture reform in Kyrgyzstan, international policy advisers and the Kyrgyz government held the view that the 2002 legislation had hindered sustainable pasture use. Since independence, decreasing number and range of seasonal livestock movements, along with overstocking near villages and underuse of pastures located at greater distance from the settlements, have been reported (Schillhorn van Veen 1995; Fitzherbert 2000; Wenzel 2004; World Bank 2004). According to official data from the Ministry of Agriculture, Water Resources and Processing Industry, this has led to worrying conditions in the pastures: severe degradation was registered on 25% of all pastures (MAWRPI et al 2008: 9). Data for 2005–2006 from the state property registry office (GosRegistr) indicate that 27% of the pastures contain large amounts of inedible species, 19% is eroded, and 33% is substantially degraded (USAID 2007: 3).

Administrative procedures are believed to be complicated and to cause high transaction costs for potential leaseholders. International policy advisers and the government have identified the formal pasture law with its fragmentation of administrative control over pastures as the “root of the degradation problem” (World Bank 2007b: 53; MAWRPI et al 2008: 6; see also World

Bank 2007a). Impractical and slow administrative procedures, unclear administrative responsibilities, and expensive fees have been discussed as the main causes for abandonment of summer pasture use (World Bank 2007a: 61). However, the case study reported here does not support this view.

This article has 2 objectives: First, it studies the impact of the 2002 lease-based pasture law on migration decisions. Second, in consideration of those findings, it discusses the likely effects of the 2009 community-based reform approach on migration.

Methods and case study selection

An exploratory single case study (Yin 1993) was conducted in Akmuzy village in Naryn oblast (district) to assess the linkage between administrative practices, working rules for pasture access, and herders' mobility (Figure 1). The case study location was selected from a set of 5 municipalities in which focus groups were held and municipality data were collected during a preliminary study in 2008. Two of the communities had a comparatively strong focus on agropastoral livestock production and a large pasture area endowed with all 3 pasture types (winter, intensive, and summer pastures). Of these, Akmuzy was selected because its remote summer pastures were not located near big roads, which was assumed to affect migration decisions (eg by reducing income opportunities from trade), and roads to the remote pasture areas were traversable. Akmuzy, located at approximately 2300 masl, is part of the Northern Mountain region of Kyrgyzstan, which is characterized by high altitude, remote location, and high livestock numbers (Schuler et al 2004: 2–6). One third of the Kyrgyz pasture area (30.4%) is located in Naryn oblast; due to a low population density, the pasture availability per

FIGURE 2 (A) Intensive pastures near Akmuz village and the Naryn Too range, September 2009; (B) Sheep pen and yurt on summer pasture. (Photos by Wibke Crewett)



pastoralist is 44.86 ha (Kulov 2007: 4), the highest in the country.

The grazing area of Akmuz municipality includes 17,369 ha of village-adjacent pasture and 39,710 ha of remote pasture (Figure 2A, B). Of this area, 89 ha of village-adjacent pasture and 3980 ha of remote pasture were officially rented out in 2009 (At Bashi GosRegistr data and municipality statistics 2009). In addition,

2147 ha of intensive pasture were rented out by the *leskhoz* (State Agency for Forest and Environment) as part of the state forest fund. Focus group data and individual interviews indicate high livestock dependency, because crop production is particularly limited because of unfavorable climatic conditions, a lack of agricultural machinery, and a collapsed irrigation system.

TABLE 1 Case study data.^{a,b)}

Population in 2008	Statistics
Total population	3504
No. of households	740
Average size of households	4.9
Average livestock ownership (heads/household) in 2008	
Yaks	2.3
Cattle	3.2
Small ruminants	15.0
Horses	0.2
Pasture endowment (ha) in 2009	
Village-adjacent	17,368
Intensive	n/a
Remote	39,710

^{a)}n/a, not available.^{b)}Sources: municipality statistics 2008, GosRegistr data 2009, own calculations.

Livestock mobility in Akmuz follows the same rotational migration principles that have been described for other livestock-dependent communities in Kyrgyzstan (Farrington 2005; Schoch et al 2010; Steimann 2011). In 2008, the village had 3504 inhabitants in 740 households, of which 36% were officially classified as poor (Table 1). The analysis builds on triangulated data from a content analysis of transcripts of interviews and focus group data, documents obtained from municipality administrations and GosRegistr offices, and maps produced by *goskartografia* (the state cartographic institute). Between June 2008 and October 2009, 29 semistructured interviews were conducted with livestock owners ($N = 25$) and administrators from the municipality, *leskhoz*, and GosRegistr ($N = 4$). The semistructured questionnaires focused on effective working rules for pasture use and access under the 2002 legislation, that is, rules that are “actually used, monitored, and enforced when individuals make choices about the actions they will take” (Ostrom 1990: 51). Interviews were conducted by the author and simultaneously translated into the Kyrgyz language. The transcripts of the interviews were analyzed by means of qualitative content analysis with inductive and deductive coding (Mayring 1993). The data analysis technique was a stepwise constant comparison method used for analysis of and comparison between interviews and documents (Glaser 1965, Strauss and Corbin 1998; for a detailed description of the method applied, see Boeije 2002). Examples for code assignment during the analytical coding process are presented in Table 2.

The first pasture reform approach: 1999–2009

According to the Land Code (1999) and the Law on Management of Agricultural Land (2001), pastures are the property of the Kyrgyz state. Pasture rental became possible under the Law on Procedures of Allocating Pastures for Lease and Use, which was adopted by the Government of the Kyrgyz Republic on 4 June 2002. The law introduced a new administrative management scheme for pastures based on functional categories. Winter pastures were classified as village-adjacent pastures, spring and autumn pastures as intensive pastures, and summer pastures as remote pastures. Administrative control for each pasture category was assigned to a different state body: village-adjacent pastures to municipality administrations, intensive pastures to district administrations, and remote pastures to regional state administrations. In addition, larger parts of the pasture fell under the authority of the state agency for environment and forestry (*leskhoz*).

Working rules for pasture use and access since 2002

In the Kyrgyz pasture sector, common practice or working rules regularly deviate from formal administrative rules (Steimann 2011; Dörre 2012; Steimann 2012). The following section therefore looks at effective pasture use and access rules under the 2002 pasture governance reform and their impact on migration decisions. The analysis shows that administrative hurdles were not the main reason for the abandonment of long-distance migration.

In effect, 2 types of pasture existed, each with a different access mechanism:

1. Heavily used village-adjacent winter pastures, relatively close autumn–spring pastures, and relatively close summer pastures, the use of which required a formal lease contract.
2. More sparsely used remote summer pastures and relatively distant intensive pastures, which did not require a lease contract.

In practice, formal pasture lease was not a general precondition for pasture use, because rent payments were not systematically enforced on all pastures; particularly on remote pastures, no systematic effective administrative enforcement of the legislation was in place. Therefore, herders were not forced to carry out difficult administrative procedures to get access to pasture land. Intensive use of pastures near the village was preferred to migration to remote summer pastures. Although variations existed in the chosen livestock migration strategy, herders expressed a strong preference for summer grazing as close to the municipality as possible. Instead of the seasonally differentiated pasture selection of the Soviet period, many herders chose pastures for their proximity to the settlement. The prescribed

TABLE 2 Coding examples for text segments from interview transcripts.

Statement made by respondent	Coding categories
Quote 1. <i>"In the past, we had our animals in [the summer pasture] Zhany Zher but when this [closer spring/autumn] pasture was available, it was much better to take this."</i> (contract holder)	<ul style="list-style-type: none"> • Contraction of amplitude of migration • Preference for closer pastures
Quote 2. <i>"After the collapse [of the Soviet Union] everyone started to try to get [pasture] land near the village."</i> (contract holder)	<ul style="list-style-type: none"> • Preference for closer pastures • Rush for lease
Quote 3. <i>"Now you cannot use this pasture without a lease agreement anymore."</i> (non-contract holder)	<ul style="list-style-type: none"> • Access depends upon possession of lease contract • High demand for pasture contract/rush for lease • Preference for closer pastures
Quote 4. <i>"All the closer pastures are rented. Not everyone can use these pastures. But there are enough other places where you can go."</i> (non-contract holder)	<ul style="list-style-type: none"> • Access depends upon lease contract • High demand for contracts • Preference for closer pastures • Choice between contracting and not contracting
Quote 5. <i>"Why did you choose that remote section of the pasture when you made the contract?"</i> Respondent: <i>"Because it was the only part that was still available for rent. All the rest was already rented to someone else."</i> (contract holder)	<ul style="list-style-type: none"> • Choice between contracting and not contracting • High demand for lease contracts/rush for lease • Preference for closer pastures • Remote pasture use as second-best option
Quote 6. <i>"Actually everything is rented on our pasture. We tell everyone not to come [to our pasture]"</i> (contract holder)	<ul style="list-style-type: none"> • Self-enforcement of maximum stocking rate • High demand for lease contracts • Pasture in high demand
Quote 7. <i>"Rich people [who were described as contract owners earlier during the interview] use some part of the pasture and say: 'This is our pasture. Go away!' Sometimes they beat our animals."</i> (non-contract holder)	<ul style="list-style-type: none"> • "The wealthy occupy pastures" • Self-enforcement of maximum stocking rate
Quote 8. <i>"It is better to make a lease agreement for a pasture that is closer to the village, such as [the relatively closer intensive pasture] Itchké, than to go to [the relatively far summer pasture] Ak-Say for free. Ak-Say does not cost any rent. I was a herdsman at Ak-Say for 40 years on that pasture. But I think Itchké is better, also with respect to quality. The pasture can easily be reached by car and is only 2 hours away by horse."</i> (contract holder)	<ul style="list-style-type: none"> • Preference for closer pastures • Abandonment of migration • Summer pasture use abandoned in favor of intensive pasture use • Preference, pasture quality • Preference, convenient access
Quote 9. <i>"We came to Zhany Zher because of my father's health problems. It is not so high as Ak-Say."</i> (contract holder)	<ul style="list-style-type: none"> • Preference, access medical services • Preference, lower altitude • Preference for closer pastures

migration dates, which were annually announced by the municipality administration, were not being followed by many herders. As a result, many of the areas that were spring and autumn pastures during the Soviet period had become summer grazing locations. Thus, there was a high demand for nearby pastures. Most intensive pastures were reported to be fully used, and herders perceived all intensive pastures to be rented out. Although pastures in low demand were often accessible without an agreement, access to pastures in high demand depended on the ability to obtain a lease.

The interest in pasture leases increased over time. Although the demand for pasture leasing was very low shortly after introduction of the reform, and only a few rich herders aimed to secure pasture rights for the best grazing locations, the observation of a growing number of contract holders and the common practice of excluding non-contract holders has led to the perception that a

contract is necessary to get access to a pasture and has increased demand for pasture leases.

The impact of administrative practices

Contracting for pasture was considered rather complicated. It involved, depending on whether responsible staff were present, which was not always the case, two or more visits to administrative bodies in the district capital. The conclusion of a lease was in one case described as having taken up to 6 months. However, none of the interviewees mentioned difficulties during the administrative process as a reason for not concluding a pasture lease. Also, respondents were aware of the official leasing procedure. The district administration seemed to follow a uniform procedure. There were no differences in descriptions of the lease application procedure by contract holders in Akmuz, GosRegist staff in At Bashi, and a discussion by Steimann (2011) in a case study in the

same district. Hence, no difficulties in locating the leasing authority were mentioned.

None of the interviewed leaseholders considered rental fees, which are fixed by a state commission, to be expensive and a reason for not concluding a lease. In 2009, official fees in the study area were US\$ 0.06 per hectare per year for remote pastures and for village-adjacent pastures. For intensive pastures, respondents reported paying from US\$ 0.2 to US\$ 0.4. The pasture allocation rules that emerged under the 2002 law were only quasi-lease based, because the rental fee was set by the administration. The low fees did not reflect demand. Hence, in one case, a herder chose to abandon the use of a remote pasture free of charge in favor of nearer pasture plots that required lease payments. The cost of using the closer pastures was preferred to the cost and inconvenience of long-distance migration.

Even the small yearly rent payments were not strictly enforced, due to the insufficient staff capacity of GosRegistr. Many herders did not pay their rent regularly or paid only part of it. Rent payment on *leskhoz* lands was also sporadically enforced, because several respondents who used what they believed were *leskhoz* pastures neither had a lease nor paid a fee. Given the low lease fees and sporadic enforcement, the administrative lease procedure did not constrain use of highly desired pasture plots. Rental and administrative fees and procedures did not prevent herders from concluding a lease. Instead, interviewees discussed 2 reasons for not concluding a contract. First, a pasture lease was sometimes not considered necessary. This was the case on most remote pastures and on some of the more distant intensive pastures, which could be used without a formal rental agreement due to the lack of competition for pasture use and the low degree of administrative enforcement. Second, a desired pasture lease was sometimes unavailable because the pasture already was (or was perceived to be) rented. This occurred because GosRegistr staff limited the number of leases issued for each pasture area according to a predefined official stocking rate. Hence, many herders were not able to establish a formal lease for their preferred pasture plot and were forced to use or rent a plot farther away from the village.

It is noteworthy that leases were mainly discussed as a means to defend pasture-use rights against other pasture users, whereas establishment of pasture leases by administrative order was rarely mentioned. Many respondents reported that leaseholders actively excluded non-contract holders from access to their rented plot. The respondents, therefore, shared the view that only contract holders could access pastures near the village and that this had increased the demand for pasture leases.

In the case study municipality, the contract was a mandatory means to increase the probability of uncontested use rights to a pasture in high demand. It was not required to establish legal rights to the use of pasture

in general, because state administrative bodies did not systematically enforce rent payment on all pastures. Pasture leasing was an optional means to establish access rights to relatively nearby pastures. Leases had become an important means of securing usufruct rights to intensive pasture plots.

In the case study area, nonadministrative factors were the main reasons for herders to abandon long-distance migration. Herders were strongly interested in keeping travel distances to the grazing areas short. The case study revealed that factors that affected migration decisions included a lack of access to services; high individual migration costs, which were further increased by a decay of infrastructure; perceptions of sufficient pasture quality on nearer pastures; and the breakdown of formal and informal enforcement mechanisms for long-distance migration. In addition, the lease of intensive pastures limited motivation for summer migration by those who held contracts or felt secure in their use rights to specific plots. Because no effective seasonal use restrictions for the different pasture types existed, renters, mainly those with smaller herds, remained stationary throughout the grazing season.

The second reform approach: community-based management

The analysis of the Akmuz case showed no direct relationship between high administrative costs that accrue to pasture users and the abandonment of herders' long-distance mobility. Although this finding needs to be confirmed by further research, including multiple case studies and additional quantitative studies, one might develop a hypothesis on the effectiveness of the community-based pasture governance reform that is currently being implemented. On 26 January 2009, the government of Kyrgyzstan issued the Law on Pasture (N 30), which shifted responsibility for managing pastures to new community-based user organizations and abandoned the earlier fragmented system of state authority. According to the new law, all pasture users are to form pasture user unions (PUU, which elects its own executive body, called a pasture user committee [PUC]). These bodies are authorized to govern the use of pastures independently from state administrative control. The PUUs hold a bundle of rights. Under article 6, section 5 of the new law, the PUCs have the right to (1) develop and implement a community pasture management plan and an annual pasture use plan, (2) issue pasture use right certificates (pasture tickets) and collect payments for pasture use, (3) resolve disputes among pasture users, and (4) carry out investments in pasture infrastructure and maintenance.

If fully implemented, the 2009 law could solve what has been identified as the administrative fragmentation problem. However, based on the case study, one might

hypothesize that the localization of pasture administration in municipal-level PUCs and the envisaged simplification of access procedures might not be sufficient to increase livestock mobility. Results of the case study suggest that administrative hurdles, including the need to travel to administrative offices outside of the municipality, were not among the key reasons for the contraction of seasonal livestock movements. It also showed that herders adhered neither to what can be considered traditional seasonal migration rules nor to pleas by the municipal administration.

The findings of this exploratory case study, therefore, suggest that to increase flock mobility under the 2009 reform legislation, investments in infrastructure are key. At the same time, specific migration rules with effective enforcement and sanction mechanisms might be needed. Unfortunately, the current legislation lacks provisions for enforcement of seasonal migration and does not include regulations that establish sanctions. This causes a particular challenge associated with the control function of PUCs.

Analysis of the case study suggests that herders have limited interest in traveling to remote pastures due to inconvenient access and the absence of services. Hence, PUCs might find it difficult to enforce migration rules and particularly to withstand pressure from local groups or individuals who might have an interest in avoiding migration (eg influential herders who prefer to use already secured pastures near settlements). Outside assistance might be needed to support the effective implementation and enforcement of migration rules and to prevent local pressure-group influence. Therefore, rule enforcement might better be backed by a body located outside of the village, such as an umbrella organization of PUUs at the district or regional level. It could serve as a control body, independent of municipality-level pressure group influence, that could effectively control seasonal migration rules. The mere shift of administrative responsibility to the municipal level, without the establishment of effective independent enforcement bodies, might be insufficient to increase flock mobility.

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