

“Community management of high-alpine grasslands in the Kyrgyz Republic: social, economic and ecological implications”

Nazgul Esengulova¹,
Amantur Japarov², Edil Mamytbekov³

Abstract

This paper reviews a case of developing a local community association for management of high-altitude pastures in Kyrgyzstan. It examines drivers for formation of such organisation, benefits and challenges it faces with.

In Kyrgyzstan where all pastures belong to state and there is weak land legislation, lack of knowledge on sustainable practices among land users, inequitable access to resources and not registered rights, maximisation of pasture use is in place, which leads to overexploitation of natural resources. Pasture users association established in Tolok village of Kyrgyzstan is a community based organisation which was formed to sustain natural resources of high-alpine grasslands in Tolok river basin. The paper reflects on concept and principles of this association, discusses its role and relationship with other institutions dealing with common-pool resources, future opportunities and threats.

Key words: *community association, high-alpine pasturelands, community management*

¹ Nazgul Esengulova, President of Public Fund ‘Ak Terek’

² Dr. Amantur Japarov, Social Anthropologist, Institute of History of National Academy of Sciences of Kyrgyz Republic, Member of Advisory Board of Public Fund ‘Ak Terek.

³ Edil Mamytbekov, Programme Coordinator, Public Fund ‘Ak Terek’

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1. Executive summary

Common resources to which pastures belong in Kyrgyz Republic are not well defined in legislation yet. However individualization and commercialization of common resources are happening in the country.

The paper discusses pasture management issues in the Kyrgyz Republic with focus on one case of community management alpine grasslands in Tolok community.

First parts provide short info on the country and its pasture resources to give reader understanding of the local context and specifics of pasture management in the country.

Third and fourth parts describe Tolok community and organization of pasture users association, prerequisites for formation of such organization and implications it brought about and talk about necessity of common use of pastures.

2. Background

The Kyrgyz Republic is a small country (198.500km²) in Central Asia, about 90 % of its territory lies above 1500 m above sea level, 40 % of the country is above 3000 m high and three quarters of that under permanent snow and glaciers.

Most of the land of the republic is not suitable for crop production but only for livestock breeding due to altitude, topographical features and climatic conditions. These territories were traditionally used as transhumant system with summer grazing in sub-alpine and alpine zones and winter grazing in pastures in lower valleys.

During the Soviet period, agriculture, including livestock breeding was centrally organized, the traditional system overlaid by agro-industrial system and all land was intensively used. Kyrgyz Republic is one of illuminating examples of tragedy of commons that Hardin described in 1960s. Kyrgyz Republic had 13 million sheep in 9 m ha of pastures. Capacity of some pastures were exceeded by 10 times (L.Penkina, 2005)

After the collapse of the Soviet because of socio-economic hardships the number of livestock has significantly decreased to 4, 5 m(Giprozem). But the country remained to be agrarian and its economy is still largely farming and livestock breeding. However it is a small-scale and weakly organized and influenced by massive grassland degradation and change in institutional and social infrastructure that supported pastoral systems.

3. Pasture Resources of the Kyrgyz Republic

Pasturelands make up more than 80% of all agricultural land of Kyrgyz Republic and cover area of 89,000 km² (see table 1)
In addition to designated rangeland, there are also pastures that are classified as part of the Forestry Fund and the territory it covers is 32,000 km²

Table 1: Agricultural Land in the Kyrgyz Republic (hectares)⁴

Land Use	Area (ha)	Percentage of Total Agricultural Land Area
Pastures	9,187,600	86.2
Arable land	1,238,600	11.6
Hay land	169,600	1.6
Perennials	37,400	0.4
Fallow land	21,400	0.2
Total	10,654,600	100.0

Classification by seasons

By the seasonal use pastures are divided into spring-autumn, summer and winter pastures. Spotted development and type of the grass stand serve as the basis for such division; they depend on the relief and proximity of pastures to arable lands.

⁴ Source: Resolution # 744 of the Government of the Kyrgyz Republic on Distribution of Land Fund according to the Agricultural Land Categories as of January 1, 2004 (October 7, 2004).

Winter pastures (Kyshtoo) – usually territories which are located close to villages, in areas of light or negligible snowfall where livestock can graze. As a rule sheds are built in these sites to house livestock.

Because of socio-economic hardships after collapse of Soviet system and violation of seasonal rotation of pastures most of these pastures have been heavily used all year round for a number of years and are much degraded.

Summer pastures (Jailoo) are situated at middle elevations and in the high mountain valleys and gorges, at significant distance from the villages.

These pastures are characterized by high productivity and grazed in summer. After collapse of the Soviet system where government provided means to shepherds to get their families and herds to distant pastures, summer pastures were left underutilized.

This brought about positive and negative results, in some places pastures rested and rehabilitated after intensive use, in other places pastures have been dominated by unpalatable secondary plant species, which much affected pasture's economic value.

Also most of summer pastures are characterized by slope steepness of 40° and more. They degrade very easily under cattle grazing when terraced paths, generally running perpendicular to the slope, are formed and landslides follow (Ch. Bozumbaeva and L. Penkina, 2005, 2006).

Spring-autumn pastures (Jazdoo - Kuzdoo) usually situated at the foothills below 2500 m altitude. Grazing starts here in early spring when forage growth begins and again in fall after the harvest has been collected from cultivated agricultural fields. These pastures are very important because they serve as the first natural feeding source after winter, and they are used for inseminating, shearing and dipping of sheep.

Table 2 Seasonal Pastures Resources in the Kyrgyz Republic⁵

Type of Pasture	Hectares	% of Total
Summer Pastures	4,129,000	45
Spring-Autumn pastures	2,955,000	32
Winter Pastures	2,063,000	23
Total Pastures	9,147,000	100

At present, overgrazing near populated areas and the virtual abandonment of summer pastures represent two extremes of undesirable trends in pasture evolution. According to pasture experts, in the last two decades pastures degradation increased in winter and spring-autumn pastures.

According to their location and management *pastures are classified*⁶ as follows:

- Pastures located near villages (*priselnye*); these include lands that have been cultivated, hayfields, orchards, and forests ;
- Pastures under intensive use (*intensivnye*) – pastures which are between distant pastures and pastures near villages;
- Distant pastures (*otgonnye*) used for transhumant livestock production.

⁵ Source: KyrgyzGiprozem

⁶ Source: Governmental Resolution #360 of June 4 2002.

4. Pasture Use and Management in Past and Present

To understand how institutional framework and legal relations took shape regarding the use and management of pasture resources, it is necessary to consider three basic historical periods:

- (1) Prior to collectivization and Soviet era, when pasture use was of communal character and rotational pasture use patterns were in place.
- (2) Soviet period when all was subordinated to the planned economics with maximal use of natural resources;
- (3) Post-independence period when radical changes in land-legal relations took place with privatization of agricultural lands on the basis of development of market relations.

4.1. Pre-Soviet period

Before Soviets nomadic Kyrgyz were organized in nuclear families, kin and tribal groups sharing common winter camps. Summer pastures were often considered as common property of larger groups, basically grazing rights were based on kinship.

Regarding management regulations, there was no vertical pressure from power structures in use of pastures; the system was characterized by its decentralized nature and absence of individual rights to pasture lands, with prevalence of communal character of cattle grazing. However tribal or kin group leaders during their usual public gatherings would often discuss pasture issues along with other main issues in their settlements. For example in *Jut* year (Bad years because of extreme weather, diseases, lack of forage and etc) neighboring tribes would help each other by allowing herds of neighbor into their own pastures and later would take payment for this in the form of cattle.

Borders of each tribe or kin group would be defined using natural landscape features, like rivers, lakes, gorges, valleys and etc. Often when passing through pastures of neighbors or other tribes pastoralists would pay *otmok* (Fee for passing through).

Any disputes that arisen were settled through *Kazy* and Elders Courts (Traditional system of courts) based on customary law.

4.2.. Soviet period

During the **Soviet period** radical changes took place in regard of ownership in livestock industries and of all system of pasture use and management in the process of establishment of large *Kolkhozes* (collective farms) and *Sovkhozes*⁷ (state farms). In Soviet period all land belonged to the state. Keeping the foundation of rotation of remote pastures for livestock breeding, *the state control* over pasture economy simultaneously promoted *infringement* of the basic traditional ways of communal grazing.

Decisions *on* rights of use of various pasture lands were accepted by village councils but as animal husbandry was of collective nature, actually all decisions were

⁷ The term *kolkhoz*, is a form collective farming in the former USSR. *Kolkhoz* members were paid a share of the farm's product and profit according to the number of working days, and were allowed to hold about one acre of private land and a couple of domestic animals. *Sovkhozes largely depended on state subsidies and employed salaried workers.*

made by collective farm administration on the basis of the information provided by the central state agencies. Private individuals accordingly had no much say in this decision making.

Everything was subordinated to the objective of maximization of livestock production, which had led to *intensive pasture use*, suppressing sustainable use of pasture resources.

In Soviet collective farms there was practiced a type of communal grazing when members of collective farm would send their livestock with herdsmen to pastures. Since there was no strict rules or regulations for pasture use eventually each herdsman would maximize the use of pasture resources by increasing the number of his herd. In this regard Hardin's tragedy of commons was much true, and even decades later after some rest of pastures we can still see signs of degradation and overuse that hard to remedy.

But in fact common regimes have chance to live and contribute to sustainability, if there is clear written regulations for management and responsibilities of users, which we will discuss later in our case.

4.3. After Soviet and present situation

This period is characterized by low efficiency at instability of a pasture economy.

In the center of reforms during the period after getting independence there was an objective of fragmentation of the state and collective farms and distribution of land, livestock and technique to private owners (former members of collective and state farms).

Only pasture land remained in state ownership; since 1995, it is given out for rent to private farmers and herders.

By 2001 all soviet farms have been reorganized into private farms and cooperatives, and by 2005 the number of private farms has come near to 240 thousand. However most of them could not survive in new market oriented conditions and gone through further fragmentation into household-based subsistence production.

In connection with disbandment of collective farms and state farms their duties were either terminated or were handed over to other existing or newly established structures, including local self-government bodies, like village administrations (Ayil okmotu).

The carried out transformations were characterized by noticeable inconsistency and made a considerable impact on change of economic structure, on number of cattle and management of pasture resources.

Number of sheep across the Republic during 1990 - 2005 reduced from 10 million to 5 million, and in the Song-Kul ayil okmotu from 32 thousand to 12 thousand (1990-1996).

At the same time transfer of sheep of collective farms and state farms into ownership of new owners - numerous small farmers - was carried out without transfer of necessary knowledge, technologies and resources for maintenance of animals. Small farmers began to excessively exploit nearby pastures and avoided moving cattle to distant pastures where infrastructure and other facilities deteriorated.

Only owners of large herds began to move livestock to rangelands for summer grazing, but each family on individual base.

Pasture maintenance is based on subdivision of all pastures into three zones:

- adjacent to the village pastures (*near the village*), controlled by local aiyl okmotu,
- medium zone - the so-called intensive pastures – are controlled by the rayon administration
- and distant pastures (*rangelands*), are managed by regional administration.

Such classification frequently causes ambiguities and disputes between private persons and various agencies. Because borders of pastures are not well defined, village administrations often do not have maps of their pastures and even lack knowledge of their duties and responsibilities regarding pasture management. A very small number of farmers know the difference between categories of pastures, and many, of these farmers in particular in the remote areas, do not have any idea that three categories of pastures have different instructions for use. There is no public awareness of changing laws and regulations.

Pasture use and management system is still not well defined in legislation and basically remain on former Soviet system of use and management of pastures according to administrative division of territories. The law has no clear regulations for common use of pastures.

Pasture use rights such as access to land and right to utilize resources of pasturage is given to pasture user on the base of lease. Whereas control and decision-making rights like rights to reassign pastures to others remain with state and local administrations.

But nevertheless the basic difference *of the present period* became an opportunity *of obtaining the rights to pasture resources* on a legitimate basis. These rights though are temporary by their nature and are based on rent relations, but nevertheless give pasture users a basis for more responsible attitude to pasture resources.

4.4. Legal Aspects of Pasture Use and Management

According to Kyrgyz Law pasturelands belongs to state and they cannot be privatized, only rented.

Issues of management and use of pasture resources are mentioned in a number of laws⁸, including the Forest Code regulating land tenure within the boundaries of the State Forest Fund; the Tax Code and the Law on management of the land of agricultural purpose.

In different laws there are numerous inconsistencies, which cause ambiguity and different interpretation.

The main legislation determining institutional structure and the order of management of pastures includes “Regulations on the order of renting and use of pasture” (Governmental Decree # 360 as of June, 4, 2002).

It contains definitions of types of pastures, roles and responsibilities of various governmental structures concerning different types of pastures, principles and restrictions of pasture use and *the detailed order of renting pasture land parcels*.

Pasture use Resolution explains comprehensively but it is rather complicated. Though the basic items in the Resolution pursue the objective of rational use of pasture resources on a competitive basis, in practice they are difficult to implement. The process of documenting the right to pasture use is also complicated and burdensome. It is not clear, why for confirmation of allocation of a pasture land parcel

⁸ Enumerate laws regulating pasture issues

three separate documents are required (contract of rent, the certificate of transfer and the certifying certificate).

5. Case of Tolok community

5.1. Background information

The study area is located at the altitude of 2500-3000 meters above sea level near fresh water lake Song-Kol in Inner Tian-Shan and include pilot communities of Tolok and Kok-Jar which use these landscapes. It has the most important pasturelands and therefore plays a significant role in livestock breeding in the republic. The majority of local population lives on raising domestic animals like horses, sheep, goats, yaks and cows for subsistence as well as for marketing (hides, meat, wool, dairy products). In Soviet time Tolok was a part of big Sovkhoz "Song-Kol", which specialized on ranching pedigree livestock because of which most of traditional breeds significantly diminished. Land was intensively used both for livestock and agriculture which resulted in massive land degradation.

Present time Livestock is still a key source for local economic development.

Tolok is mainly livestock breeding community with very limited agriculture, mostly for fodder growing. Total population of Tolok is about 1500 people, representatives of more than 14 small tribes.

Kok-Jar has both land cultivation and livestock breeding.

All pastures in Tolok community have been designated as the *adjacent to village category and are under supervision* of village administration (Ayil okmotu).

In study area we observed under-use of summer pastures and overgrazing in winter pastures near to village.

5.2. Findings of participatory research

Main issues researched and defined together with communities related to pasture use and management:

5.2.1. No official registration of pasture parcels:

During our research in pilot communities we have not found a case when pasture users officially were renting a pasture parcel, mostly oral agreements with ayil okmotu were in place.

Pastures around the village of Tolok ayil okmotu were used without official contracts though payments were made to representatives of local administration, but were not registered in local budget.

Ayil okmotu, which received the right to dispose local pasture resources, has not been interested in granting the rights due to many reasons. One of principal causes was that ayil okmotu has no base information on pastures which they administer (boundaries, location of infrastructure and bearing capacity (number of sheep per square kilometer) and all planning was limited to forecasting of probable total income as the result of rent of the pasture lands.

Ayil okmotu had no stimulus for registration of official contracts which would show real revenues from rent of the pasture lands. Though pastures near villages are intensively used all year round, according to the official data their rent makes up only a few percentage.

Rates of rent were rather low - 2,5 Som per hectare annually. Besides this, 90 percent of the sum of the rent which should have gone to the budget of local aiyl okmotu, as a matter of fact never reached it.

5.2.2. *Absence of maps of pastures which show boundaries, status of land*

Maps used in aiyl okmotu were out-of-date. Absence of the crucial information has led to conditional allocation of pastures under the scheme which was inherited after the collapse of the state farm.

5.2.3 *Pastoralists themselves lack knowledge* of land legislation, their rights and responsibilities, about sustainable use of pastures.

Lack of knowledge on behalf of our pastoralists of the rights and measures of responsibility entails adverse consequences both for pastoralists and for the land resources used by them.

In practice there are cases of withdrawal of the lands, imposing of penalties on the bases which have not been stipulated by the current legislation.

By virtue of social vulnerability, low level of well-being of farmers and backwardness of extension services rural dwellers have no opportunity to address for the help to lawyers or other human rights activists.

Let's take a concrete example from this local community. Using contradictions in the legislation of the Kyrgyz Republic, earlier former local aiyl okmotu practiced renting out of selected pasture areas without drawing up of contracts for the period of 1 year.

In other words the farmer already could not expect to use it for more than one year and tried to use its resources at maximum, which naturally affected the subsequent condition of pastures.

Some farmers, having received based on verbal arrangement such pasture lands, the next year found out, that this land is already used by others.

And a farmer thus could not defend his rights, because no documents had been drawn up.

The legal collision was, that in the version of the Land Code in the Kyrgyz language it was written, that the lands of agricultural purpose (agricultural lands) to which pasture were attributed, can be rented for the term of less than 5 years, and in the variant of the same Land Code in Russian for the term of not less than 5 years. That is one law contained two mutually exclusive positions in two different translations. Naturally local aiyl okmotu used this provision at their own discretion and for their own benefit.

After applications of farmers and nongovernmental organizations dealing with land issues in Kochkor district this error in the Land Code was corrected.

Other part of this problem was that many of our pasture users thought that if terms of rent comprise less than 5 years it is not necessary to register rent, which was without any doubt also their mistake, due to ignorance of laws, because in compliance with the Resolution № 360 of the Government of the Kyrgyz Republic all agreements on pasture rent, which were not registered in the State Register, are not valid.

And in this case, due to avoiding registration, pasture users could not provide themselves with guarantees of rent.

KyrgyzGiprozem Institute participated earlier in some projects, carried out in the village Tolok; the projects were devoted to improvement of status of pastures, it fixed important concepts of pastures maintenance, but these concepts have not been widely discussed in the community and were not applied in practice by villagers. Also pasture management plans were developed but was not distributed and reached people.

5.3. Pastoralists Organisation into Pasture Users Association

Field researches (anthropological survey on traditional knowledge about pasture use and management, geobotanical field trips to determine pasture status and others) carried out with participation of local pastoralists and various explanatory seminars on rights, land law, convinced pastoralists that inevitable changes in the pasture lands used by them occur and that most importantly they need to take initiative in their hands and act.

Firstly it was important to define who is the user of these lands? What are the rights and responsibilities land use entails?

Since the use of lands (rent) has not been registered officially, land rights correspondingly were not obtained.

A group of pastoralists who are using Kashka-Suu gorge decided to unite into an association to jointly solve problems of pasture use they had.

Pasture users of the Kashka-Suu became the first members **of Association of pasture users**, united 17 farmers.

Association is a locally registered organization with an open membership, executive body and internal regulations.

Each member has a voting right in general meeting of members. Association structure has both traditional and modern features. For example the head of association is elected, there is an executive secretary who is also an accountant, it formally registered, operates according to written internal regulations that have been developed by members themselves. On the other hand in decision-making and voting only elder members of family like husband or wife take part, not children. However children inherit membership from parents.

Election of head of association is organized in traditional voting manner. The executive body does not have office or regular working hours and summons only on urgent cases or by request of several members to discuss certain issue in the area.

With unification pastoralists signed official contracts with ayil okmotu on pasture use. Jointly with geobotanists and State Registry (Gosregister) defined borders of their pasturages. They managed to legalise their rights of users by registration in Gosregister and received certificates on temporary use of pasturages on conditions of rent for the period of 10 years. To each pasturage there have been registered several people (family heads) based on kinship. This is a traditional way of using and management of pastures. However few association members decided to keep individual rights for use of pastures.

Main reasons for pastoralists organization into association were ecological degradation of their lands due to pressure on certain plots while underutilization of others, social and economic problems (threat to commercialise their pasturages by outsiders, social isolation and lack of cooperation between pastoralists, lack of finances to move to jailoos, repair and maintain roads leading to jailoos, inability to prohibit hunting and fishing in their territories when alone, non-fair trade of their livestock production through mediators)and others.

The idea of association is threefold:

-ecological improvement of pastures by revival of traditional rotational system of grazing, improvement of structure of herds according to specifics of certain pasturages, organization of protected spots for the period of seeding of plants.

-social organization and empowerment of pastoralists, education and capacity building.

-economic cooperation between pastoralists and development of multi-functional use of pasture resources.

5.4. Social, economic and ecological implications

5.4.1. Ecological implications

According to Giprozem pasture assessment reports 2000-2001 pasturelands of Tolok and Kok-Jar communities in general are in good state, though in some places there have been recorded heavy overgrazing areas. Summer pastures for a number of years (in the period of 1994-2004) have been under-utilized because of decline in number of livestock; with the break up of Soviet collective farms and transition to market economy rural communities who mostly relied on their livestock and land sold most of them. So under-utilisation gave pastures a chance to some extent to rehabilitate. However under-utilisation resulted also in degradation of pastures with spread of weeds and non-palatable plants.

Organisation of community based association and securing rights to pasture lands for its members, has allowed to raise their responsibility concerning the use of the lands and allowed for putting in order not only the order of cattle grazing during the winter and summer periods alleviating pressure from overgrazed areas, but common use of separated pasturages which allowed their rotation, thus decreasing trampling and underutilization in pastures. Pastoralists organize protected spots during seeding period of wild fodder plants, which save these places as potential revival zones. Also pastoralists are planning to improve structure and quality of their herds, which eventually will positively effect ecological state of their pastures.

5.4.2. Economic implications

Unification of pastoralists helped to pool resources for their movement to summer pastures and return to winter pastures. If before each pastoralist family had to hire track on their own, now families jointly hire bigger truck to carry their yurt and tents to jailoos.

Payments for using the pasture lands acquired official nature - now both rental fees are paid, which comprises 8 Som (Kyrgyz money) per hectare annually, and social payments, a part from which will be used by the Association for repair of roads, clean up snow, in case of occurrence of difficulties of movement to pastures and other needs of Association.

The previous system of pastures management created conditions for corruption. Also not clear borders caused problems. It was reported that in the actual pasture tenure and access system, people would use more land than they were agreed with ayil okmotu because of unclear borders.

If before pastoralists sold their livestock production to middlemen by low price, now association jointly regulate prices and elect representatives to sell their production in centre for better price.

5.4.3. Social implications

Acquisition of rights to use and availability of the Association of pasture users will allow for protecting pasture users from the non-authorized purchase by rich and influential people of pasture lands and reception of the big benefits, will allow to struggle collectively against unfair transactions with pasture areas.

Continuously increasing competition among the land users pursuing various interests, for use of one or other land resources, can become one more problem in the nearest future. It certainly can lead to occurrence of disputable situations.

It is no secret, that for many traditional users of pasture resources in Tolok a unique source of not only development of animal husbandry, but also means of subsistence are natural resources used by them, however many of them pursue certain commercial interests. Until now the number of conflict situations relating to land tenure was insignificant owing to abundance of land resources and decrease in the numbers of livestock.

Presence of local organization dealing with pasture issues, strong and able to be negotiate is important. Pastoralists believe their new built association will be such institute.

6. Conclusion

That fact is obvious, that management of pastures including control over cattle grazing almost does not exist on the part of authorities. There is a strategy on pasture plans, monitoring and rotation based on bearing capacity of the pasture (number of cattle per square kilometer) (Resolution No 360), but in practice such management appears either completely ineffective or has small efficiency. The system at which various state subjects are given the right to supervise various types of pastures, leads to confusion or at best to inefficient use of the limited state resources and probable reduction of involvement of communities in pastures planning.

At present Kyrgyz legislation and government policies do not provide recognition and support to common property regimes. However we think that access and management of pasture resources should be done through common property regimes which will sustain livelihoods of rural people.

It could be done through customary institutions or organization like Pasture Users Association which is based on group identity like kinship.

Simple and practically feasible measures strengthening possibilities on development of community pasture management are necessary, allowing providing for sustainable use and rehabilitation of pasture land.

Providing of a more fair access to land does not mean only expansion of the given rights to pasture resources.

For full realization of these rights and opportunities it is necessary that there was a guarantee of access to land (for example to protect from withdrawal it by force or by law).

Changes are necessary allowing for consolidation of pasture management on the level of community, which will provide for greater participation and responsibility on behalf of local users. The appearing associations, similar to the Association pasture users in the village Tolok, should possess a weighty voice at decision-making concerning use and conservation of pasture resources. For this purpose accordingly it is necessary to make amendments into the corresponding legislation (the Land and the Tax legislation, laws on local self-government bodies, on management of lands of agricultural purpose, etc.).

Improvement in legislation and policy reform are required in order to support common property systems and ensure that the rights and responsibilities of groups and individuals using commons are clearly defined and secured.

Access to land is of crucial importance as it is one of key means of production of animal husbandry and the major factor of increase of accessibility of local community's development.

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