BioOne COMPLETE

Post-Soviet Transformations in Pastoral Systems in the North Caucasus: The Development of Hybrid Institutions

Authors: Gunya, Alexey, Gairabekov, Umar, Karaev, Yuri, Lysenko, Alexey, Elmurzaev, Ruslan, et al.

Source: Mountain Research and Development, 39(4)

Published By: International Mountain Society

URL: https://doi.org/10.1659/MRD-JOURNAL-D-20-00047.1

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Mountain Research and Development (MRD)
An international, peer-reviewed open access journal
published by the International Mountain Society (IMS)
www.mrd-journal.org

MountainResearch
Systems knowledge

Post-Soviet Transformations in Pastoral Systems in the North Caucasus: The Development of Hybrid Institutions

Alexey Gunya[1,2]*, Umar Gairabekov[2], Yuri Karaev[3], Alexey Lysenko[4], Ruslan Elmurzaev[2], and Halimat Janibekova[5]

** Corresponding author: gunyaa@yahoo.com*

[1] *Institute of Geography, Russian Academy of Sciences, Staromonetniy Lane, 29, Moscow 119017, Russia*
[2] *Chechen State University, Prospekt Bul'var Dudayeva, 17, Grozny, Chechnya 366007, Russia*
[3] *North Caucasian Institute of Mining and Metallurgy (State Technological University), Ulitsa Nikolayeva, 44, Vladikavkaz, North Ossetia–Alania Republic 362021, Russia*
[4] *North-Caucasus Federal University, Pushkin Street, 1, Stavropol 355017, Russia*
[5] *Karachay-Cherkess State University, Ulitsa Lenina, 29, Karachayevsk, Karachay-Cherkessia 369202, Russia*

© 2019 Gunya et al. This open access article is licensed under a Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/). Please credit the authors and the full source.

This article describes the condition and spread of one of the most mobile forms of pastoralism, transhumance, as well as factors and transition pathways that have taken place in the pastoral systems of the North Caucasus. The weakening of centralization and control over local economies, as well as the cessation of subsidies to collective and state farms in the 1990s, led to the destruction of state-regulated transhumance. At the same time, traditional institutions and local forms of social organization, such as ethnic groups, tribal alliances, and family associations, are playing an important role. This study is based on mapping of pasture use, analysis of statistical data, and interviews with shepherds, municipal authority representatives, and government officials from regional agricultural departments. It describes the factors promoting or limiting transhumance in 4 regions (Dagestan, Chechnya, North Ossetia–Alania, and Karachay–Cherkessia), including ethnicity, land tenure, the status of privatization of agricultural land, and centralization of power. Leading actors and institutions in 3 periods, pre-Revolutionary, Soviet, and post-Soviet, are considered, with a more detailed analysis of the last period right up to present times. The role of resettlement of people from the mountains to the plains in the Soviet period, which contributed to the development of transhumance in the modern period, is emphasized. Institutional hybrids are discussed, including formal state and informal (traditional and new) rules to regulate the use of pastures during the transition from the Soviet central planning system to market relations.

Keywords: *transhumance; pastoralism; mountain; cattle breeding; pasture; traditional institutions; institutional hybrids; North Caucasus.*

Peer-reviewed by the Editors: *November 2019*
Accepted: *December 2019*

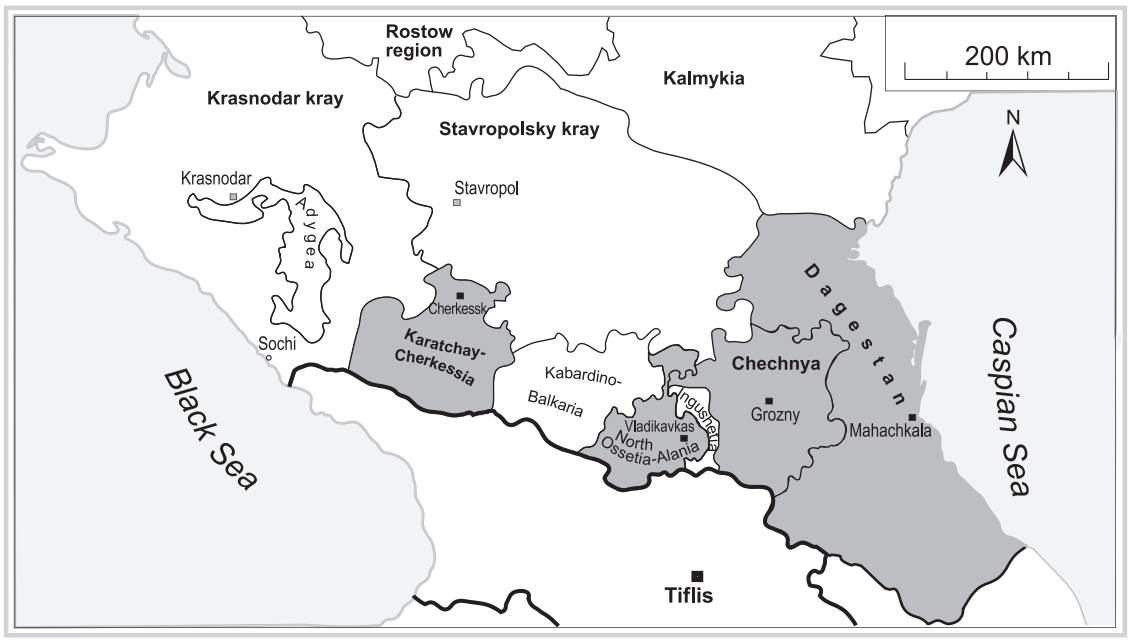
Introduction

According to the Food and Agriculture Organization (FAO) of the United Nations, pastures occupy 40 million km^2, about 26.7%, of the planet's ice-free territory (Ritchie and Roser 2019) and support 1–2 billion people (Sayre et al 2013). Pastoralism remains important in the postindustrial era. This is evidenced by the implementation of international programs and projects to study and support pastoralism. These include, for example, several initiatives within the FAO, where a special division on pastoralism has been created (http://www.fao.org/pastoralist-knowledge-hub), and the International Fund for Agricultural Development, which runs projects on livestock and rangeland (https://www.ifad.org/en/livestock-and-rangeland). Today, acute political, economic, and environmental (eg climate change) issues are coming to the forefront, testing the resilience of pastoral systems and their adaptability (Galvin 2009; Reid et al 2014; Jurt et al 2015; Gentle and Thwaites 2016; Deléglise et al 2019).

In Russia, pastureland use plays an important role in the agricultural economy of mountain regions (Russian Federal State Statistics Service 2018). Studies of pastoralism have primarily focused on economic and biological aspects (Kerven et al 2011, 2012). The sociocultural component of pastoralism has been addressed less frequently, and this has been done mainly by historians and ethnographers (eg Markov 1981; Kaloev 1993; Intigrinova 2011; Yamskov 2013). The term pastoralism itself has hardly been used; instead, the term "distant-pasture cattle breeding" (*otgonno-pastbishchnoe zhivotnovodstvo*) is widely applied. Thus, the increasingly relevant sociocultural and institutional aspects of pastoralism are largely absent from more natural science-oriented investigations. In Soviet times, transhumance was formalized by the state and reinforced by various legislative acts. After the collapse of the Soviet Union and the weakening of the state, this institution became disembedded,

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

FIGURE 1 Case study regions. (Map by Alexey Gunya)



and many legislative initiatives ceased to correspond to the real practice of transhumance. Further, the system of distant-pasture cattle breeding underwent profound transformations due to the demonopolization of land rights and the emergence of market relations (Gracheva 2014; Gunya 2014, 2017).

Pastoralism has been transformed especially in multiethnic mountainous regions, such as in the North Caucasus. State support for agriculture in the North Caucasus declined sharply in the 1990s. However, in the 2000s, the state continued to subsidize this region in order to reduce social tension and create jobs through subsidies and the implementation of state programs (Kolosov et al 2016).

In this study, we examined the transition pathways of pastoral systems in the post-Soviet period in the North Caucasus. We considered the connection between one of the most mobile forms of pastoralism—transhumance—and the sociocultural and political characteristics of the North Caucasus region: ethnicity, land relations, and the privatization of agricultural land. We also discuss the factors that contribute to or limit transhumance, identifying leading actors and institutions in 4 North Caucasian regions (Dagestan, Chechnya, North Ossetia–Alania, Karachay–Cherkessia; Figure 1) in 3 periods: pre-Revolutionary, Soviet, and post-Soviet, with a more detailed analysis of the latter period.

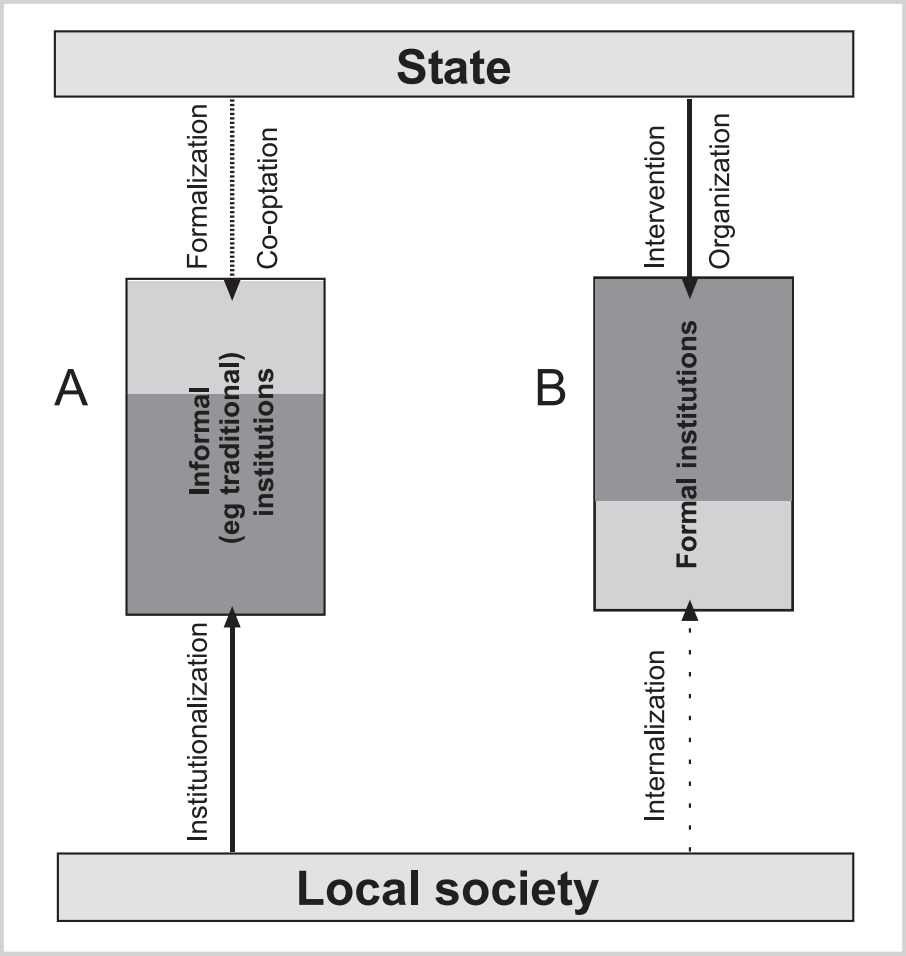
Conceptual framework

In its most general form, pastoralism is domestic animal husbandry that forms the basis for the local population's subsistence. This concept, however, varies from country to country and assumes different particularities according to the sociocultural and political contexts (see, for example, Sayre 2017). The concept of pastoralism has expanded as ideas have developed about interactions between people and the environment, resource constraints, and conflicts in natural resource use. Pastoralism now incorporates a whole range of issues, from environmental and economic to social and sociopolitical (Fratkin 1997; Fernandez-Giménez and LeFebre 2006; Kreutzmann 2012; Dong et al 2016). In mountain regions, pastoralism is typically identified with distant-pasture cattle breeding and related systems of economic, cultural, and environmental processes, including the social management of pastures and hayfields, the adaptation of traditional institutions of land use in farming, and contributions to the sustainable development of mountain areas in general. In this regard, mountain pastoralism is an important layer of mountain peoples' cultures that contributes significantly to the sustainability of mountain systems, especially within the context of globalization and climate change (see, for example, Gentle and Thwaites 2016). Despite globalization and modernization, mountain pastoralism is experiencing a new stage of development, as evidenced by contemporary examples from the European Alps (Fassio et al 2014). Some Alpine countries are beginning to revive disappearing management systems, such as distant-pasture cattle breeding, living on summer pastures, and cultivation of dairy products (primarily cheese). Distant-pasture sheep breeding in the Alps is closely tied to family connections (Viazzo 2010), and the traditional role of the family (Nimkoff and Middleton 1960) is again becoming important in pastoral systems.

We understand pastoralism as a set of environmental management institutions and practices that control links among pasture resources, livestock, and humans and represent an adaptive strategy for a changing environment (Nori and Davies 2007). We focus on transhumance as a system of seasonal movements of livestock that is regulated by institutions. It is important to emphasize the following features of this institution: recurrence in time, acceptance by most people, generational succession, control, and sanctions (North 1990), and embeddedness in social systems (Elwert et al 1999).

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

FIGURE 2 Basic types of hybrid institutions, formed at the junction of the state and local communities that regulate transhumance: (A) dominance of internal mechanisms of self-organization within communities; (B) dominance of external governance.



Hybrid institutional arrangements are formed as an adaptation to changes in framework conditions, and similarities and differences between such adaptations are informed by historical and geographical context (North 1990; Thelen 1999; Egnell and Halden 2013). Hybrid institutional arrangements facilitate temporary or transitional stability because they have an important conflict-processing function (Elwert 2002; Koehler and Zürcher 2004). Hybrid institutions are formed either through the formalization and co-optation of traditional institutions, or by the internalizing of institutions and organizations imposed on communities by the state (Figure 2). This is a prolonged and dynamic process (Lindner 1998; Gunya 2004). The search for mutual benefit between the state and society is at the heart of the formation of internal and external, new and old, traditional and innovative institutional hybrids. This model of hybrid institutions enables the role of the state to be integrated with the role of self-organization within local communities in forming conditions for transhumance.

We assume that the transformation paths of transhumance will be correlated, on the one hand, with the processes of formalization, co-optation, and organization (on the part of the state) and, on the other hand, with institutionalization and internalization (on the part of local communities).

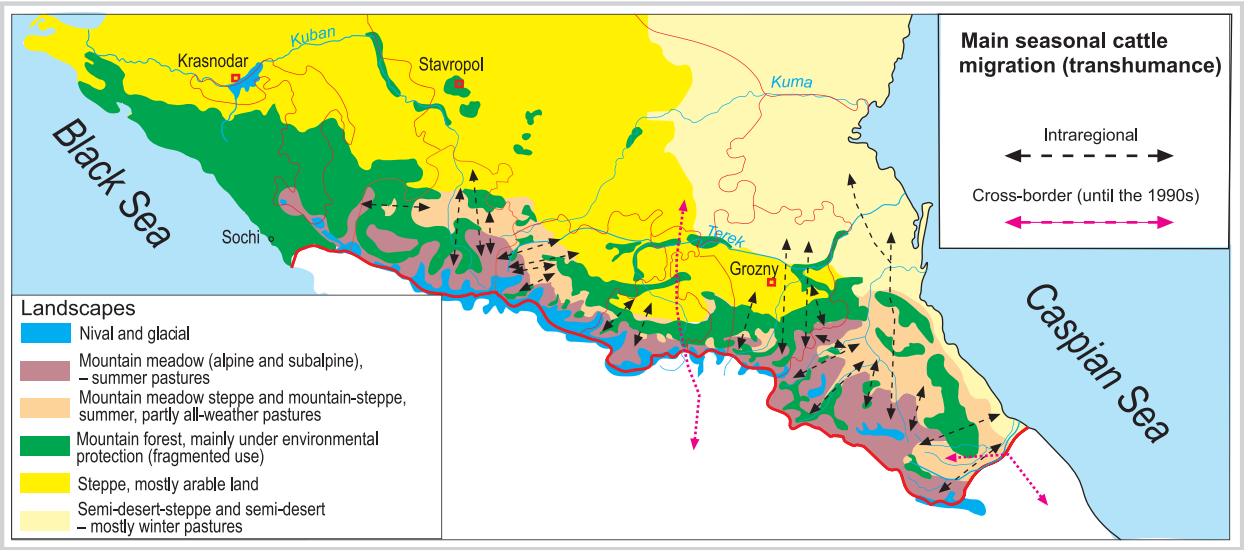
Methods

To identify the factors that underlie the transition pathways occurring in contemporary pastoral systems, we briefly examined the history of the North Caucasus. We selected 4 regions of the North Caucasus that, first, represent the state and factors of "distant-pasture livestock breeding" (transhumance–pasture livestock breeding) throughout the North Caucasus. Second, they characterize various trends in the post-Soviet transformations of cattle breeding. We did not include the regions of the Western Caucasus (Adygea, Krasnodar kray), where transhumance is poorly represented. We also excluded some regions, for example, Ingushetia, since this republic occupies an intermediate situation between Chechnya and North Ossetia–Alania (although there are some peculiarities).

Based on an analysis of literature, we briefly described the leading actors and institutions in 2 periods: the pre-Revolutionary period (until 1917) and the Soviet period (from 1917 until 1991, especially its last decades). Our aim was not to conduct a thorough study of the heritage of these 2 periods, but to use these data to supplement the analysis and explain some features of the modern period (from the beginning of the 1990s). The modern period is extremely poorly represented in the scientific literature. The official statistics available are incomplete and sometimes do not

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

FIGURE 3 Distant-pasture use of the landscapes of the North Caucasus. Compiled from the fieldwork materials of the authors.



correspond to the real situation (see, for example, the description of Dagestan below).

Therefore, the study was built on field data. Among the many characteristics of transhumance, we investigated geographical features (where and in what seasons grazing occurs, livestock migration routes), institutional mechanisms for regulating access to pastures, the role of the state, and the ethnicity of actors involved in transhumance. Based on these groups of indicators, we selected statistics, performed mapping, and selected people for interviews.

During field studies in 2016–2019, 15 qualitative interviews were conducted with 2 groups of actors in each of the regions: (1) local agricultural entrepreneurs and shepherds, and (2) government officials from district and regional agricultural departments. Interviewees were chosen as follows. Initially, the presence and extent of livestock pasture farming were identified within case study regions. Then, we selected those representatives who were experienced in distant-pasture cattle breeding. During the fieldwork, we noted livestock migration routes and mapped them on large-scale maps or high-altitude profiles, which showed the spatial and environmental characteristics of the distribution of livestock pastures. The statistics that we collected in local municipalities were robust (eg number of population involved in transhumance, number of livestock, and other indicators of mountain villages).

Study area

The North Caucasus region is characterized by a multinational population, unresolved conflicts, economic backwardness, and high unemployment (see Starodubrovskaya and Kazenin 2013). This region receives subsidies from the federal center (Holland 2016). Ethnic groups are distributed unevenly across the territory. The Turkic-speaking ethnic groups (Nogais, Kumyks, Balkars, Karachais) tend to engage in animal husbandry more frequently than, for example, ethnic groups from the Adyghe group (Kabardians, Circassians, Adygs), which are more inclined to cultivation. However, all North Caucasian ethnic groups are engaged in animal husbandry to some extent, and this plays an important role in supporting livelihoods (Kuzminov 2006, 2008). Our field studies in the whole region of North Caucasus (2016–2019) revealed that in rural settlements, more than 90% of families keep cattle. At the same time, some urban residents residing in 2 houses (in the city and village) also keep cattle in the village. The number of livestock depends on the number of workers in the family. On average, a family keeps 1 or 2 cows and some calves. Sheep are kept much less often. Any goods produced are for the household's own use. Only a small proportion of families (no more than 5%) engage in animal husbandry as a business. An average farm with about 20 head of cattle and about 100 head of sheep can be considered commercial (ie aimed at selling livestock products for a profit).

The North Caucasus consists of mountain ranges of the Greater Caucasus range within the boundaries of Russia, as well as foothills that are ecologically and historically closely related to the mountains. Located at the junction of the temperate and subtropical climate zones, this region is characterized by hot summers on the plain and relatively cold and snowy winters in the mountains. In the mountains, the most suitable landscapes for summer pastures are mountain meadows and mountain meadow steppes, and steppe and semidesert steppe landscapes in the lowlands provide winter pastures (Figure 3). In total, pastures occupy 34% of the entire mountain zone of the North Caucasus (Trofimova et al 2012). Most pastures in mountains—intensively used during the Soviet era—are now underutilized or even no longer used. This is due to the collapse of collective and state farms, low profitability of livestock through the introduction of intensive stabling of cattle in the plains, tensions between ethnic groups of the mountains and plains, and land-use reform, among others (Gracheva 2014; Kolosov et al 2016). However, the mountain meadows, meadow steppes, and steppes have huge potential for stock raising due to the high protein content of high-altitude pastures, the comfortable (not hot) climate in the mountains during the summer months, and the low frequency of blood-sucking insects in the highlands (Intigrinova et al 2012). The combination of such factors

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

TABLE 1 Main parameters of the North Caucasus region, areas of pastures and hayfields, livestock number. Compiled according to the site http://www.gks.ru and the 2016 all-Russian agricultural census (Russian Federal State Statistics Service 2018).

Republic/Region	Mountain territories % (according to Badenkov et al 2012)	Population (in thousands, 2017)	Total land area (in thousands of hectares, for 1 January 2018)	Pastures (in thousands of hectares, 2016)	Hayfields (in thousands of hectares, 2016	Sheep and goats (in) thousands, 2017)	Large horned livestock (in thousands, 2017)
Adygea	20 (estimated data)	454	779.2	42	6.4	51.4	46.7
Krasnodar kray	7.0	5603	7548.5	204.8	54.1	224.4	543.3
Dagestan	36.5	3064	5027.0	2129.7	186.6	5339.5	1004.0
Ingushetia	21.3	488	362.8	36.3	6.3	152.2	57.0
Kabardino–Balkaria	53.0	865	1247.0	44.6	17.2	364.0	265.7
Karachay–Cherkessia	69.0	466	1427.7	129.5	88.5	1080.1	157.5
North Ossetia–Alania	49.0	702	798.7	11.1	9.6	58.9	83.4
Chechnya	21.3	1437	1564.7	448	41.5	248.3	239.7
Stavropol kray	1.5	2801	6616.0	1086	99.4	1709.9	319.1

would allow an increase in productivity and is an incentive for the use of mountain pastures.

The present status of transhumance, based on our fieldwork data collected in the North Caucasus in 2014–2019 (Figure 3), is very different from the situation in the 1970s–1980s. The mobility of seasonal migrations and the number of livestock have decreased. Prior to the collapse of the USSR, mountain animal husbandry in the Caucasus could be found in several ecological and geographical types based on state or collective ownership of the land (see, for example, Markov 1981; Stadelbauer 1984). Field research shows that 2 main types of mountain animal husbandry currently exist in the North Caucasus:

1. Distant-pasture cattle breeding is characterized by transhumance, which, in the most general form, provides year-round grazing (above villages in high-mountain subalpine and alpine meadows in the summer, and in winter at lower altitudes, usually in the intermountain basins or on the plain). In Soviet times, cattle droves from the plains to the mountains and back existed in all republics of the North and South Caucasus. Until the 1990s, sheep from Georgia were driven annually to the Caspian winter pastures in Russia. Following the collapse of the state in the early 1990s, the migration of cattle and sheep in the Caucasus practically stopped. Only in the 2000s did this form of transhumance begin to revive (in different regions, in different ways, and with different intensities).
2. Pastoralism, according to the meaning of the German term *Almwirtschaft*, is characterized by only summer grazing on pastures above villages. This is the most common form of grazing in the North Caucasus. It involves winter grazing near villages. Due to transformation of the state system of distant-pasture cattle farming and the increase in livestock raising in private ownership, grazing on pastures (with cattle in stalls in the evening) has become a fairly common phenomenon. The hiatus in the migration of livestock in the 1990s led to the overuse and degradation of nearby pastures in mountain areas (Gunya 2013).

The case study regions differ from each other not only in the composition of ethnic groups (multi-ethnic Dagestan versus mono-ethnic Chechnya), but also in the peculiarities of land reform and centralization of governance.

Results

Dagestan

Transhumance in Dagestan is promoted by natural features: Mountains occupy more than a third of the territory. Pastures are located both on the plains and in the mountains, and they occupy almost half of the territory of the republic (Figure 3; Table 1). However, summer and winter pastures are extremely unevenly distributed between ethnic groups. Fourteen titular ethnic groups and several subethnic groups live in Dagestan (Table 1). Mountain ethnic groups, such as Avars, Dargins, Tabasarans, and Lezgins, have summer pastures but lack winter pastures and forages, as well as arable land. Under the intensive demographic growth of the mountain population, land scarcity led to migrations to the plains, where other ethnic groups, such as Nogais and Kumyks, lived. During periods of instability (the Caucasian war of the 19th century, revolution, reform of the 1990s), social tension increased, negatively affecting transhumance.

In the pre-Revolutionary period: Moving cattle from plains to mountains and vice versa was in the interest of mountain and lowland residents (eg Karpov 2009), but it was limited by the unstable situation in the region, caused by feuds and the Caucasian war. Transhumance was regulated on the basis of informal agreements between local feudal lords, who owned most of the land and livestock on the plain (Kumyks), and mountain communities (Yamskov 2013).

In Soviet times: Land and livestock became the property of the state, as well as collective farms. The problem of land shortage for people living in mountainous regions was solved by an administrative decision relocating the highlanders to the plains and foothills (Badenkov et al 1988). At the same time, cattle droves from plains to mountains and vice versa were formalized in laws. The first such law was the Decree of

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

the Council of People's Commissars of the USSR and the Central Committee of the All-Union Communist Party of Bolsheviks of 11 March 1942, "On measures to preserve young animals and increase the number of livestock on collective farms and state farms" (SNK SSSR and ZKVKP 1943). Later, the law "On the status of lands of transhumance livestock breeding in the Republic of Dagestan" (Respublika Dagestan 1996) was introduced.

Land used for transhumance on the plains was given special status. As a result, the habitats and land use of ethnic groups of the plains became isolated within the pasturelands of highlanders. For instance, in the Babayurt district (originally a plains area densely populated by Kumyks), more than two thirds of the land was secured for use by farmers from 20 mountain and foothill areas. Further, in Nogai district (Nogai ethnic group), about two thirds of all land was given to land users from 15 mountain areas (Starodubrovskaya and Kazenin 2013). The Soviet economic planning system created *kutans* ("pastureland" or "shed" in Kumyk language) in lowland areas. Initially, the meaning of *kutan* implied the construction of temporary structures on a site. However, the highlanders who moved to *kutans* settled permanently. In addition, they continued to maintain their registration at rural administrations of mountain villages, which resulted in an unusual linkage between mountain villages (local homelands) and *kutans*. In fact, most people from mountain villages now live in *kutans*.

The main actors involved in transhumant livestock breeding during Soviet times were collective farms.

In post-Soviet times: A profound transformation of statehood took place. For transhumance, this was expressed in the destruction of collective farms as the main actors. This resulted in increasing tension between ethnic groups, reducing security, and blocking livestock migration between the plains and mountains. State subsidies for agriculture were stopped (and then, in the 2000s, resumed). In place of large collective farms, the so-called collective agricultural enterprises (*kollektivnoe selskohosyaistvennoe predpriyatie* or KSHP) were formed. They inherited all the rights of collective farms to land and property and became the main actors in transhumance. Like collective farms, KSHP represent the interests of ethnic groups that make up the village. An official from the mountainous Agul district described the role of such enterprises:

> *Modern agricultural enterprises have a small number of workers (20 to 30 people), which is 10 times less than collective farms have. The agricultural enterprises lease land to villagers engaged in animal husbandry and receive state subsidies. Basically, they are legal entities that fit into the state policy of supporting agriculture in the republic. They are interested in registering more cattle (to receive government subsidies) and often report on nonexistent seasonal droves of cattle. Villagers own more cattle than an agricultural enterprise does, but [they] are not concerned about paying taxes, and so understate the number of cattle they own.*

The republic vetoed the privatization of agricultural land. Therefore, there is no free market for agricultural land available to individual entrepreneurs. According to the law "On the status of distant-pasture cattle breeding in the Republic of Dagestan," considerable tracts of land in plains areas still remain assigned to farms in mountain districts. This law is essentially a form of guardianship of transhumance and allows mountain dwellers to use land on the plains. Nevertheless, the law does not fit the changed socioeconomic conditions. It has become a façade that masks the actual processes, where significant proportions of mountain ethnic communities (eg Avars and Laks) are settling on the plains among other ethnic groups (Nogais, Kumyks, Russians). According to A. Yarlykapov, one of the leading ethnographers in the North Caucasus (interviewed in 2019), the highlanders try to graze on *kutans* year-round. The law mentioned above legalizes their residence on the lands of another ethnic group. Nevertheless, in the field, we observed livestock migrations (Figure 3), although the scale of transhumance is hardly consistent with official statistics.

Thus, according to an interview with a representative of the Agul district, an institutional symbiosis of formal (KSHP) and informal (informal relations within the local community with elements of customary law) institutions has formed. Although the official statistics contain references to certain collective farms, it is mainly the cattle of private owners that now graze on winter pastures (*kutans*). Year-round grazing in the lowlands has caused erosion and desertification (primarily in the Nogai Steppe) (Karpov 2009).

Chechnya

Contemporary Chechnya is a mono-ethnic republic, which is associated with the departure of Russians and Cossacks (subethnic Russians) as a result of the Chechen wars of the 1990s. Ethnocultural diversity is represented at the level of clans or *teips*. *Teips* have their roots in specific mountainous areas. In different periods of history, ethnicity and settlement played an important role in stimulating or blocking transhumance.

In the pre-Revolutionary period: Transhumance was difficult due to the tension between the Chechens living in the mountains and the Cossacks living on the plains. A type of animal husbandry similar to the *Almwirtschaft* type was mainly practiced. The pasturelands belonged to *teips*, and their use was regulated by customary law. In interviews with Chechen historians, sheep droves between the mountains and the plains were nevertheless noted. These were initiated by the mountain people. Livestock migration is also recorded in some publications (eg Ibragimova 2010).

In Soviet times: The land was collectivized. The Chechen settlement network changed significantly, as most of the highlanders moved to the plains and foothills. The reason for this population distribution is historical: In 1944, all Chechens were deported from the Chechen Republic to Central Asia. In the late 1950s, they were allowed to return and settle on the plains and in the foothills. Most of the mountainous areas remained uninhabited. Pastures in the mountains were distributed between lowland and foothill collective farms; on this basis, the state initiated transhumance (Rusin 1989).

In post-Soviet times: The main part of the Chechen population lives on the plains and in the foothills; only about 1% of the population live in the mountains. After the collapse of the USSR, Chechens began to actively explore the mountains. This process ceased during the wars of the 1990s, but it has now resumed (Gunya et al 2016). Since the 2000s, transhumance has been an important step toward

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

BOX 1: Interview with Suleiman, a Chechen, resident of the village of Kharachoy

In winter and spring (from November 1 through the end of May), Suleiman herds cattle on the plains near the village of Tolstoy-Yurt, more than 100 km away from Kharachoy and at 123 m above sea level (masl). In late May, while driving sheep to the mountains, he stops at Kharachoy for 2 weeks, where the sheep acclimatize and are sheared. From 15 June to 1 October, the sheep graze in the intermountain basin near the village of Makazhoy (1700 masl), and from 1 October to 1 November, they graze in the vicinity of Kharachoy. There are no difficulties with the sale of meat; many sheep are bought for cooking special meals during religious holidays.

This situation is typical for Chechnya. It reflects the modern processes of livestock migration from plains to mountains with reliance on mid- and high-mountain villages, which play a key role in transhumance due to their location at the junction of mountains and foothills, near the mountain pastures.

exploration of the mountains. It has its own distinctive features, based on traditional institutions transformed by modern processes (see Box 1).

The main actors and social organization of pastoralism rest on families that form large tribal associations or *teips*, which are confined to specific villages on their ancestral lands. Support inside the clans is important for organizing cattle droves, regulating grazing, and the further selling of products.

In Chechnya, in contrast to Dagestan, the plains are not populated by other ethnic groups (the Russians and Cossacks having left), which makes it possible to settle freely here. Under these conditions, Chechens are able to move their cattle between the plains and the mountains. Despite the long-lasting Soviet period, deportation, and wars, Chechens maintained close ties to their ancestral lands, and they know the location of these lands. The borders of pasture areas and their use are regulated by traditional rules. Generally, there are no documents confirming land ownership; it is enough to reach a verbal agreement with representatives of a particular *teip* for permission to graze cattle on their lands.

The state promotes cattle breeding. So, for example, those entrepreneurs who register their activities and pay taxes receive support from the state (interview with businessman Khizir from Roshni-Chu village, August 2019). The state also supports the construction of roads to remote villages in the mountains and allocates funds for the restoration of ancestral towers, which have cultural value and sacred significance for Chechens, who would like to return to the mountains and again populate the patrimonial lands. The scale of transhumance is relatively small; most of the pastures are not yet used. However, there is a fairly high rate of development that will necessitate the regulation of pasture use in the near future (Gunya et al 2016).

North Ossetia–Alania

The ethnic factor does not play such a big role in transhumance in North Ossetia–Alania as in Dagestan. Ossetians are mainly engaged in animal husbandry, while Russians (the second largest ethnic group) live in cities and are engaged in industry and services. Nevertheless, in the regulation of transhumance, a certain role is played by subethnicity and belonging to a specific mountain community. The republic experienced an unprecedented outflow of population from the mountains, due to land shortage, which prompted natural migrations and relocation to the plains and cities. A hundred years ago, about 20% of the republic's population lived in the mountains; now, it is less than 1% (Badov and Beroev 1990; Badenkov et al 2012).

In the pre-Revolutionary period: Livestock migration between the mountains and the plains was local in character, along the main valleys (the Ardon, Urukh, and others). This was facilitated by the relatively peaceful relationship between mountain Ossetians and the plains' inhabitants (Kabardins, Russians, etc). Transhumance was based on informal rules, and the main actors were local feudal lords, who were large private landowners, in particular, Kabardian and Ossetian princes (Kuzminov 2006, 2008).

In Soviet times: Land was collectivized. As a result of the state redistribution of land, collective farms on the plains received pasture areas in the mountains, and mountain collective farms received small plots on the plains. This contributed to the development of transhumance, where collective enterprises that used pastures on the basis of state regulation became the main actors. The formation in the mountains of conservation areas—the North Ossetian Reserve and the Alania National Park—legislatively limited grazing in the mountains.

In post-Soviet times: From 60 to 80% of mountain pastures are not used at all or are underutilized (Badenkov et al 2012). In Alania National Park, the number of pastures in the mid- and highlands has decreased by more than 50%, and bushing and afforestation of pastures are in progress. Cattle are driven from nearby foothills to mid- and high-mountain areas (within 30–70 km).

The main actors involved in transhumance are registered agricultural enterprises of various kinds (peasant farmers, individual entrepreneurs), unregistered entrepreneurs based on family businesses, and officials who monopolized access to land leases, organized large agricultural holdings, and began to lease land. Thus, they are indirectly involved in transhumance. According to researchers at the Center for Sustainable Development of Mountain Territories, the development of family-related businesses is hampered by lack of experience in animal husbandry, difficulties in marketing and storage of livestock products, and low competitiveness in relation to large firms (Vladikavkaz, interview in August 2019).

According to the republican Ministry of Agriculture and Food (http://www.mcx.alania.gov.ru), in 2018, there were 322 registered farms of different types, 35 of which used summer pastures. These farms received federal and/or republican subsidies and development grants prior to or in the current year. They report regularly and pay taxes. As a rule, these farms have certain tax benefits.

Public policies provide incentives, financial and otherwise, to withdraw from the "shadow" farms engaged in cattle breeding for commercial purposes. The institutional formalization of transhumance is now taking place on a

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

TABLE 2 Characteristics of the North Caucasian republics by ethnicity, degree of centralization, and land reforms.

Republic	Number of titular ethnic groups	Centralization of power and activities of local self-governments	Privatization of agricultural land	Leading mechanism of regulation of land relations
Dagestan	14	Moderate centralization and active local self-government	Republican government vetoed land privatization for 49 years	Lease from the state (the republic)
Karachay–Cherkessia	5	Moderate centralization and active local self-government	Privatization	Private land ownership and lease
North Ossetia–Alania	2	Moderate centralization and relatively active local self-government	Republican government vetoed land privatization for 49 years	Lease from the state (the republic)
Chechnya	1	Strong centralization, weak local government	Republican government vetoed land privatization for 49 years	State farms (since 2015, reform and transition to lease)

voluntary basis, in contrast to the forced transhumance that took place in Soviet times (see Box 2).

In another interview, Soltan, a resident of a mountain village and a co-owner of a flock of sheep, related that he does not rely much on state support for entrepreneurs. Since there is no proper accountability for the number of livestock, he pays only part of the taxes (declaring only half of the total number). The herd is about 3000 head, and the number of cattle amounts to 100 head. In winter, cattle are kept on the plains, and from May to October or November, they are kept on mountain pastures; the distance between herding points is about 80 km. Soltan himself oversees and performs most of the work in the mountains; however, it has become somewhat easier this year because he found a highly skilled worker, a shepherd from Georgia.

Karachay–Cherkessia

Karachay–Cherkessia is a multinational republic, where 5 titular ethnic groups live (Table 2). The predominant group is the Karachay people, for whom animal husbandry is an important traditional type of economic activity. Other ethnic groups that have been involved in transhumance at different periods are the Russians (Cossacks), Abazins, Circassians, and Nogais.

BOX 2: Interview with Alan, an Ossetian, owner of a flock of sheep in North Ossetia–Alania

In winter, Alan keeps his flock on the plains in the Iraf district, and in summer, he drives it to the Digor gorge. He cooperates with 3 other sheep owners. Previously, they avoided any contact with the authorities, mainly to avoid paying taxes. However, in 2018, on the advice of colleagues, they registered their farm, submitted an application, and received a grant that supports start-ups (the grant is given within 24 months from the date of a new organization's registration). The grant was used to significantly improve the conditions of stock keeping and the fodder base for the wintering of livestock (cows and sheep), which eventually led to an increase in the number of sheep. A crucial problem for Alan is the lack of professional shepherds. Shepherds who work in the mountains are recruited in Georgia; they are paid wages of RUB 25,000–30,000 a month (about US$ 380–450). Winter maintenance on the plains is provided both by herd owners and, if necessary, by relatives and residents of nearby villages.

In the pre-Revolutionary period: The Karachais lived mainly in the highlands, where they practiced *Almwirtschaft*. The main actors were family and family–tribal associations of Karachais, based on grazing on private and communal lands (Kuzminov 2006, 2008).

In Soviet times: As in other regions of the North Caucasus, private pastures were transferred to the state and collective farms. At the same time, many collective farms located in the foothill–lowland zone received plots of pasture in the mountains. This land-use system contributed to the development of transhumance. The main actors were collective farms located on plains' territory that drove cattle into the mountains in the summer.

Like the Chechens, the Karachais were deported to Central Asia and Kazakhstan in 1943. Following their return, the Karachais' settlement network has become more extensive and has spread to the foothills and plains.

In post-Soviet times: The system of collective land-use management collapsed. However, collective farm lands were not passed to the state (as in other republics of the North Caucasus) and were instead distributed proportionally (in the form of shares) among the members of the collective farms. This led to the development of private enterprises and, on another level, renewed transhumance.

The social tensions in the 1990s led to an outflow of Russians from the republic. Many of them left the villages and were replaced by Karachais. Since the Karachais had close ties to the mountainous regions, transhumance received a new impetus. Karachais now make up the majority of the population of the republic. Driving cattle to summer pastures is an important social and cultural event for the entire republic. In 2018, cattle migrated through a number of mountain tracks, the most famous of which is Biychesyn to the north of the Elbrus mountain massif. Mountain pastures are used from May to October by farms located in the foothills and on the plains of the republic. The average distance of a cattle drove is around 60–100 km.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

BOX 3: Interview with Akbaev, a Karachay, owner of small farm in Karachay–Cherkessia

In Soviet times, the Akbaev family kept 3 cows and 25 sheep in a subsidiary farm on the southern slope of the Baranuha mountain (near the village of Pregradnaya). After the collapse of the Soviet Union, the number of livestock kept on the farm increased to 10 cows and 200 sheep and goats. In Soviet times, there were 6 dairy farms; after perestroika, people bought these farms and founded family farms (usually with a mix of cows, calves, sheep, goats, and horses).

From 2000 to 2017, there was a significant shift toward an increase in horses and a decrease in other livestock. High maintenance costs, including the purchase of expensive feed, resulted in a reduction in the number of dairy cattle. The marketing of dairy products is very difficult (primarily due to the lack of adequate storage). The owner, his son, and 2 sons-in-law work on the farm. Due to the persistence of traditional gender roles in Karachay society, women never work on the farm. Particular problems are high loan rates, labor shortages (no hired workers are available, so farmers must rely on themselves and their family members), and lack of available land and markets for meat and dairy products.

The main actors involved in transhumance are families. Local pastoral practices based on family organization of labor are illustrated by the example of a black sheep farm (Box 3).

Institutional conditions in Karachay–Cherkessia contribute to the development of transhumance. This is the only republic in the North Caucasus where agricultural land was privatized. Relatively liberal business conditions have been created here. Local communities are also very active in the political life of the republic. In an interview with Akbaev, it was noted that the success of the family is associated with relatively clear rules: (1) registration with state bodies and the ability to use benefits (eg loans, veterinary care); (2) a guaranteed land lease with fixed payments; (3) permanent and affordable tax, etc. Noninterference of the state is an important condition for the dynamic growth of animal husbandry in the republic. However, overuse and degradation of closely located pastures are acute problems. The solution to this requires centralized regulation by the state, based on spatial and other measures to optimize the use of pastures.

Discussion and conclusion

As shown by the results of the transhumance study in the North Caucasus, the new sociopolitical conditions that have arisen in recent decades have led to the destruction of the Soviet collective farm system of transhumance. The magnitude of transhumance has declined sharply. With the exception of Dagestan and Karachay–Cherkessia, most pastures are only underutilized, and many of them are now overgrown with forest. The cattle driving distance has decreased; in the 1990s, this was due to ethnic tension, and now it is due to economic factors. Instead of collective farms—the main participants in transhumance in Soviet times—new actors have appeared: farmers linked with family–tribal relations. However, in Dagestan, a local agricultural collective organization in the form of KSHP survived, ensuring the legitimacy of the old transhumance laws under the new conditions.

Studies have revealed various ways of transforming transhumance. Thus, in Karachay–Cherkessia, conditions for transhumance are relatively liberal, private ownership of agricultural land is allowed here, and market relations have given impetus to the development of transhumance. In Chechnya, private ownership of agricultural land is formally prohibited. However, state policy on national cultural revival and development of mountain territories encourages traditional institutions, including those that underlie transhumance. In reality, pastures have owners in the form of *teips* that regulate land relations on the basis of customary law.

The shift of the mountain population to the plains is similar for all regions. The people are described as "highlanders without mountains" (Karpov and Kapustina 2011). In some republics, this led to an increase in tension with the plains ethnic groups (Dagestan), and in others, the plains ethnic groups left the republics (Chechnya and, to some extent, Karachay–Cherkessia). However, in general, the shift of the mountain population to the plains contributes to the development of relations between mountains and plains and favorably affects the development of transhumance.

With regard to transhumance, hybrid institutions of the "B" type (see Figure 2)—those with a larger element of state regulation and a lesser share of self-organization—dominated the whole North Caucasus in Soviet times. Hybrid institutions of the "A" type, those with a lesser element of state regulation and a larger share of self-organization, dominate now. The best example is Karachay–Cherkessia. This type is optimal from a social and economic point of view, but it does not prevent pasture degradation (the tragedy of the commons; Hardin 1968; Yamskov 2012). The state offers formalization of transhumance: Official registration and payment of taxes make it possible to purchase soft loans and even obtain grants (North Ossetia–Alania, Chechnya).

State intervention in transhumance leads to the formation of hybrid institutions of the "B" type. An example of this is the veto on land privatization in Dagestan, the adoption of the law on transhumance and pastureland, and even a special Directorate for Transhumance and Pasture Livestock under the Government of Dagestan. The process of internalization is often delayed or bypassed. For example, in Soviet times, collectivization in the North Caucasus dragged on for several decades. Now there are a number of examples showing how local entrepreneurs bypass the veto on land privatization. For example, they arrange a long-term lease (up to 49 years), becoming actual users of land (Gracheva 2014). Studies have shown that, recently, in the North Caucasus, there has been an increase in centralization; the republics are highly dependent on subsidies. Against this background, institutional conditions for transhumance will most likely develop toward the prevalence of institutional hybrids of type "B."

The results and conclusions presented here may be applicable in other mountainous countries experiencing post-Soviet transformations. In particular, there is a similar discussion on the relationship between decentralization and

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

privatization in pastoral systems of Kyrgyzstan and Tajikistan (Kerven et al 2012). The institutional approach we used, with a focus on the analysis of hybrid institutions, may reveal the features of transhumance during the transition period from a different perspective.

ACKNOWLEDGMENTS

Part of the work for this article was performed under the research task of the Institute of Geography, Russian Academy of Sciences, "Evaluation of physical and geographical, hydrological, and biotic changes in the environment and their impact on the creation of sustainable environmental foundations." The present article was prepared and reviewed for *Sustainable Development of Mountain Territories* (SMDT) (http://naukagor.ru) with the title "Современный горный пасторализм на Северном Кавказе: некоторые географические и социально-культурные аспекты"; based on an agreement between SDMT and *Mountain Research and Development* (MRD), it was then translated by the authors and reviewed by MRD.

REFERENCES

Badenkov YP, Gracheva RG, Gunya AN, Belonovskaya EA, Merzlyakova IA, Shmakin AB. 2012. Gornye raiony Severnogo Kavkasa na rubeghe vekov: Transformazia prirodoposovania i sovremenye problem rasvitia [Mountainous areas of North Caucasus at the turn of the century: Transformation of nature use and modern problems of development]. *In:* Institute of Geography of RAS, editor. *Changes of Natural Environment of Russia in the Twentieth Century*. Moscow, Russia: Molnet Publishing, pp 254–271.

Badenkov YP, Kotlyakov VM, Losev KS, editors. 1988. *Gornye territorii: razionalnoe prirodopolsovanie, hosyaistvennoe osvoenie i rasselenie [Mountainous Territories: Rational Nature Management, Economic Development and Resettlement].* Itogi nauki i tehniki: Geografia SSSR [Results of Science and Technology: Geography of the USSR] Vol 18. Moscow, USSR: Vsesoyusnyi institut nauchnoi i tehnicheskoi informazii (VINITI).

Badov AD, Beroev BM. 1990. Osnovnye tendenzii pererаspredelenia naselenia v Severnoi Osetii [The main trends of population redistribution in North Ossetia. Problems of mountain economy and resettlement]. Moscow, Russia: Institute of Geography, Academy of Sciences of USSR, pp 191–200.

Deléglise C, Dodier H, Garde L, François H, Arpin I, Nettier B. 2019. A method for diagnosing summer mountain pastures' vulnerability to climate change, developed in the French Alps. *Mountain Research and Development* 39(2):27–41.

Dong S, Kassam KS, Tourrand JF, Boon RB, editors. 2016. *Building Resilience of Human–Natural Systems of Pastoralism in the Developing World: Interdisciplinary Perspectives*. Cham, Switzerland: Springer.

Egnell R, Halden P, editors. 2013. *New Agendas in Statebuilding. Hybridity, Contingency and History*. London, United Kingdom: Routledge.

Elwert G. 2002. Conflict: Anthropological aspects. *In:* Smelser NJ, Baltes PB, editors. *International Encyclopedia of the Social and Behavioral Sciences*. Oxford, United Kingdom: Elsevier, pp 2542–2547.

Elwert G, Feuchtwang S, Neubert D, editors. 1999. *Dynamics of Violence. Processes of Escalation and De-Escalation in Violent Group Conflicts*. Beiheft/ Supplement to "Sociologus" 1. Berlin, Germany: Duncker & Humblot.

Fassio G, Battaglini LM, Porcellana V, Viazzo PP. 2014. The role of the family in mountain pastoralism—Change and continuity. *Mountain Research and Development* 34(4):336–343.

Fernandez-Giménez ME, LeFebre S. 2006. Mobility in pastoral systems: Dynamic flux or downward trend? *International Journal of Sustainable Development and World Ecology* 13(5):341–362.

Fratkin E. 1997. Pastoralism: Governance and development issues. *Annual Review of Anthropology* 26:235–261.

Galvin KA. 2009. Transitions: Pastoralists living with change. *Annual Review of Anthropology* 38:185–198.

Gentle P, Thwaites R. 2016. Transhumant pastoralism in the context of socioeconomic and climate change in the mountains of Nepal. *Mountain Research and Development* 36(2):173–182.

Gracheva RG. 2014. *Semlepolsovanie na severnom kavkase: Ot adatov do semelnogo kodeksa [Land Use in the Northern Caucasus: From Adats to the Land Code. Problems of Geography]*. Vol 137. Russian Geographical Society. Moscow, Russia: Kodeks, pp 494–520.

Gunya A. 2013. *Instituzionalnoe restrukturirovanie geograficheskogo prostranstva: vliyanie privatisazii sewmel na gorgnye landshafty Severnogo Kavkasa. Palmarium [Institutional Restructuring of Geographical Space: The Impact of Land Privatization on Mountain Landscapes in the North Caucasus]*. Saarbrücken, Germany: Academic Publishing.

Gunya A. 2014. *Vliyanie privatisazii na gornye landshafty [Impact of Land Privatization on Mountain Landscapes of North Caucasus. Problems of Geography]*. Vol 137. Russian Geographical Society. Moscow, Russia: Kodeks, pp 182–204.

Gunya A. 2017. Land reforms in post-socialist mountain regions and their impact on land use management: A case study from the Caucasus. *Journal of Alpine Research* 105(1). http://rga.revues.org/3563; accessed on 06 April 2017.

Gunya AN. 2004. *Trendovye ismenenia I rasviytie gornogo regiona: Geograficheskkij analis i vosmoghnosti upravlenia [Trend Changes and the Development of the Mountain Region: Methodology, Geographical Analysis and Management Capabilities]*. Nalchik, Russia: Kabardino–Balkarian Scientific Center, Russian Academy of Sciences.

Gunya AN, Gairabekov UT, Gagaeva ZS, Dzhabrailov S-EM. 2016. Osvoenie gornyh landshaftov territorii Argunskogo istoriko-arhitekturnogo musei-sapovednika. [The development of mountain landscapes in the territory of the Argun historical and architectural museum-reserve (Chechen Republic)]. *Bulletin of Chechen State University* 4(24):67–76.

Hardin G. 1968. The tragedy of the commons. *Science* 162(3859):1243–1248.

Holland EC. 2016. Economic development and subsidies in the North Caucasus. *Problems of Post-Communism* 63:50–61.

Ibragimova ZK. 2010. *Gorzy [Highlanders]*. Moscow, Russia: Probel 2000.

Intigrinova T. 2011. *Prava sobstvennosti na pastbishchnye ugodia: Problem, diskussii, opyt. [Property Regimes for Pastoral Resources: Discussions, Practices and problems]*. Research Paper Series 158. Moscow, Russia: Gaidar Institute for Economic Policy.

Intigrinova TP, Mironova NI, Sokolov DV, Starodubrovskay IV. 2012. Nekotorye voprosy semlepolsovania v sonah otgonnogo ghivotnovodstva Severnogo Kavkasa [Some questions of land use in zones of a pasture of agricultural cattle of the North Caucasus]. *Scientific Works of DGS* [Dagestan Geographical Society] 40:36–48.

Jurt C, Häberli I, Rossier R. 2015. Transhumance farming in Swiss mountains: Adaptation to a changing environment. *Mountain Research and Development* 35(1):57–65.

Kaloev BA. 1993. *Skotovodstvo narodov Severnogo Kavkasa. S drevneishih vremen do nachala XX veka. [Cattle Breeding by the Peoples of the North Caucasus. From Ancient Times to the Beginning of the 20th Century]*. Moscow, Russia: Nauka.

Karpov YY. 2009. Kutany v Dagestane: Obiekty hosyaistvennoi deyatelnosti, factor etnopoliticheskoi napryaghennosti [Kutans in Dagestan: Objects of economic activity, factor of ethno-political tension]. *In:* Chistov YK, Rubzova MA, editors. *Radlovsky Collection: Scientific Research and Museum Projects of the MAE RAS in 2008*. St. Petersburg, Russia: Museum of Anthropology and Ethnography, Russian Academy of Sciences, pp 173–178.

Karpov YY, Kapustina EL. 2011. *Gorzy Posle Gor. Migrazionnye Prozessy V Dagestane V XX – Nachale XXI Veka: Ich Sozialnye I Etnokulturnye Posledstvia I Perspektivy. [Highlanders after the Mountains. Migration Processes in Dagestan in the XX–Early XXI Centuries: Their Social and Ethnocultural Consequences and Prospects]*. Saint Petersburg, Russia: Petersburg Oriental Studies.

Kerven C, Steimann B, Ashley L, Dear C, Rahim I. 2011. *Pastoralism and Farming in Central Asia's Mountains: A Research Review.* MSRC Background Paper No. 1. Bishkek, Kyrgyzstan: Mountain Societies Research Centre, University of Central Asia. https://www.ucentralasia.org/Content/Downloads/pastoralism_and_farming_in_central_asia_mountains.pdf; accessed on 21 September 2020.

Kerven C, Steimann B, Dear C, Ashley L. 2012. Researching the future of pastoralism in Central Asia's mountains: Examining development orthodoxies. *Mountain Research and Development* 32(3):368–377.

Koehler J, Zürcher C. 2004. Conflict and the state of the state in the Caucasus and Central Asia: An empirical research challenge. *Berliner Osteuropa Info* 21:7–67.

Kolosov VA, Vendina OI, Gritsenko AA, Glezer OB, Panin AN, Sebentsov AB, Zotova MV. 2016. Resultaty politiki postsovetskih economicheskih i sozialnyh reform na Severnom Kavkase [Results of the policy of post-Soviet economic and social reforms in the North Caucasus]. *Sustainable Development of Mountain Territories* 4:342–355.

Kreutzmann H, editor. 2012. *Pastoral Practices in High Asia. Advances in Asian Human–Environmental Research*. Dordrecht, Germany: Springer.

Kuzminov PA, editor. 2006. *Agrarnye otnoshenia u narodov Severnogo Kavkasa v rossiiskoi politike XVIII – nachala XX veka. Arhivnye materialy i nauchnye issledovania [Agrarian Relations Among the Peoples of the North Caucasus in Russian Politics of the 18th to Early 20th Centuries. Archival Materials and Research]*. Vol I. Nalchik, Russia: El-Fa.

Kuzminov PA, editor. 2008. *Agrarnye otnoshenia u narodov Severnogo Kavkasa v rossiiskoi politike XVIII – nachala XX veka. Arhivnye materialy i nauchnye issledovania [Agrarian Relations Among the Peoples of the North Caucasus in Russian Politics of the 18th to Early 20th Centuries. Archival Materials and Research]*. Vol II. Nalchik, Russia: El-Fa.

Lindner P. 1998. Zur geographischen Relevanz einer institution-orientierten Analyse von Industrialisierungsprozessen. *Geographische Zeitschrift* 86(4):210–224.

Markov GE. 1981. Skotovodcheskoe hosyaistvo i kochevnichestvo. Definizii i terminologia. [Cattle breeding and nomadism. Definitions and terminology]. *Soviet Ethnography* 4:83–94.

Nimkoff MF, Middleton R. 1960. Types of family and types of economy. *American Journal of Sociology* 66(3):215–225.

Nori M, Davies J. 2007. *Change of Wind or Wind of Change? Climate Change, Adaptation and Pastoralism. The World Initiative for Sustainable Pastoralism*. Nairobi, Kenya: IUCN [International Union for Conservation of Nature].

North D. 1990. *Institutions, Institutional Change and Economic Performance. Political Economy of Institutions and Decisions*. Cambridge, United Kingdom: Cambridge University Press.

Reid RS, Fernandez-Gimenez ME, Galvin KA. 2014. Dynamics and resilience of rangelands and pastoral peoples around the globe. *Annual Review of Environment and Resources* 39:217–242.

Respublika Dagestan. 1996. Zakon Respubliki Dagestan: O statuse zemel otgonnogo zhivotnovodstva v Respublike Dagestan [Law of the Republic of Dagestan: On the Status of Lands Used for Transhumant Livestock Breeding in the Republic of Dagestan]. http://pravo.gov.ru/proxy/ips/?doc_itself=&infostr=

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

x07q8+zl7flg7vLu4fDg5uDl8vH/lO3lIOlg7+7x6+Xk7eXpIPDl5ODq9ujo&nd=133028332&page=1&rdk=1#l0; accessed on 19 June 2020.
Ritchie H, Roser M. 2019. *Land Use*. Published online at OurWorldInData.org. Retrieved from: https://ourworldindata.org/land-use; accessed on 19 June 2020.
Rusin VF. 1989. *Gornyi selskohosyaistvennyi potenzial Checheno-Ingushetii i ego razionalnoe ispolsovanie [Mountain Agricultural Potential of Chechen-Ingushetia and its Rational Use]*. Grozny, Russia: Kniga.
Russian Federal State Statistics Service. 2018. *Itogi vserossiiskoi selskohosyaistvennoi perepisi 2016 goda [Results of the All-Russian Agricultural Census 2016]*. In 8 Volumes. Russian Federal State Statistics Service. Moscow, Russia: Information and Publishing Center Statistics of Russia.
Sayre NF. 2017. *The Politics of Scale: A History of Rangeland Science*. Chicago, IL: The University of Chicago Press.
Sayre NF, McAllister RR, Bestelmeyer BT, Moritz M, Turner MD. 2013. Earth stewardship of rangelands: Coping with ecological, economic, and political marginality. *Frontiers in Ecology and the Environment* 11:348–354.
SNK SSSR, ZKVKP [Sovet Narodnyh Kommisarov SSSR i Zentralnyi Komitet Vsesoyusnoi Kommunisticheskoi Partii (Bolshevikov)]. 1943. *Postanovlenie Soveta Narodnyh Kommisarov SSSR i Zentralnogo Komiteta Vsesoyusnoi Kommunisticheskoi Partii (Bolshevikov) ot 11 marta 1942 goda «O merah sohraneniya molodnyaka i uvelichenia skota v kolhozah I sovhozah». [The Decree of the Council of People's Commissars of the USSR and the Central Committee of the All-Union Communist Party of Bolsheviks of 11 March 1942, "On measures to preserve young animals and increase the number of livestock on collective farms and state farms."]* Moscow, USSR: Gosudarstvennoe izdatelstvo politicheskoi literatury [State Publishing House of Political Literature].
Stadelbauer J. 1984. Bergnomaden und Yaylabauern in Kaukasien. Zur demographischen Entwicklung und zum sozioökonomischen Wandel bei ethnischen Gruppen mit nicht-stationärer Tierhaltung. *Paideuma. Mitteilungen zur Kulturkunde* 30:201–229.
Starodubrovskaya I, Kazenin K. 2013. North Caucasus: Quo vadis? Expert Report. *Polit.ru.* http://polit.ru/article/2014/01/14/caucasus/#_ftnref13; accessed on 19 June 2020.
Thelen K. 1999. Historical institutionalism in comparative politics. *Annual Reviews of Political Science* 2:369–404.
Trofimova LS, Trofimov IA, Yakovleva EP. 2012. Zoning of pastures of North Caucasus. *Proceedings of the Institute of Geology of the Dagestan Scientific Center of RAS* 61:234–236.
Viazzo P. 2010. Pastoral and peasant family systems in mountain environments: Comparative evidence from the Italian Alps. *Itinera* 29:245–264.
Yamskov AN. 2012. Definizia I etnoekologicheskie aspekty fenomena "tragedii obshchinnyh resursov" [Definition and ethno-ecological aspects of the phenomenon of "tragedy of community resources"]. *In:* Dubova NA, Grigulevich NI, Solovieva LT, Yamskov AN, editors. *Ethnos and Environment: Collection of Articles on Ethnoecology*. Vol 3. Moscow, Russia: Institute of Ethnology and Anthropology, Russian Academy of Sciences, pp 231–247.
Yamskov AN. 2013. Varianty resheniya problemy zemlepol'zovaniya na otgonnykh pastbishchakh Severnogo Kavkaza (sotsial'no-ekologicheskiy aspekt). [Variants of solving the problem of land use on transhumant pastures of the North Caucasus (socioenvironmental aspect)]. *In:* Babich IL, Virt YuV, Martynova MYu, editors. *Modernizatsiya ekonomiki i samoupravleniya v respublikakh Severnogo Kavkaza i shveytsarskiy opyt organizatsii obshchestva i ekonomiki [Modernization of the economy and self-government in the republics of the North Caucasus and the Swiss experience in organizing society and the economy]*. Moscow, Russia: Institute of Ethnology and Anthropology, Russian Academy of Sciences, pp 23–40.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 28 Mar 2024
Terms of Use: https://bioone.org/terms-of-use