

Migration and animal husbandry: Competing or complementary livelihood strategies. Evidence from Kyrgyzstan

Nadia Schoch, Bernd Steimann and Susan Thieme

Abstract

Animal husbandry and labour migration are important livelihood strategies for a large proportion of the rural population in developing countries. Up to now, the two strategies have usually been studied by looking at either one or the other; their interlinkages have rarely been examined. Based on a case study in rural Kyrgyzstan, the aim of this paper is to explore the links between animal husbandry and labour migration. Results show that for most rural households, livestock is crucial yet not sufficient to make a living. Therefore, many people diversify their income sources by migrating to work elsewhere. This generates cash for daily expenses and the acquisition of new livestock, but also leads to an absence of workforce in households. Yet since remittances usually exceed the expenses for hiring additional workforce, most people consider migration profitable. From a socio-economic point of view, migration and animal husbandry can thus be considered important complementary livelihood strategies for the rural Kyrgyz population, at least for the time being. In the long term, however, the failure of young migrants to return to rural places and their settlement in urban areas might also cause remittance dependency and lead to an increasing lack of qualified labour. From an environmental point of view, the investment of remittances into animal husbandry poses challenges to sustainable pasture management. Increasing livestock numbers in rural areas raise pressure on pasture resources. Since most people consider animal husbandry their main future prospect while continuing to use pastures in a fairly unsustainable way, this may further exacerbate the over-utilization of pastures in future.

Keywords: Migration; remittances; multi-locality; pastoralism; rural livelihoods; Kyrgyzstan.

1. Introduction

Processes of agrarian transformations within and across countries have changed significantly and dynamically over the past few decades (Borras, 2009). For example, animal husbandry has been a key component of rural livelihoods in many developing countries. In many cases, however, rural households cannot make a living from livestock alone; they have to diversify their sources of income by adding new economic activities, often beyond the agricultural sector and local level (Bebbington, 1999; Ellis, 2000; De Haan and Zoomers, 2005; Borras, 2009; Scoones, 2009).

Migration is a central feature of this diversification for many rural societies. Although the role of migration is context-specific and changes over time (de Haan and Rogaly, 2002), the increasing inflow of remittances into rural areas has raised hopes that these funds will contribute to poverty reduction, facilitate investment and raise productivity,

particularly in agriculture where market failures are the most manifest (UNDP, 2009; Davis *et al.*, 2010). With increasing labour mobility, livelihoods are less likely to be organized in a single place, they instead take on a multi-local dimension whereby people have responsibilities in different places (De Haan, 1999; Tacoli, 1998; De Haan and Zoomers, 2005; Thieme, 2008a). While livelihoods diversification can improve a household's economic situation, it might also cause new insecurity (see Ashley *et al.*, 2003). In some cases migration is merely a survival strategy, as a family's workforce is limited and the social and financial costs of migrating are often enormous, but in other cases it has led to substantial improvements in family livelihood (Bebbington, 1999; Ellis 2000). The increasing interpenetration of rural and urban life therefore calls for a critical rethinking of the direction that agrarian transformations and development are taking (Borras, 2009; Spoor, 2009).

In this paper, we wish to raise the question of how these two livelihood strategies — animal husbandry and labour migration — relate to one another. So far, scholars have studied the changing dynamics of livelihoods by looking

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either at people's pastoral activities in their place of origin or at their new activities as labour migrants. For instance, recent studies among East African pastoralists have examined why and when labour migration becomes an option for pastoral households to diversify livelihoods (Little *et al.*, 2001; Homewood, 2008), and to what extent it is not just an important economic but social process (Hampshire, 2002). However, none of these studies has explicitly asked how labour migration may complement animal husbandry, or how the two livelihood strategies may compete with each other.

Building on a case study of a rural community in Southern Kyrgyzstan, we therefore look at how the absence of migrants and the remittances they send affects pastoral livelihoods. We do not, however, ask when, why and under what circumstances members of Kyrgyz pastoral households migrate for labour, since that issue has recently been discussed elsewhere (Schmidt and Sagynbekova, 2008; Thieme, 2008b).

Two aspects make the case of Kyrgyzstan particularly intriguing. First, mobile animal husbandry is not only an important source of income for a large proportion of the rural population, but also has a long tradition as an integral part of Kyrgyz identity (Liechti, 2008). With the collapse of the Soviet Union in 1991, Kyrgyzstan went through fundamental changes and reforms that affected most people's livelihoods. In response to a sharp increase in (mainly rural) poverty after independence, the Kyrgyz Government introduced a package of reforms in the early 1990s that included far-reaching privatization of the agricultural sector. As a result, small-scale farmers in rural areas are now the main owners of the country's livestock, which has become very important for household self-sufficiency and a valuable source of income (Howell, 1996: 55f; Shamsiev, 2007: 3; UNDP, 2008).

A second — and more recent — development in Kyrgyzstan since 1991 has been the increase in labour migration as a result of rising poverty. Close to 20% of the population are seeking better economic opportunities in Russia and Kazakhstan, sending back remittances that account for 30% of GDP (Sadovskaja, 2008). It is mainly the young men and women that migrate in search of better income, but they also do so for educational purposes and to escape traditions such as early marriage. Labour migration by the young people is still regarded as a temporary solution and successful migration is expected to conclude with return. However, migrants only return under certain circumstances and not necessarily to the rural areas from which they originally came. Specific consequences for rural development can be remittance dependency, an aggravation of the lack of labour force and new conditions for social care (Thieme, forthcoming).

In view of the continuing importance of animal husbandry in rural Kyrgyzstan, it might be assumed that a major share of remittances is invested in livestock. On the one hand, large livestock numbers can help to increase a

household's financial capital and thereby secure rural livelihoods. On the other hand, more animals may increase pressure on the already strained Kyrgyz pastures. Last but not least, migration by family members entails a loss of human resources at farm level, forcing those who stay behind to reallocate the workload and reorganize their households. This latter factor appears all the more relevant when one takes into account that many young migrants seem to get used to an urban lifestyle and start building their lives in other places than those they originally came from (Thieme, forthcoming).

It is the purpose of this article to shed light on these interlinkages and thereby contribute to a broader understanding of migration and its effects on animal husbandry, both from a socio-economic and an environmental point of view. Thus, our research also contributes to a better understanding of the ongoing transformation processes affecting rural livelihoods in post-socialist Kyrgyzstan.

The paper is organized as follows. Section 2 explores the notions of livelihood insecurity, diversification and multi-locality, and explains how the data were gathered. Section 3 outlines the recent history and current patterns of animal husbandry and labour migration in Kyrgyzstan. The effects of migration on household organization, animal husbandry and pasture resources, as well as the future prospects in the case study area, are then described in section 4. Section 5 highlights the key messages and draws some policy implications.

2. Research approach and methods

2.1. Livelihoods insecurity, diversification and multi-locality

Agrarian transformations in post-socialist societies have been repeatedly related to an increase in livelihood insecurity (Hann, 2006; Spoor, 2009). On the one hand, the dissolution of collective and state farms resulted in soaring rural unemployment rates and widespread poverty. On the other hand, the state's withdrawal from economic, social and legal service provision made it more difficult for many people to plan ahead and secure their livelihoods in the long term.

People often cope with insecurity by diversifying their livelihoods. Adding new economic activities helps them to make their household income more diverse and thus to improve — or at least secure — its capital base (Scoones, 2009). However, diversification does not necessarily improve a household's economic situation. Short-term diversification is often forced and unplanned when a household in financial distress is pushed to diversify. Thus, it may help the household to make a living in the short run, but is often part of a vicious cycle that exacerbates future impoverishment, because the newly adopted activities compete with the existing ones. However, seasonal or long-

term diversification is more often than not a strategic choice, allowing households to build on complementarities and to spread risk. For the relatively wealthy, it is a strategy of accumulation (Barrett *et al.*, 2001; Ashley *et al.*, 2003).

Livelihood studies have not only established that increasing numbers of people have opted for diversification in the recent past; they have also shown that, in the absence of local job opportunities, rural people increasingly diversify their income sources beyond the agricultural sector and the local level (Bebbington, 1999; De Haan and Zoomers, 2003).

Although it is not an entirely new phenomenon (Bernstein and Byres, 2001: 26), migration for employment to the capital and especially to Kazakhstan and Russia has become an increasingly popular way of diversification in post-socialist rural Kyrgyzstan (Schmidt and Sagynbekova, 2008). This migration usually involves only part of the family, and people's lives therefore take on a multi-local dimension. Consequently, migration affects both family members who migrate and those who do not. Therefore, local rural development can no longer be explained without taking into account the multi-local networks of people, and the flow of remittances, people and information, just as the life of migrants at their new place of residence cannot entirely be separated from their life in the home area (de Haan and Zoomers, 2005; Pries, 1999; Thieme, 2008a). Family members live and work in different places, earn money in one place and remit it to a different one, and take care of their children and elderly relatives from a distance. Migrants' and non-migrants' lives and responsibilities within and outside their families are (re)negotiated and (re)organized in multi-local set-ups. Exposure to different places also transforms the meaning of "home"; being away might increase a longing to return but can also result in the migrant establishing a new home in a different place (Conway, 2005). Furthermore, the networks can open up new possibilities and perspectives for the migrants and the household members remaining — but also new constraints.

2.2. Methods

To shed light on the increasing interpenetration of rural and urban life — and particularly the interlinkages between migration and animal husbandry — we implemented a three-stage case study in Kara-Tash.¹ This rural municipality (Aiyl Okmotu²) in Osh oblast is characterized by high national and international out-migration of inhabitants. First, Thieme carried out multi-site research from April to July 2006 and then once again in June 2007 by focussing on labour migration and multi-local livelihoods. To explore the multi-local household settings, Thieme chose five households with the widest possible range of

migration patterns. A quantitative household survey provided the basis for household selection. Household members who had not migrated were first interviewed and, in a second stage, the household members who had migrated were traced and interviewed in Bishkek, Almaty (Kazakhstan) and Moscow (Russia). To close the cycle, the author returned to the place of origin and discussed the findings again with the non-migrants. At the end of the cycle, 68 women and 90 men were interviewed, all of them ethnic Kyrgyz (Thieme, 2008a; Thieme, 2008b).

Based on the aforementioned datasets, Schoch carried out specific research into the interlinkages between migration and animal husbandry in 2008, and this research forms the core of this paper. The qualitative and quantitative data were collected over 12 weeks of field work. Semi-structured interviews were complemented by seasonal calendars, pair-wise rankings, focus groups and participatory observation. A sample of 53 households with a livelihood strategy based on migration and animal husbandry, as well as a number of experts, were interviewed in the village and in the summer pastures (*jailoo*), as were 17 migrants from the research site who worked in the capital, Bishkek (Schoch, 2008).

3. Migration and animal husbandry as livelihood strategies in Kyrgyzstan

3.1. Animal husbandry in Kyrgyzstan from pre- to post-Soviet eras

Mountain pastures and animal husbandry have been particularly important for the rural population throughout Kyrgyzstan's history (Fitzherbert, 2000). In the pre-Soviet era up until the early 20th century, most Kyrgyz practised mobile animal husbandry, moving their flocks between seasonal pastures at different altitudes and covering distances of up to 200 km. This form of pasture management was a sustainable low-output system, limited by the availability of fodder on the winter pastures (Shamsiev, 2007: 55).

By the late 1920s, the new Soviet regime began to force the rural population to settle down and hand over their livestock to local authorities for redistribution to the *kolkhozes* and *sovkhoses*.³ The transhumant grazing system was retained, but handed over to a few professional herders. The import of winter fodder from other Soviet republics as well as the mechanization of transport, farming and milk and meat processing led to an intensification of production and to rapidly increasing flock sizes. Soon, the animal population

³ The term *kolkhoz* (Russian contraction of 'collective farm' *kolektivnoe khozyaistvo*) describes a form of collective farming in the former Soviet Union. *Kolkhoz* members received shares in the farm's production and profits according to the number of days they worked. Along with *kolkhozes* there were also state-owned *sovkhoses* (Russian contraction of 'Soviet farm' *sovetskoe khozyaistvo*).

¹ The name of the study site has been changed for confidentiality reasons.

² Aiyl Okmotu (kyrg.) = federation of different villages within one municipality.

was two to three times greater than the carrying capacity of winter, spring and autumn pastures, the eventual result being severe pasture degradation (Farrington, 2005: 174). In addition, *kolkhoz* workers were highly specialized and lost their skills for holistic animal and pasture management. All in all, the Soviet livestock sector can be described as a high-output but unsustainable system (Shamsiev, 2007: 56).

After 1991, independent Kyrgyzstan started to break up the approximately 560 *kolkhozes* and *sovkhoses*, distributing their means of production to the former workers' households. Every household received between 0.2 and 0.8 ha of arable land per household member, plus a few animals as private property. Only pastures remained in state ownership. The dissolution of the *kolkhozes* and *sovkhoses* led to a collapse in agricultural productivity. Many people started to slaughter or sell their animals to survive the economic crisis of the early 1990s. Thousands of animals also died of diseases soon after distribution so that the number of sheep fell from 10.3 million in 1989 to 3.7 million in 1996, and recovered only slowly after 1996. Today, animal husbandry is once again a key component of the rural Kyrgyz economy, though output is still comparatively low. Due to inadequate management practices however, many observers consider current pasture use unsustainable (Shamsiev, 2007: 57).

In short, many rural Kyrgyz lost most forms of State support and their former wages as farm employees. Jobs in the service, education or health care sectors were no longer sufficient to sustain the livelihood of a family. Without any experience of herding animals, many found being a small peasant farmer a huge and unexpected challenge (Howell, 1996: 63). Nowadays only a few households can make a living from animal husbandry alone, while most have had to diversify their livelihoods. Popular strategies include selling surplus agricultural and animal products at nearby markets, producing handicrafts or renting out private arable land to others (Farrington, 2005: 175). Many people also migrate to find employment elsewhere to diversify household income and secure livelihoods.

3.2. Migration and remittances in Kyrgyzstan

Although Kyrgyzstan's history has always been characterized by population movement, the disintegration of the Soviet Union, and the shift from a socialist economic system to the free market, led to a particularly sharp economic downturn and therewith an increase in migration (Schmidt and Sagynbekova, 2008). After a first wave of ethnic out-migration (UNDP, 2002; Schuler, 2004; Abazov, 1999; Shamsiev, 2007), the major flow of people in recent years has been economically motivated and involved international or internal migration (UNDP, 2005). Most of the migrants who have left to seek better economic opportunities outside Kyrgyzstan find work in Russia and Kazakhstan, but the capital Bishkek also offers job opportunities. The south of the country is particularly

affected by emigration flows. A large proportion of migration is undocumented and irregular (Ruget and Usmanalieva, 2008), and this is one reason for the lack of detailed migration statistics. Unofficial sources in both Russia and Kyrgyzstan put the number of emigrants somewhere between 200,000 and 1 million people, this latter number representing almost 25% of Kyrgyzstan's total population or one third of the economically active population (Sadowskaja, 2008: 3; UNDP, 2005: 140f; Schmidt and Sagynbekova, 2008). People's reasons for working abroad are predominantly economic. With only a few exceptions, skilled young and middle-aged men and women are prepared to accept work that is far below their skill level. They work in the hardest and most draining jobs on construction sites, factories, markets, and in restaurants, paying little attention to learning new skills or starting a new profession (Sadowskaja, 2008: 4). While remittances of over US\$ 840 million made up about 31% of the country's GDP in 2006, more than 75% of the remittances transferred to Kyrgyzstan flow into rural areas (World Bank, 2007: 9). Therefore, the question we wish to look at in the next section is how these remittances are invested and how they influence the livelihoods of the rural population.

4. Results: Migration and animal husbandry: Competing or complementary livelihood strategies

4.1. Animal husbandry

In rural Kyrgyzstan, a household's wealth is usually measured in terms of how many head of livestock it owns. This is for three reasons. First, livestock is important for maintaining self-sufficiency due to the milk products and meat it provides. Second, livestock serves as an investment fund that increases through natural reproduction; unlike remittances, livestock is usually freely available and can be sold whenever cash is needed. Third, livestock is important for traditional feasts when people slaughter animals in order to serve guests or to offer gifts.

Since most households entrust their animals to relatives, friends or a professional herder during summer, livestock also generates seasonal employment for several local herders. For people from Kara Tash who own about ten horses, ten cows and 20 sheep, moving to the *jailoo* in summer becomes a viable livelihood option. They then often herd their own animals as well as livestock of relatives and/or paying customers. While about half of herding households practise a two-step livestock migration cycle over four months, the other half migrates in one step and for three months only. Thus, very few herders practise the ideal three-pasture annual cycle practised by former Kyrgyz nomads (Figure 1). This leads to intensified use of distant summer pastures and pastures close to villages, and can have a serious impact on pasture quality, as we shall discuss in more detail in section 4.3.3.

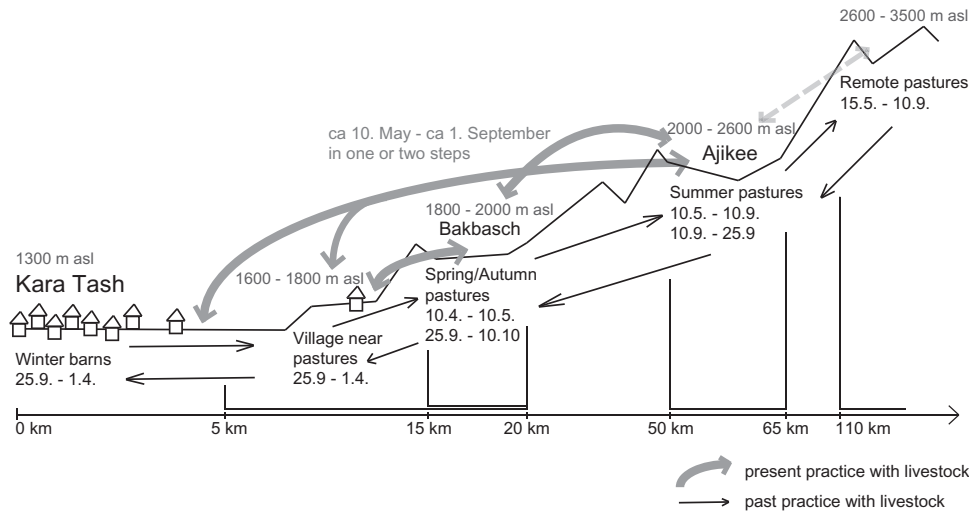


Figure 1. Seasonal migration cycles in animal husbandry.
Source: Schoch (2008).

4.2. Migration

Alongside animal husbandry, migration has become an important livelihood strategy in Kara Tash, as is the case in the whole of Kyrgyzstan. Out of 9,911 inhabitants, 19% were absent in 2006 (Thieme, 2008b). Sixty-four per cent of migrants were men and 36% women; the average age was 32. It is generally the elderly and children who remain in the places of origin. Internal migration is almost as important as international migration. About 45% of the absentees had migrated internally, mainly to the capital Bishkek, but they had also gone to Osh, the closest city to Kara Tash. Another 41% of the migrants work in Russia, mainly in Moscow, St. Petersburg and Tomsk. Kazakhstan is a destination for 12% of migrants, who mainly work in Almaty (Thieme, 2008b). Migrants work especially as traders and in low-skill construction work and service provision such as cleaning. As well as seeking a better income, younger men and women also migrate for educational reasons and to escape from traditions such as early marriage. Further, a sense of relative deprivation is an increasing cause of migration.

“They leave because of the problems in whole Kyrgyzstan, because of unemployment. And they see others going and see how migration can change the situation at home. My daughters have no possibility to study today and you can earn good money by migrating. I’m building this new house with help from my daughters. Even if they studied, they wouldn’t find a job afterwards” (42-year-old woman with two unmarried daughters (20 and 19) in Moscow, Kara Tash 2008).

Remittances from international and internal migration are a major income source for most households.

Remittances are not sent on a monthly basis, but represent 50 to 200 dollars every one or two months, which is in line with a World Bank survey of migrants conducted in 2006 (Quillin *et al.*, 2007: 15).

An estimated two million US dollars of remittances per year to the study site means that each household receives about 100 US dollars per month. This is slightly less than the estimated monthly needs of a household with six members and shows just how important remittances are for daily life.

Money is first of all invested in daily survival and later in life-cycle events, children’s education, cars, housing, cattle, and land. Marriages are important life-cycle events. Traditionally, parents pay for their children’s weddings as well as houses for their sons. Nowadays, migrants of marrying age increasingly finance their weddings and houses themselves.

“I don’t ask for money from my children that have migrated. They want to build or buy a house, so they should save up for this plan. This is a big relief to me and my family, as otherwise I would have to pay for a house for them” (47-year-old man, Kara Tash 2008).

Investing remittances in material goods such as a house or car is a visible sign that a household member has migrated successfully. This puts great pressure on the migrant to be successful and to send as much money as possible. A family that is unable to renovate its house is considered to be relatively poor. Despite the increasing importance of houses and cars as symbols of successful migration, livestock remains a crucial investment and is still a symbol of wealth. Additionally, livestock represents stability and Kyrgyz tradition, and therefore links an individual to the pastures of home.

4.3. Searching for linkages between migration and animal husbandry

4.3.1. Effects of migration on labour division and household organization

Kyrgyz women have been involved in the wage labour market since Soviet times. However, they are also responsible for homemaking, child rearing and caring for the elderly. Men are mainly responsible for work in the fields, livestock, and haymaking, and are seen as the main cash-income earners. As a consequence, they are expected to migrate for work first. Despite a statistical overrepresentation of male migrants in the case study, 36% of migrants are women, who contribute their share of family income (Thieme, 2008b).

Consequently, the absence of one or more migrants can produce a household labour shortage, which can lead to an increased workload in animal husbandry and agriculture, especially in the summer. Families with absent migrants thus have to organize themselves in one of two ways. If they decide to move to the *jailoo*, they need someone to look after the fields and the house in the village. If they decide to stay in the village, they must entrust their livestock to someone else, which generally means paying for those services.

“Our livestock has been with a relative for three seasons and we pay him a fee for this service. In the current free market economy, you even have to pay your relatives” (59-year-old man, Kara Tash 2008).

To handle tasks during labour intensive periods (i.e. haymaking, work in the fields, house-building), many families reduce their agricultural production to self-sufficiency level or recruit extra labour from among relatives or friends. The latter practice, called *ashar*, does not involve any payment but is based on mutual assistance. Our data confirm that *ashar* becomes more common when migrant household members are absent. Another way of finding support in work-intensive periods is to hire day labourers. These are mainly male teenagers in their final years at school or young villagers who have not yet migrated. Remittances are often used to pay for these day labourers.

In general, the absence of the working active generation results in additional work for members of the older generation, who are no longer physically able to migrate. According to Kyrgyz tradition, the youngest son stays with his wife to look after his parents and to take over their responsibilities. In many families, however, economic necessity has changed the rules, and the youngest son migrates, too. In some cases, another son and his wife stay behind to take care of everything, including the animals of their migrated brothers, who send remittances in return. Nevertheless, many parents still hope that their youngest son and his wife will return to inherit their house and to look after them. Overall, parents now remain in charge for much

longer than before and have the additional task of taking care of their grandchildren.

“Today we carry out many tasks we wouldn’t normally do if our children were here, particularly if the youngest son were here. Then we would do nothing, as he and our daughter-in-law would take care of everything” (63-year-old woman, Kara Tash 2008).

Despite these changing responsibilities and tasks, migration remains profitable because remittances usually exceed expenditure on paid labour and compensate for the losses caused by not cultivating the land. Therefore, many encourage the migration of their family members, although this alters the organization of animal husbandry, land cultivation, and the household in general.

4.3.2. Effects of migration and remittances on livestock numbers

Livestock numbers decreased significantly following the privatization of the Kara Tash *kolkhoz*. In the first two years after privatization, approximately 70% of all animals either died from disease and starvation or were slaughtered to maintain self-sufficiency and sold or bartered away. Data from the Kara Tash Ail Okmotu show that the number of livestock has increased again since 2000 (Figure 2). While the number of cattle and horses has already exceeded the Soviet maximum, sheep and goats account for a third of the 1985 total. If converted into sheep equivalents,⁴ the current number of livestock is thus comparable to 1990 levels — with the reservation that the data for livestock numbers in Kara Tash could not be established conclusively. These data are presumably based on the amount of taxes that have to be paid for sending animals to *jailoo*. It can therefore be assumed that these numbers are too low, but they are nevertheless considered as an illustration of a trend.

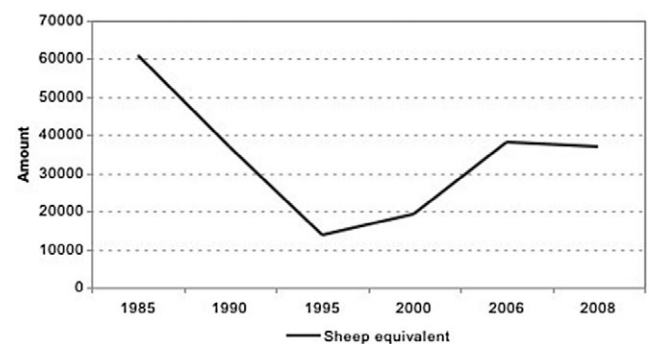


Figure 2. Livestock numbers in sheep equivalents, Kara Tash.
Source: Kara Tash Aiyi Okmotu (2008).

⁴ For this article, five sheep or goats are considered equal to one cow or horse. Since sheep equivalents reflect an animal’s fodder consumption, they are a good indicator of the intensity of pasture use (see Farrington, 2005: 174).

Our data indicate that this increase in livestock numbers is closely related to migration. Most respondents from Kara Tash confirm that they own more livestock today than they did before one of their family members migrated. Apparently, many households invest remittances in livestock. They do so by buying new animals, building new stables or purchasing additional winter fodder. In addition, many use remittances to pay others for herding their animals during the summer or to hire day labourers to work in the fields.

The number of livestock is not only increasing because people *buy more*, but also because they *sell fewer* animals. As they have remittances to cover their everyday expenses, they are not forced to sell animals regularly to raise cash.

“We invest the remittances in everyday expenses. Livestock has increased, as we don’t have to sell livestock. Our livestock breeds and we can keep the young” (42-year-old woman, Kara Tash 2008).

Since livestock is considered financial capital, this shows a direct effect of migration on a household’s financial situation. Yet animal husbandry has far more than just financial advantages. As described above, animals are important for subsistence, to provide draught for ploughing and fetching water, and have a symbolic value, as they demonstrate wealth. Therefore, most respondents regard livestock as their household’s most important resource even though they cover many of their expenses through remittances.

4.3.3. *Effects of increasing livestock numbers on pasture use and quality*

Remittances have been a major driving force behind the increase in the number of livestock. This significant increase in livestock in Kara Tash has affected people’s animal husbandry and pasture management practices. Our research reveals that the number of families moving to the *jailoo* has increased along with the growing number of animals. Within the last five to seven years, the number of yurts⁵ on the largest *jailoo* in Kara Tash has increased from around 150 to 400. In addition, herding families have become younger, indicating that herding animals during summer has become a popular income source for young people and their families.

However, from an ecological point of view, the intensification of animal husbandry can also have negative effects. Recent studies have shown that today, the knowledge about effective and sustainable pasture use that supposedly existed among the pre-Soviet Kyrgyz nomads has largely disappeared. The herders’ current pasture management is often based on individual assessment and must be considered unproductive and unsustainable

(Shamsiev, 2007: 4–57). Although there was already pasture degradation in Soviet times, many summer pastures and those close to villages appear to suffer from overgrazing and erosion, while remote pastures are often underutilized⁶ (see Ludi, 2004: 99; Shamsiev, 2007: 57). In Kara Tash, this imbalance is not only related to the increase in livestock numbers (Figure 2), but also to the fact that the once practised three-pasture moving cycle (Figure 1) has been abandoned. Today, the intensive use of summer pastures can lead to reduced pasture productivity, which results in fodder scarcity in late summer and forces people to move downwards in early September, a time when the harvest has not usually been brought in yet and roaming animals can cause considerable crop damage.

Some of the main reasons preventing herders from moving far away from the village include poor infrastructure, a lack of economic incentives and coordination among herders, and insufficient financial means to invest in housing on and transport to remote pastures. In addition, according to the law, herders must sign lease agreements for every type of pasture they use, so many prefer to stay in one place during the summer (Liechti, 2008). Most herders also consider social relations with neighbours and relatives when they decide where to go (Meierhans, 2008; Steimann, forthcoming).

Apparently, few people in Kara Tash are concerned about the intensive use of pastures or aware of the causes of degradation and erosion. Most respondents are satisfied with pasture quality and are confident that the number of animals can be further increased. They often argue that livestock numbers are still far below Soviet levels and that the animals’ impact such as trampling, dust and lack of grass are less visible today (see Liechti, 2008: 14). This appraisal somehow contradicts the fact that most households in Kara Tash must increasingly buy expensive extra fodder and hay. At the time of research, low forecasts for the approaching hay harvest were even prompting many households to sell livestock because they feared that their livestock would not survive the winter without extra fodder. As a result, livestock prices all over Kyrgyzstan have started to fall.⁷

Kerven *et al.* (2003: 9) show that a three-pasture moving cycle would improve the animals’ health and decrease the need for supplementary winter fodder. However, they also assume that increasing livestock numbers automatically cause increased flock movements in the search for good pastures, meaning that people will not continue to keep their animals only on pastures close to villages. In Kara Tash, households have at least started to move their livestock from the pastures close to the villages to the summer pastures again. Yet, due to the increased numbers

⁶ Under-utilization can also encourage pasture degradation as they become overgrown with weeds and bushes. Interview with Ludmilla Penkina, expert on pasture quality and pasture use at the Department of Pasture Monitoring of the state planning institute, Bishkek 2008.

⁷ Personal communication with traders and customers.

⁵ Traditional mobile summer housing built of a circular wooden frame supporting a felt cover.

of livestock and insufficient agricultural production, the pressure on pastures remains high.

Only a few respondents considered it necessary for the *aiyl okmotu* to better regulate pasture management. Currently, villagers agree in annual meetings on an official period of time during which livestock is not allowed in the village — yet since non-compliance has not been sanctioned so far, only a few people have respected the agreement. In view of the fact that the majority of respondents see their future in animal husbandry, there is an urgent need for coordinated pasture management, since as a result, livestock numbers are likely to increase further (Shamsiev, 2007: 4; Liechti, 2008:17f).

4.3.4. *Negotiating future perspectives*

When it comes to long-term perspectives, the plans and expectations of young migrants and their non-migrating parents often diverge. Older respondents, in particular, express their hope that migration is a temporary phenomenon and that migrants will return to the village in the near future.

“The children that have migrated will come back to the village. There is a Kyrgyz saying that the horse always comes back to his stick” (68-year-old man, Kara Tash 2008).

In contrast, the majority of migrants do not intend to return to the village in the short or medium term. Instead, many are starting to build their lives in urban areas of Kyrgyzstan, where they have better economic opportunities, have begun to build houses, and have access to education for their children and better infrastructure. This phenomenon of “temporary” migration becoming increasingly permanent has also been observed in other post-socialist countries such as Russia (White, 2009) despite de-skilling and the precarious living conditions migrants have to live in. Nevertheless, migrants also invest in livestock that is then taken care of in the village of origin. While this is primarily a way of supporting the family they left behind, it also helps to maintain strong links with their place of origin. Animals and *jailoo* are perceived as being very precious and, despite the hard work they require, they have connotations of restfulness and abundance (Liechti, 2008: 16f).

“I bought two cows last year. This is not only for me, but also to support my family in Kara Tash. Now they are more self-sufficient in milk products” (46-year-old man, Bishkek 2008).

From a purely economic point of view however, the fact that some migrants do not return also has its advantages. For instance, arable land that is divided among fewer sons reduces the pressure on the land. In addition, the remaining household members receive financial support from

migrants to look after their animals. It may therefore be assumed that the multi-locality of livelihoods and providing support at a distance will continue at least in the medium term (Thieme, 2008b).

The majority of villagers see animal husbandry as the future of Kara Tash and the future of returning migrants. Many plan to increase the livestock number in order to live solely from livestock. However, the pastures are already being used very intensively today and pasture management is often unsustainable. In addition, there are few specialists and little expert knowledge.

“Today everybody is a herder, regardless of what he has learned. Nobody is specialized. (. . .) Where will this lead? The quality of the animals is bad. From one cow, for example, you could get 30 litres of milk, but we get 30 litres from three to four cows. There is no selection. People are interested in quantity but not in quality” (64-year-old man, jailoo 2008).

If animal husbandry is to remain an important income source today and in the future, then innovation is necessary. Interviewees suggested that livestock should once more be herded according to the once practised and more sustainable three-pasture annual cycle and that a processing industry would create local job opportunities. People still look to the state to provide infrastructure and services and to create employment, which might be attributable to people’s previous dependency on state inputs (Kerven *et al.*, 2003: 4). With the exception of one mosque, there has so far been no investment of remittances in community development or in expanding private businesses. All people involved perceive their amounts of remittances as just enough to cover their private needs and said that local private businesses might emerge in a few years’ time once people have improved their standard of living and have enough livestock.

5. Conclusion and policy implications

Although agriculture remains important for rural people worldwide, recent livelihood research has observed a global trend towards the diversification of household income sources beyond the agricultural sector and the local level (De Haan and Zoomers, 2003; Scoones, 2009). Thus, agrarian transformation today is characterized by an increasing mobility of labour and the emergence of multi-local livelihoods (Borras, 2009).

In this article we used a case study from rural Kyrgyzstan to examine the interlinkages between the two livelihood strategies of labour migration and animal husbandry. While mobile animal husbandry is a traditional way of securing livelihoods and an integral part of Kyrgyz identity, the sending of remittances by labour migrants to rural areas on a large scale and the substantial investments in land and

housing in urban centres is a more recent trend. Although livelihood diversification does not necessarily always improve a household's economic situation and can also cause new insecurities (Ashley *et al.*, 2003), for the time being labour migration and animal husbandry complement each other. It appears that income diversification broadens rural households' options by increasing the resources at their disposal. In recent years, many households have invested remittances in livestock and barns and have thereby significantly increased their flock size. In addition, households are now rarely forced to sell livestock since they can cover their expenses through remittances. At the same time, the permanent absence of family members alters social relations and leads to a multi-local setup of households with differing responsibilities in different places. This also leads to an increased workload in the village, which is most obvious during labour-intensive periods of the farming year. While some households re-organize using the traditional *ashar* method, others use remittances to hire day labourers. Hence, migrants compensate for their absence, and those who stay behind are generally in favour of migration. In addition, absent male migrants do not claim their distributive share of arable land and livestock, so households are able to manage these resources in a more profitable way.

The research findings nevertheless point towards two aspects that are likely to become critical in the long term, both in Kyrgyzstan and in other regions where people rely on labour migration and animal husbandry. First, from an environmental (but in the long term also economic) point of view, such an increase in livestock numbers may create an additional challenge for sustainable pasture management. Today already, most households practise livestock farming at their own discretion and have abandoned the once practised three-pasture-moving cycle. Poor infrastructure, complex legislation and a lack of knowledge and coordination among herders have exacerbated pasture degradation. As a result, many households have begun to buy expensive supplementary winter fodder, since the productivity of pastures and hay fields is too low to cover their increasing demand. This is often financed through remittances.

This leads us to our second concern, i.e. the sustainability of remittances and migration in general. While elderly people often feel that these family separations are only temporary, younger people in particular increasingly see their identity and their future in urban areas where they have better economic and educational opportunities, better services and infrastructure and an urban lifestyle that gives them more individual freedom. They could only imagine returning to their rural place of birth when they retire. Thus, it is not yet clear to what extent young migrants will maintain their contacts to rural areas in the future. For the time being, investing their remittances in livestock means that they can maintain emotional ties to their home and reduce the insecurity inherent to international mobility. However, the pressure to send remittances may also prevent

migrants from investing in their own families and (urban) businesses. In addition, illness or unemployment can interrupt the flow of remittances at any time, causing financial shortages for rural households that have hardly any access to other cash sources.

The evidence presented in this article thus shows how the diversification of household income sources can foster the interpenetration of rural and urban life. Consequently, the notions of agrarian transformation and rural development need critical rethinking (Borras, 2009), which thus raises a number of questions about the policy implications.

First, to what extent are migrants (who are absent for most of the year) integrated in decision-making and training in the rural area where they still invest and to which they might, under certain conditions, be ready to return? At present, a large proportion of the population that represents the future of the country is not represented in schemes for training, capacity-building and infrastructure rebuilding in rural areas. However, since decision-making processes and responsibilities vary within each household, policymakers and programme officers must obtain a detailed understanding of who has a stake in decision-making processes regarding animal husbandry. If decisions are made in the rural area, then funding and resources must be better directed towards local programmes. In families where absent migrants have a major stake, extension-type services to help them with decision-making might be useful, and returning migrants should be integrated into and potentially attracted by existing programmes.

Second, what can be done to make pasture management more sustainable? In view of people's investment in more livestock, the way pasture resources are used becomes a key concern. From this point of view, recent donor-initiated efforts to decentralize pasture management to the community level and make it less bureaucratic are a promising start (World Bank, 2008). However, while these reforms can help to reduce the legal hurdles for improved pasture rotation (Kerven *et al.*, 2003), other aspects such as poor infrastructure and a lack of economic incentives to increase flock mobility may continue to prevent people from using pastures in a sustainable manner. One way to overcome these obstacles might be to encourage cooperation among rural households. If people did not simply use their remittances to increase their private flocks, but instead invested jointly in improved access to remote pastures or in improved access to rural commodity markets, labour migration may even have the potential to become a major driving force for sustainable pasture management in the future.

Third, as remaining family members and some returning migrants plan to gain a livelihood from farming again, a very important issue (although it needs to be looked at further as it was not part of our research) is access to markets. The challenge is to come up with policies that strengthen rural commodity markets in order to generate

and raise rural cash income. Unless rural markets are reinforced, labour migration will remain one of the few ways to make a living in rural Kyrgyzstan.

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