ARTICLE

LAWS, INSTITUTIONS AND TRANSBOUNDARY PASTURE MANAGEMENT IN THE HIGH PAMIR AND PAMIR-ALAI MOUNTAIN ECOSYSTEM OF CENTRAL ASIA

Michelle Lim

This document can be cited as
Michelle Lim, 'Laws, Institutions and Transboundary Pasture Management
in the High Pamir and Pamir-Alai Mountain Ecosystem of Central Asia',
8/1 Law, Environment and Development Journal (2012), p. 43,
available at http://www.lead-journal.org/content/12043.pdf

TABLE OF CONTENTS

1.	Introduction	45
2.	History and Background of Rangeland Management in Tajikistan	
	and the Kyrgyz Republic	46
	2.1 Pre-Soviet Era	46
	2.2 Soviet-era	46
3.	Issues and Challenges for Transboundary Pasture Management in	
	the High Pamirs and Pamir-Alai Ecosystem	47
	3.1 Overexploitation of Pasture Ecosystems	48
	3.2 Governance and Institutional Issues	49
4.	Legal Issues for Transboundary Pasture Management in the	
	High Pamir and Pamir-Alai Ecosystem	49
	4.1 Different Land Tenure Systems in Tajikistan and the Kyrgyz Republic	50
	4.2 Different Laws for the Regulation of Pasture Management in	
	Tajikistan and the Kyrgyz Republic	51
	4.3 Limitations of National Level Pasture Management Instruments	
	and Institutions	54
	4.4 Transboundary Cooperation between the Kyrgyz	
	Republic and Tajikistan	55
5.	Ways Forward for Effective Transboundary Pasture Management	
	in the Pamirs	56
	5.1 Facilitate Access to Pastures and Markets Across the	
	Tajik-Kyrgyz Boundary	56
	5.2 Coordinate Institutions and Harmonize Laws	57
	5.3 Creation of Clear Mechanisms for Dispute Resolution	58
6.	Conclusion	58
Acl	knowledgements	58

INTRODUCTION

The neighbouring Central Asian states of Tajikistan and the Kyrgyz Republic were formed following the collapse of the Soviet Union. Central Asian states have retained as international boundaries the former Soviet Socialist Republican (SSR) boundaries demarcated in Soviet times. Previously porous republican boundaries are now subject to strict border control measures which restrict the movement of inhabitants across the new international boundaries. Areas once subject to Soviet centralized planning rules are now subject to different laws and institutions on each side of the international boundary.

The agricultural and rural sectors are fundamental components of the economies of former Soviet Central Asian states providing employment, basic livelihood and social security. Ethnic Kyrgyz minorities remain as Tajik citizens in Tajikistan and vice versa. Pastoralism continues to be an important cultural component of the way of life of the ethnic Kyrgyz. Livestock are often equated with financial security and constitute an important point around which the rural Kyrgyz organize their social relations. Social status and wealth are measured by the quantity of livestock a person or household possesses. Mountain pastures are the greatest source of livestock forage in both countries.

The 2007 report of the Intergovernmental Panel on Climate Change gives Central Asia the highest rating of 'highly vulnerable' when forecasting the risk of land degradation due to climate change.³ Climate change impacts in Central Asia are predicted to include gradual reduction in summer rainfall and increased warming during the growing season. This is likely to cause reduced productivity in grasslands and increased bare ground.⁴

Enhanced rangeland governance is a priority for the governments of the Kyrgyz Republic and Tajikistan. Following independence a process of regulatory and institutional reform occurred across multiple sectors in former Soviet states. Major transitional challenges confront the Newly Independent States (NIS) of Central Asia. These challenges include the withdrawal of subsidies previously provided by the centralised Soviet government; moves towards privatisation and the conversion of administrative boundaries to international boundaries; all of these changes occurred within a short timeframe. In this context transboundary approaches to rangeland management are essential to help overcome some of the adverse effects of the combination of increased pressures and altered institutional arrangements.

This paper discusses the legal and institutional challenges to effective transboundary pasture management in the high-mountain areas of the Pamir and Pamir-Alai ecosystem. It focuses on transboundary rangeland management in the shared high-mountain ecosystem of the Pamir and Pamir-Alai mountain ranges of Tajikistan and the Kyrgyz Republic. It first provides the background and history of rangeland management in Tajikistan and the Kyrgyz Republic and identifies the current rangeland management issues in the Pamir and Pamir-Alai ecosystem. It then reviews the legal and policy history of land-use and pasture regulation in the two countries and existing agreements between the two countries. From this the institutional and implementation challenges and the need for a coordinated inter-country response are highlighted.

¹ Max Spoor, 'Agricultural Restructuring and Trends in Rural Inequalities in Central Asia - A Socio-Statistical Survey' (United Nations Research Institute of Social Development, 2004).

² Bernd Steimann, Making a Living in Uncertainty. Agro-Pastoral Livelihoods and Institutional Transformations in Post-Socialist Rural Kyrgyzstan (University of Zürich, 2010).

³ Carol Kerven et al, 'Pastoralism and Farming in Central Asia's Mountains: A Research Review' (Mountain Societies Research Centre, University of Central Asia, 2011).

⁴ *Id*.

HISTORY AND BACKGROUND OF RANGELAND MANAGEMENT IN TAJIKISTAN AND THE KYRGYZ REPUBLIC

2.1 Pre-Soviet Era

In the pre-Soviet era, the area of present day Tajikistan and the Kyrgyz Republic was inhabited by sedentary Tajik and nomadic Kyrgyz tribes. Agriculture was subsistence-based and household-centred. Kyrgyz herders engaged in vertical transhumance moving between seasonal pastures at different altitudes. Short-term seasonal migrations were combined with long-term migrations to better pastures. This nomadic land use system developed in response to semi-arid to arid conditions and enabled the Kyrgyz tribes to cope with climate variability. It was a sustainable but low-output system limited by the availability of fodder in winter pastures. 10

The nomadic Kyrgyz were organized in family groups with kin and tribal groups sharing common winter camps. Summer pastures (jailoo) were considered common property of the kinship groups and grazing rights were based on kinship. The

5 Aida Gareeva et al, Natural Resource Management for Sustainable Livelihoods - Challenges and Trends in Central borders of common pastures of each kin group were defined by landscape features. Other kinship groups were granted easement rights on payment of a fee (otmok). Disputes were addressed through the use of customary law in a traditional system of courts. ¹¹

The arrival of the Russian army to Bishkek in 1860 was followed by the settlement of Russians and Ukrainians. The colonists appropriated the most fertile lowland pastures and turned this into cultivated areas. This reduced the amount of winter pasture available to the nomadic Kyrgyz. It also disrupted their seasonal migration patterns and access to water for livestock. ¹²

2.2 Soviet-era

On 30 December 1922 the Union of Soviet Socialist Republics (USSR) was created. By the late 1920s, the Soviet regime had forced the sedentarization of the rural Tajik and Kyrgyz populations and redistributed their livestock to *kolkhozy* and *sovkhozy*. ¹³ *Kolkhozy* (plural; *kolkhoz* singular) were "collective farms". Members received shares in the farm's production according to the number of days they worked. *Sovkhozy* (plural; *sovkhoz* singular) were State farms which employed salaried workers. ¹⁴ Most rural social infrastructure was organized within these two types of farms. ¹⁵

The Soviet era was characterised by dependence on the central state. ¹⁶ Agriculture became highly specialized and required skilled labour. ¹⁷ The

Asian Mountain Regions (2008).

6 Thomas Breu, Daniel Maselli and Hans Hurni,
'Knowledge for Sustainable Development in the Tajik
Pamir Mountains' 25(2) Mountain Research and
Development 139 (2005).

⁷ R. T. Wilson, 'Livestock, Pastures and the Environment in the Kyrgyz Republic, Central Asia' 17/1 Mountain Research and Development 57 (1997).

⁸ N. Schoch et al, 'Migration and Animal Husbandary: Competing or Complementary Livelihood Strategies. Evidence from Kyrgyzstan' 34 *Natural Resources Forum* 211 (2010).

⁹ Jyldyz Shigaeva et al, 'Livelihoods in Transition: Changling Land Use Strategies and Ecological Implications in a Post-Soviet Setting (Kyrgyzstan)' 26(3) Central Asian Survery 389 (2007).

¹⁰ See Wilson, note 7 above and Shamsiev 2007, in Schoch et al, note 8 above.

¹¹ Nazgul Esengulova, Amuntur Japarov and Edil Mamybetkov, 'Community Management of High-Alpine Grasslands in the Kyrgyz Republic: Social, Economic and Ecological Implications', Paper presented at the Governing shared resources: connecting local experience to global challenges, the 12th Biennial Conference of the International Association for the Study of Commons, University of Gloucestershire, Cheltenham, 14-18 July 2008.

¹² J. D. Farrington, 'De-development in Eastern Kyrgyztan and Persistence of Semi-nomadic Livestock Herding' 9 Nomadic Peoples 171 (2005).

¹³ Schoch et al, note 8 above.

¹⁴ *Id*.

¹⁵ See Spoor, note 1 above.

¹⁶ See Breu et al, note 6 above. See also Gail Berg, 'Strategies and Actions for Improving Rangeland Management in Tajikistan - Final Report to CAWMP' (2009).

¹⁷ See Breu et al, note 6 above.

collectivized livestock production used some elements of the nomadic grazing systems such as seasonal pastures and annual migratory cycles. The goal however was to rapidly increase livestock numbers. 18 In the pre-Soviet era most Kyrgyz families practiced transhumance and tended their own flock. With the introduction of *kolkhozy* this role was taken over by a few professional herders employed by the collective farms. 19 The agricultural sector was transformed into a centrally organized commodityoriented system. Crop and livestock production and rangeland management were under state control and received regular inputs from the central economy.²⁰ Directions from Moscow to increase the production of grain, cotton and tobacco resulted in the expansion of croplands at the expense of pasture area.²¹

Kolkohzy and sovkhozy were large and situated on arable land. The introduction of new livestock types necessitated the stocking of winter fodder. This resulted in greater demand for forage crops.²² Midelevation mountainous areas became cropping sites for forage. Households with few livestock and no access to their own land also used this area for planting crops. As a result, native vegetation was removed and replaced with unsuitable agronomic species.²³ Summer rangeland areas were used in an organized manner with no charges for use or access to pastures. Inputs from the centre meant that livestock numbers were not regulated by local availability of fodder and there was enough feed to overwinter herds.²⁴ The amount of cattle grazed on pastures exceeded sustainable limits.²⁵ These practices resulted in the degradation of mountain pastures.

Immediately prior to independence, the Central Asian republics experienced a low level of industrialization, high population density, a predominantly rural population and a higher degree of poverty than elsewhere in the Soviet Union. ²⁶ Centralized planning for more than half a century

18 See Steimann, note 2 above.

had produced inappropriate resource-use policies, which contributed to serious environmental deterioration, disruption of local cultures, and ethnic unrest.²⁷

3

ISSUES AND CHALLENGES FOR TRANSBOUNDARY PASTURE MANA-GEMENT IN THE HIGH PAMIRS AND PAMIR-ALAI ECOSYSTEM

The Central Asian republics had little warning of the dissolution of the Soviet Union and had to make a rapid transition to independent states.²⁸ The newly independent Central Asian states were among the most severely impacted of Soviet successor states.²⁹ Inputs from the all-Union budget ceased. Previous transfers of wealth from the republics to the central administration in Moscow were replaced by exports in exchange for hard currency.³⁰ In Tajikistan the impact of the sudden withdrawal of subsidies was exacerbated by the civil war in 1992. Widespread famine was only averted by relief efforts by international agencies.31 Termination of the highly intensified Soviet model of livestock production and instability in the immediate post-Soviet period initially had a positive effect on summer pasture areas. Rangelands were granted respite for plant recovery.³² Reduced mobility however caused new forms of degradation due to the overutilization of near-village pastures and the under-utilization of summer pastures.³³

¹⁹ Id.

²⁰ See Berg, note 16 above.

²¹ See Gareeva et al, note 5 above.

²² Id.

²³ See Berg, note 16 above.

²⁴ *Id*.

²⁵ See Gareeva et al, note 5 above.

²⁶ See Spoor, note 1 above.

²⁷ Yuri P. Badenkov, 'Sustainable Development of the Mountain Regions of the USSR - The Realities, the Role of Science, and Research Orientations '10(2) Mountain Research and Development 129 (1990).

²⁸ See Spoor, note 1 above.

²⁹ R. Pomfret, 'Central Asia Since the Dissolution of the Soviet Union: Economic Reforms and Their Impact on State-Society Relations' 6 Perspectives on Global Development and Technology 313 (2007).

³⁰ *Id*.

³¹ See Breu et al, note 6 above.

³² See Berg, note 16 above, Wilson, note 7 above, and Steimann, note 2 above.

³³ Steimann, note 2 above.

In Soviet times each kolkhoz and sovkhoz was allocated territory in another district, oblast or republic to ensure livestock mobility and use of remote pastures.³⁴ Deterioration of transport and infrastructure and the discontinuation of state subsidies for migration and water supply resulted in near-village pastures being used all year round.35 Transformation of the relatively porous administrative boundaries of Soviet times to national boundaries upon independence has led to pastures in other republics becoming inaccessible. Migrations across administrative boundaries are therefore the ones that have experienced the greatest decline.³⁶ A further key difference in post-Soviet agriculture is the shift from large corporate farms (kolkhozy and sovkhozy) to individual/family based agriculture.

Pasture use is today characterised by a large number of small herds used for subsistence, and a much lower number of large commercially viable herds.³⁷ Forage production is insufficient due to high and unsubsidised costs and limited area for production. This is aggravated by the fact that livestock are regarded as a 'living bank'. Many households have started re-investing in livestock after a large dip in the livestock population during the decade that followed independence.³⁸ The return to a subsistence economy with a population that has quadrupled since 1926 is a further cause of widespread natural resource degradation.³⁹

The transition from a planned to centralized economy and the shift of administrative boundaries to national ones following independence has created

particular challenges for the mountain communities on both sides of the Kyrgyz-Tajik border in the transboundary ecosystem of the High-Pamir and Pamir-Alai ranges. The region's high-mountain settlements located at altitudes between 2000 and 4200 metres are far from the major economic and cultural centres. Road infrastructure is poor. The network of transport connections that existed in Soviet times has ceased to function, and the cost of travel has become inhibitive. 40 The lack of transport infrastructure results in increased costs of external farm inputs, and limits cash crop production to nonperishable products. Limited communications infrastructure restricts access to market information. 41 Inter-republic trade and information exchange opportunities across the Kyrgyz-Tajik border that existed in Soviet times have been restricted. This situation is exacerbated by customs and military regulations and corrupt and inefficient practices at border crossings. These practices greatly hinder interactions between the geographically and culturally close communities on each side of the boundary line. The influx of refugees to the relative safety of the Pamirs during the five-year civil war in Tajikistan has also led to increasing pressure on the region's natural resources. In addition, the collectivisation of agriculture during the Soviet era means that traditional knowledge on the management of the mountain ecosystems of the Pamirs has been lost.⁴²

3.1 Overexploitation of Pasture Ecosystems

The overgrazing of near-village pastures observed in other parts of post-Soviet Central Asia is particularly acute in the Pamirs. Extensive pasture use and drought have resulted in severe degradation

³⁴ Mark Whitton et al, 'Pasture Management and Condition in Gorno-Badakhshan: A Case Study' (Commissioned for the Mountain Societies Development Support Programme with financial support from the Education Dairy and Nutrition Programme (EDNP phase III), 2007).

³⁵ See Gareeva et al, note 5 above, T. Hoeck et al, Baseline Survey on Sustainable Land Management in the Pamirs (Report for the United Nations University, 2007), available at http://www.palm.unu.edu/publication/Synthesis%20Reports and Sarah Robinson et al, 'The Impact of Land-Reform Legislation on Pasture Tenure in Gorno-Badkhshan: From Common Resource to Private Property?' 30 Mountain Research and Development 4 (2010).

³⁶ Robinson et al, note 35 above.

³⁷ *Id*.

³⁸ See Gareeva et al, note 5 above.

³⁹ See Breu et al, note 6 above.

⁴⁰ A.S. Shanazarov et al, 'Strategy and Action Plan for Sustainable Land Management in the High-Pamir and Pamir-Alai Mountains' (GEF/UNEP/UNU Project "Sustainable Land Management in the High Pamir and Pamir-Alai Mountains – Integrated and Transboundary Initiative in Central Asia", 2011).

⁴¹ See Shanazarov, note 40 above and UNEP, Full Project Brief: Sustainable Land Management in the High Pamir and Pamir-Alai Mountains - an Integrated and Transboundary Initiative in Central Asia (United Nations Environment Programme-Global Environment Facility).

⁴² See UNEP, note 41 above.

in sub-alpine and alpine zones.⁴³ Akhmadov et al documented significant changes in species composition of blue-grass sedge pastures. These changes in vegetation structure are basic indicators of pasture degradation.⁴⁴

The over reliance on fuelwood, shrubs, dung and peat to meet household energy needs is a further reason for degradation of the transboundary rangeland ecosystem. Coal and diesel subsidies for winter heating and transportation ceased upon independence. Imports are limited and restrictively expensive when available. This has led to the cutting of shrubs and trees and particular reliance on *teresken* (*Ceratoides papposa*) - a woody dwarf shrub - for fuel. ⁴⁵

Teresken is one of the few types of shrubs that have adapted to the landscape and harsh conditions of the Pamirs. 46 The shrub is not only fuel and fodder for animals but also performs the important function of erosion control.⁴⁷ In the Eastern Pamirs, exploitation has brought teresken ecosystems to the brink of extinction. Destruction of teresken is associated with the rapid spread of soil erosion, which leads to a decline in productivity of highmountain arid pastures and to their desertification. 48 Depletion of vegetation has contributed to increased erosion by wind and water around villages. Deforestation and overgrazing have led to gully erosion and more frequent dust and sandstorms.⁴⁹ This problem is exacerbated by the poor construction of irrigation systems and the location of distribution canals on unstable slopes.⁵⁰

The Gorno-Badakshan Autonomous Oblast (GBAO) in Tajikistan is experiencing great difficulty in providing livestock with sufficient productive summer pastures and lacks fertile areas for the production of winter forage. The adjacent Alai Valley contains rich pastures and hayfields. ⁵¹ Administrative, legal and infrastructure impediments however currently limit the use of pastures across the international boundary.

3.2 Governance and Institutional Issues

Governance and institutional limitations compound the challenges facing pasture management in the Pamirs. Conflicting mandates and contradictory policies amongst institutional support services have resulted in gaps and contradictions in field level efforts to address land degradation and manage ecosystem resources.⁵² Central and local level governments have insufficient financial and human capital to provide effective advisory support services to rural land users. Inadequate policies and legislation and the inability to enforce such rules in addition to the lack of clearly defined private user rights on individual farm plots and common property resources such as pastures are further impediments to sustainable pasture management.⁵³

4

LEGAL ISSUES FOR TRANS-BOUNDARY PASTURE MANAGEMENT IN THE HIGH PAMIR AND PAMIR-ALAI ECOSYSTEM

Different national laws and institutions and the lack of adequate transboundary arrangements are the key impediment to effective management of the shared High Pamir and Pamir-Alai ecosystem. The five-year civil war that occurred in Tajikistan following

⁴³ K. M. Akhmadov et al, 'Effects of Grazing on Biodiversity, Productivity and Soil Erosion on Alpine Pastures in Tajik Mountains', in E. M. Spehn, M. Liberman and C. Körner eds, Land Use Change and Mountain Biodiversity 239 (Boca Raton: Taylor & Francis, 2006) [Spehn, Liberman and Körner].

⁴⁴ *Id*.

⁴⁵ See Berg, note 16 above and S. W. Breckle and W. Wucherer, 'Vegetation of the Pamir (Tajikistan): Land Use and Desertification Problems', in Spehn, Liberman and Körner, note 43 above, at 225.

⁴⁶ N. Pachova et al, 'Energy Crisis in the Pamir Mountains', 15 January 2010, available at http://ourworld.unu.edu/en/highland-people-struggle-to-fuel-their-lives/.

⁴⁷ See Shanazarov, note 40 above.

⁴⁸ Id.

⁴⁹ See Breckle & Wucherer, note 45 above..

⁵⁰ See UNEP, note 41 above.

⁵¹ See Shanazarov, note 40 above.

⁵² See UNEP, note 41 above.

⁵³ *Id.*

independence has contributed to different degrees of land reform in the two countries. It has also resulted in varied levels of maturity in the legal instruments for natural resource management.

The Kyrgyz Land Code allows for the private ownership of most land use types whereas the Tajik land code only allows private use in some circumstances. In both countries pastures remain in state ownership. In the Kyrgyz Republic there is specific legislation for the use of pastures. In contrast Tajikistan has specific legislation directed at dekhan (peasant) farms. The difference of emphasis in legal developments in the two countries reflects the traditionally nomadic lifestyle of the ethnic Kyrgyz majority in the Kyrgyz Republic and the traditionally sedentary lifestyle of the ethnic Tajik majority in Tajikistan. The absence of a Tajik law on pastures however results in the lack of a uniform approach to pasture management in the shared Pamir ecosystem and ambiguities for pasture management within Tajikistan and transboundary collaboration across the Tajik/Kyrgyz boundary in the Pamirs.

4.1 Different Land Tenure Systems in Tajikistan and the Kyrgyz Republic

Land reform was initiated in Tajikistan and the Kyrgyz Republic following the collapse of the Soviet Union. This enabled private use (in Tajikistan) and ownership (in the Kyrgyz Republic) of land on which households had control. As a result household land-use decisions are predominately based on short-term socio-economic interests, while ecological concerns such as preserving natural resources are mostly ignored.⁵⁴ Independence and democratic reforms enabled the establishment of national institutions of local self-governance. The process of decentralization saw local communities taking over the functions of distribution, renting, control and use of local natural resources.⁵⁵

In the Kyrgyz Republic government structures have been reformed to comprise three-tiers at the subnational level (Figure 1): oblast (province), rayon (district), and ayil okmotu⁵⁶ (village).⁵⁷ A similar structure was created in Tajikistan (Figure 2). The lowest level of organization in Tajikistan is divided into two equivalent categories of deha (village) and shahrak (settlement). In Tajiksitan there is an additional level of organization, consisting of rayons and cities of republican sub-ordination. These rayons and cities do not belong to any oblast and therefore report directly to the republic government.

Figure 1: Levels of Administration in the Kyrgyz Republic



Figure 2: Levels of Administration in Tajikistan



Administrative structural reforms occurred at the same time as the economic reforms of dismantling *kolkhozy and sovhozy*. As a consequence the local organizational framework of the 1990s was complex and involved many overlapping actors, institutions and organizations.⁵⁸ Problems adapting pasture land

⁵⁴ See Gareeva et al, note 5 above.

⁵⁵ Id.

⁵⁶ Ayil Okmotu is often used indiscriminately to describe the local 'community' level of political organization. Ayil Okmotus generally consist of several villages (ayils). The term includes the communal administration, the administration building and the head of the rural executive committee. See Kerven et al, note 3 above.

⁵⁷ See Steimann, note 2 above.

⁵⁸ *Id*.

tenure systems and pastoral employment,59 combined with the institutional vacuum created by the elimination of the collective farm model,⁶⁰ have created further challenges for pasture management. In most instances the financial and human resources needed to realize the internationally promoted policy of decentralization have not reached the local level.⁶¹ The Soviet system was highly inefficient in economic terms. The state-directed system of social organization was however an important part of the social fabric of rural areas.⁶² There is currently a lack of institutions that are suited to replace kolhozy and sovkhozy. Economic linkages between the agricultural and industrial sectors are also inadequate.63

In the early 1990s the Kyrgyz Government introduced a package of reforms which included privatisation of the agricultural sector. Small-scale farmers were now the main owners of the country's livestock. Pastures remained in state ownership.64 By the mid-1990s most kolkhozy and sovkhozy in the Kyrgyz Republic had been dissolved and their arable land distributed to the farm workers and their families in the form of 49-years land-use shares.⁶⁵ The Kyrgyz Constitution 66 was amended by referendum in 1998. The Kyrgyz people voted in favour of private land ownership and the former 49year land-use rights were converted into legal ownership documents. The Kyrgyz Land Code⁶⁷ secured these ownership rights, but still included a moratorium on land sales. In 2001, a presidential decree made private purchase and sale of land a reality, although several restrictions remained.⁶⁸

The civil war in Tajikistan from 1992 to 1997 hampered agrarian reforms. This may be one reason why Tajikistan, in contrast to the Kyrgyz Republic, maintains many elements of the Soviet agricultural system.⁶⁹ All land in Tajikistan remains in exclusive state ownership⁷⁰ and cannot be privatized. Use rights in land can however be transferred to individual or private use.⁷¹

4.2 Different Laws for the Regulation of Pasture Management in Tajikistan and the Kyrgyz Republic

The Land Code of the Kyrgyz Republic (1999)⁷² was the first attempt to regulate pasture management in the Kyrgyz Republic.⁷³ Despite the existence of private land ownership for other types of land, article 4(2) of the Land Code provides that certain land types, including all types of pastures, are owned exclusively by the state. Under the 1999 Kyrgyz Land Code, pastures were categorised as village-adjacent, intensive and remote pastures. These pasture types were respectively under the authority of ayil okmotu, rayon and oblast administrations. Pastures close to forested areas were placed under the authority of the State Agency for Environment and Forestry (leskhoz) and some intensive and remote pastures were transferred to a special state land fund under the authority of the rayon administration [Figure 3].⁷⁴ Upon the introduction of the Land Code every rural community was assigned areas of each pasture-type. Most new pasture boundaries were drawn on the basis of previous allocations to the former kolkhozy.⁷⁵

⁵⁹ Stephen Baas, Pastoral Livestock Development in Central Asia (Rome: Food and Agriculture Organisation, 1996).

⁶⁰ See Spoor, note 1 above.

⁶¹ See Gareeva et al, note 5 above.

⁶² See Spoor, note 1 above.

⁶³ See Baas, note 59 above.

⁶⁴ See Schoch, note 8 above.

⁶⁵ See Kerven et al, note 3 above.

⁶⁶ Constitution of the Kyrgyz Republic, amended on 21 October 1998.

⁶⁷ Land Code of the Kyrgyz Republic (Law of the Kyrgyz Republic, No. 10, 25 June 1999).

⁶⁸ See Kerven et al, note 3 above.

⁶⁹ Id.

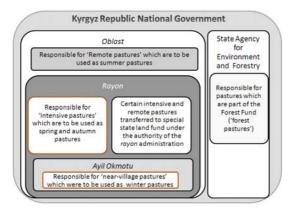
⁷⁰ Constitution of the Republic of Tajikistan (1994), art 13. 71 Zvi Lerman and David Sedik, 'The Economic Effects of Land Reform in Tajikistan' (EC/FAO Food Security Programme - Phase II 'Food Security Information for Action', 2008).

⁷² Note 67 above.

⁷³ See Steimann, note 2 above.

⁷⁵ Childress et al, Rapid appraisal of land reform in the Kyrgyz Republic (Report ARD/Checchi Development of Commercial Law Project, 2007).

Figure 3: Pasture management authorities in the Kyrgyz Republic under the 1999 Land Code

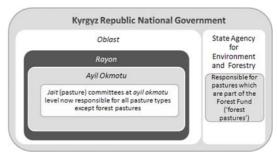


The 2002 Regulations 'on the Procedure for Providing Pastures for Lease and Use (2002 Regulations)⁷⁶ provided the details for allocation and management of the three categories of pastures. The regulations stated that pasture use is based on territorial leases to be obtained from the various levels of administration in a competitive bidding process. Communal authorities could lease out the village-adjacent pastures or manage them as common property resource. Pasture leases for grazing could be given for five years and can be extended by another 10 years and then a further 49 years.⁷⁷

The division of power between the three levels of administration under the Kyrgyz Land Code resulted in different rules and procedures for the use of the different types of pastures. The static lease system of the 2002 Regulations interfered with the flexibility of pastoral behaviour. Local herders were often unwilling and unable to cope with the complicated rules and procedures or pay the requisite leasing and administrative fees. Local administrations lacked the capacity to implement and enforce the law resulting in open access to pastures. There was also criticism of the leasing process for discriminating against the

less wealthy. 80 As a result, the Kyrgyz parliament passed the Law 'on pastures' (Kyrgyz Pasture Law) in 2009. 81 The law abandons the previous classification of pastures into 'village-adjacent', 'intensive' and 'remote'. 82 The lease system has been replaced by a fee-per-animal system called the 'pasture ticketing system'. 83 All administrative authority over pastures is transferred to jait (grazing) committees at the community (ayil okmotu) level. 84 Forest pastures remain under the authority of the State Agency for Environment and Forestry [Figure 4]. 85

Figure 4: Pasture management authorities in the Kyrgyz Republic under the 2009 Law 'on pastures'



Unlike the Kyrgyz Republic, Tajikistan does not have legislation dedicated to the management of pastures. Article 64 of the *Tajik Land Code* subjects all lands used for agriculture to the rules for farming land. Under the Code, pastures are considered farming land. The *Land Code* creates the following range of tenure options for agricultural land:

- Perpetual use;86

⁷⁶ Regulations on the Procedure for Providing Pastures for Lease and Use (Government Resolution No. 360, June 4, 2002; amended September 27, 2004).

⁷⁷ See Steimann, note 2 above.

⁷⁸ *Id*

⁷⁹ See Kerven et al, note 3 above.

⁸⁰ See Steimann, note 2 above.

⁸¹ Law of the Kyrgyz Republic 'on pastures' (The Kyrgyz Republic, No. 30, 26 January 2009) [Kyrgyz Pasture Law].

⁸² See Steimann, note 2 above.

⁸³ See Kyrgyz Pasture Law, note 81 above, art 6(5), 8(1), 10, 12, 15, 16.

⁸⁴ S. Jacquesson, 'Reforming Pastoral Land Use In The Kyrgyz Republic: From Clan And Custom To Self-Government And Tradition' 29/1 Central Asian Survey 103 (2010).

⁸⁵ See Kyrgyz Pasture Law, note 81 above, art 1.

⁸⁶ Land Code of the Republic of Tajikistan (Republic of Tajikistan Laws No.498 as of 12 December 1997, No. 746 as of 14 May 1999, No. 15 as of 12 May 2001, No. 23 as of 28 February 2004) [Tajik Land Code].

- Life-long heritable use;⁸⁷
- Fixed-term land use.⁸⁸

The perpetual land use right has no fixed term. Perpetual use was originally only granted to legal entities such as state and cooperative agricultural enterprises, public, charitable, religious and industrial organizations or for defence purposes.

The Tajik Law 'on dehkan farms' established the right of every citizen to create an independent dehkan farm outside the collectivist framework, primarily from the district's reserve land. The law called for the division of kolkhozy and sovkhozy and for individual inheritable land shares to be certified by proper documentation. It established the right of every member of a farm enterprise to a share in non-land assets.⁸⁹ Because pastures are considered as farming land under the Tajik Land Code, the Law 'on dekhan farms' therefore applies to pastures in the same way as arable land. Individual and family dehkan farm holders are entitled to receive their share of pastoral land within the area of the former collective or state farm. The 2004 amendments to the Land Code make it possible for any Tajik citizen to gain additional land plots for private farms when the terms of tenure have not previously been fixed. 90 Until the changes to the Land Code, pastoral land on collective dehkan farms was often treated as common-property over which individuals did not have control.⁹¹

Most of the Tajik side of the High Pamir and Pamir-Alai ecosystem consists of the Gorno-Badakshan Autonomous Oblast (GBAO). Land reform in GBAO was relatively successful with most households having been allocated a physical land share following the introduction of the *Law 'on dehkan farms'*. Few households however have their own *dehkan* farm. Most *dehkan* farms in GBAO are collective farms, which comprise a few villages. 92

The 2004 Tajik Land Code allows life-long heritable tenure, which may be assigned to physical persons, collectives, *dehkan* farms or household plots. Land assigned under this use type must be re-registered in the case of inheritance. Article 71.3 of the 2004 *Land Code* stipulates that land may be allocated to citizens for the pasturage of livestock and haymaking. This land may be allocated from agricultural lands, the state land reserve or the state forest reserve. The allocation of land requires the authorization of the general meeting of the farms and organizations whose agricultural lands are being allocated. In the case of state reserves the chairmen of the rayon facilitate the private use of pastures.⁹³

Fixed-term land use is granted for periods of up to three years (short-term) or for three to ten years (long-term). Holders of the three types of tenure may then lease these land types to legal entities or natural persons for a period not exceeding 20 years. 94 Whitton et al argue that this allows pastures (which were previously almost universally communal) to be used by private owners to the exclusion of other pasture users. 95

In April 2002, the new *Law 'on Dehkan Farms'* ⁹⁶ repealed the 1992 law and explicitly recognised three types of dehkan farms: individual, family and collective. This change in law acknowledged the widespread *de facto* occurrence of collective *dehkan* farms. Despite reorganization and new procedures the collective *dehkan* farms do not however function differently from *kolkhozy* and *sovkhozy* of the Soviet era. ⁹⁷

Article 11 of the 2002 Tajik Law 'on dehkan farms' allows a land share of each member of an agricultural organization or land from the state land fund to be granted for permanent heritable use. This enables the privatization of pastures by individual dehkan farmers as pastures are considered agricultural land. A pasture within the boundaries of collective dehkan farms is therefore theoretically eligible for distribution to members but is usually communally

⁸⁷ Id., art 12.

⁸⁸ Id., art 13.

⁸⁹ See Lerman and Sedik, note 71 above.

⁹⁰ Tajik Land Code, note 86 above, art 11 (g).

⁹¹ Sarah Robinson, Gulomkodir Safaraliev and Nodalieb Muzofirshoev, Carrying Capacity of Pasture and Fodder Resources in the Tajik Pamirs (Rome: Food and Agriculture Organization, 2010).

⁹² See Whitton, note 34 above and Robinson et al, note 35 above.

⁹³ Tajik Land Code, note 86 above, art 71.3.

⁹⁴ Id, art 14.

⁹⁵ Whitton et al, note 34 above.

⁹⁶ Tajik Law 'on Dehkan Farms' (Republic of Tajikistan Law No. 48 as of 23 April 2002).

⁹⁷ See Lerman and Sedik, note 71 above.

managed. This is a response to the practice of collective herding that makes splitting of pasture into shares an impractical proposition. ⁹⁸ The preference for communal management of pastures in Tajikistan reflects the experience in the Kyrgyz Republic where the fixed lease system introduced in the 2002 Regulation has been abandoned in favour of a feeper-animal system.

4.3 Limitations of National Level Pasture Management Instruments and Institutions

A recurring critique of Tajik land management is that the government has not followed through on land reform. Robinson et al suggest that the main source of problems for pasture management lies in the fact that pastures are subject to a Land Code, which was designed for arable land.99 While individuals can obtain use rights to arable land, the procedures for the privatization and lease of pastures remain unclear. 100 As indicated above there is no Tajik equivalent to the Kyrgyz Pasture Law. Tajikistan has however enacted the 'Law on dekhan (peasant) farms' 101 for which there is no Kyrgyz equivalent. These differences in emphasis in the development of legislation in the two countries could be attributed to the different levels of legal development. It is likely too that the differences can be ascribed to the different traditional lifestyles of the nomadic ethnic Kyrgyz and the sedentary ethnic Tajik. A key issue that arises out of this is the importance of regulation and facilitation of the livelihoods of the ethnic Kyrgyz living in Tajikistan such as access to summer pastures within Tajikistan and across the boundary in the Kyrgyz Republic.

There has been little change in Tajik public institutions since independence. Kerven et al recommend that Tajik pasture management should be reformed to a model similar to that of the decentralized Kyrgyz pasture users' committees. ¹⁰² Caution should however be exercised so that a Tajik

pasture law is not a mere transplant of its Kyrgyz counterpart. It is important to take into account the differences in the lifestyles of the traditionally sedentary ethnic Tajik majority in Tajikistan.

The Kyrgyz pasture law has its own limitations particularly on issues of implementation and enforcement. Steimann cites evidence that administrations at ayil okmotu, rayon and oblast levels have neither the necessary human capital nor expertise to successfully allocate pastures or enforce the pasture law. He points to examples where communal authorities simply ignore the legislation and the often striking discrepancy between the pasture law and the actual practices of stakeholders. ¹⁰³ Local pasture use practices vary considerably. The discretion granted to rayon and oblast authorities regarding the enforcement of the pasture law has resulted in significant differences even between neighbouring communities. ¹⁰⁴

The *jait* committees introduced by the Kyrgyz pasture law have also been criticized for reinforcing longstanding misconceptions of 'clan', 'custom' and 'tradition' while failing to recognize the often unequal relations between local herders. ¹⁰⁵ The participation in *jait* committees is often very formal, thus weakening the reform's original objective of strengthening participatory community-based governance structures. ¹⁰⁶ Furthermore the pasture legislation and organizational framework has created discontent among pasture users without providing meaningful systems for dispute resolution. ¹⁰⁷

An additional concern is that conflicts remain in the management of pastures under the pasture law and forest pastures which come under the *Forest Code*. ¹⁰⁸ All pastures that occur in designated forest areas are forest pastures and are regulated by the Kyrgyz *Forest Code*. ¹⁰⁹ This subjects pastures within forest areas to different rules and puts them under different levels

⁹⁸ See Robinson et al, note 36 above.

⁹⁹ Id

¹⁰⁰ See Kerven et al, note 3 above.

¹⁰¹ Tajik Law 'on Dehkan Farms', note 96 above.

¹⁰² See Kerven et al, note 3 above.

¹⁰³ See Steimann, note 2 above.

¹⁰⁴ See Kerven et al, note 3 above.

¹⁰⁵ See Jacquesson, note 84 above.

¹⁰⁶ *See* Kerven et al, note 3 above. 107 *See* Steimann, note 2 above.

¹⁰⁸ Forest Code of the Kyrgyz Republic (The Kyrgyz Republic, No. 66, 8 July 1999) [Kyrgyz Forest Code]. 109 *Id.*

of control than pastures that do not occur in forest areas. Article 1 of the Kyrgyz pasture law explicitly excludes forest pastures from the new legislation and Article 3 (1) states that pastures are publicly owned. 110 This is in contrast to the *Forest Code*, which allows private ownership. 111

All lands and forests allocated for forestry purposes constitute part of the Forest Fund granted under the Forest Code. 112 Powers for the distribution of haymaking areas and pastures continue to complicate pasture management in the Kyrgyz Republic. The Forest Code entitles State Forest Management, 113 oblast 114 and rayon 115 administrations to distribute pastures and haymaking areas under different circumstances. This creates confusion for pasture-users especially in areas where Forest Fund boundaries are not clearly defined.

4.4 Transboundary Cooperation between the Kyrgyz Republic and Tajikistan

Effective pasture management in the Pamir and Pamir-Alai ecosystem requires appropriate laws, policies and institutions within both the Kyrgyz Republic and Tajikistan. Transboundary arrangements are equally important.

The Kyrgyz pasture law is important because it simplifies pasture management. The legislation however creates challenges in practice. Of particular relevance for transboundary pasture management is Article 13. This article states that unused pastures may be allocated to foreign legal and physical entities in accordance with interstate and inter-government agreements ratified by the Kyrgyz Parliament. ¹¹⁶ Article 10 of the pasture law allows pasture use only by holders of pasture tickets. These tickets are issued by the community level *jait* committees on receipt

of payment. Article 10 also allows *jait* committees to set the price of the pasture ticket. 117

The use of Kyrgyz pastures by Tajiks is a source of tension in the transboundary region of the Pamir and Pamir-Alai. Despite the absence of international agreements required under Article 13, Tajik herders currently use Kyrgyz pastures. *Jait* committees charge Tajik users a higher price for pasture tickets and restrict the use of pastures by Tajik citizens to certain areas. The committees argue that they are entitled to do this as Article 10 allows them to set pasture ticket prices. Without an agreement between Tajikistan and the Kyrgyz Republic on the use of Kyrgyz pastures by Tajik citizens and the collection of fees for the use of these pastures by Kyrgyz *jait* committees are in conflict with the Kyrgyz pasture law

A 2008 action plan of the President's Administration of the Kyrgyz Republic provided for the signing of a draft agreement between the Kyrgyz Republic and Tajikistan on the use of Kyrgyz pastures. The plan for a draft agreement occurred in anticipation of the introduction of the 2009 pasture law. Shanazarov et al indicate that the draft agreement has been accepted under the procedures required of the laws of Tajikistan and the Kyrgyz Republic. 118 To date however agreement has not been reached on the details of implementation.

The Constitution of the Kyrgyz Republic states that international treaties and other norms of international law shall be a directly applicable part of the legislation of the Krygyz Republic.¹¹⁹ In addition, Kyrgyz legislation generally contains provisions which indicate the supremacy of international law in the event of conflict with national legislation.¹²⁰ Interestingly, the Kyrgyz pasture law does not include a provision on the hierarchy of international agreements in the case of

¹¹⁰ See Kyrgyz Pasture Law, note 81 above, art 1, 3 (1).

¹¹¹ Kyrgyz Forest Code, note 108 above.

¹¹²*Id*, art 6.

¹¹³ Id, art 24.

¹¹⁴ Id, art 19.

¹¹⁵ Id, art 20.

¹¹⁶ *Id*, art 13.

¹¹⁷ See Kyrgyz Pasture Law, note 81 above, art 10.

¹¹⁸ See Shanazarov, note 40 above.

¹¹⁹ See Kyrgyz Constitution, Article 12(3).

¹²⁰ See, for example, Article 39 of the Law of the The Kyrgyz Republic 'on Mountain territories' (The Kyrgyz Republic, No. 151, 1 November 2002).

conflict with the pasture law. This creates further legal uncertainty for transboundary pasture use.

The Agreement on Basic Intergovernmental Relations between Republic of Tajikistan and the Kyrgyz Republic (Basic Agreement), 121 and the Memorandum of Understanding on the Joint implementation of the Strategy on Sustainable Land Management in the High Pamir and Pamir-Alai Mountains and Action Plan (PALM MoU) 122 provide possible starting points for facilitating pasture management in the transboundary ecosystem of the Pamir and Pamir-Alai. The instruments are at this stage insufficient to achieve meaningful action.

The Basic Agreement defines interstate relations between Tajikistan and the Kyrgyz Republic. Article 7 states that the republics shall engage in mutually advantageous cooperation. A protocol to the agreement regulates the activities of an intergovernmental commission. Article 2 of the protocol provides that the commission's functions include the review of agreements on pasture use. Access to markets in Khorog, the capital of GBAO in Tajikistan, and Osh in the Kyrgyz Republic are of particular importance to mountain communities on both sides of the border in the Pamir and Pamir-Alai region. Article 2 of the protocol describes the commission's functions to also include the coordination of efforts to jointly rebuild and maintain the Osh-Khorog road.

The Pamir-Alai Land Management (PALM)¹²³ project is an integrated transboundary initiative of the governments of the Kyrgyz Republic and the Republic of Tajikistan. The PALM project area

encompasses the Pamir, Pamir-Alai ecosystem. The PALM MoU is an outcome of the PALM project and was concluded between the Kyrgyz Government's State Agency on Environment Protection and Forestry and the Tajik Government's Committee on Environmental Protection as well as the State Administration of Osh Oblast and Hukumats of Jirgatol Rayon and GBAO Oblast in February 2011. The MoU may pave the way for future agreements. The MoU does not however prescribe specific actions or responsibilities nor does it contain binding provisions on the creation of a transboundary institution. The MoU does however envisage the creation of such an institution in the PALM project area.

5

WAYS FORWARD FOR EFFECTIVE TRANSBOUNDARY PASTURE MANAGEMENT IN THE PAMIRS

Actions aimed at achieving sustainable pasture management in the Pamir and Pamir-Alai ecosystem need to bear in mind the limitations of the country systems of Tajikistan and the Kyrgyz Republic. When introducing new laws and agreements and amending existing laws the ability of existing administrations to implement and enforce these new rules has to be taken into account. The following recommendations are likely to enhance transboundary pasture management in the Pamir and Pamir-Alai ecosystem. Some recommendations may not be feasible in the short-term and may require significant changes within country systems.

5.1 Facilitate Access to Pastures and Markets Across the Tajik-Kyrgyz Boundary

The main cause of degradation in the Pamir and Pamir-Alai ecosystem is the overexploitation of vegetation. The overgrazing of near-village pastures results from the lack of funds and road infrastructure for the migration of livestock. The transformation of administrative boundaries to international

¹²¹ Agreement on Basic Intergovernmental Relations between Republic of Tajikistan and The Kyrgyz Republic (Dushanbe, 12 July 1996).

¹²² Memorandum of Understanding on the Joint implementation of the Strategy on Sustainable Land Management in the High Pamir and Pamir-Alai Mountains and Action Plan (15 February 2011).

¹²³ Full project name: "GEF/UNEP/UNU Sustainable Land Management in the High Pamir and Pamir-Alai Mountains (PALM) Project-An integrated and transboundary initiative in Central Asia (Project Number: IMIS: GFL-2328-2770-4984)". GEF, UNEP and UNU refer respectively to the Global Environment Facility, the United Nations Environment Programme and the United Nations University.

boundaries and the subsequent obstacles of border crossing further restrict movement to suitable pastures. The end of fuel supplies from a central Soviet government and constraints imposed by the current cost of fuel lead to further degradation because communities revert to *teresken* and dung as fuel sources. Overexploitation of *teresken* leads to desertification due to the removal of vegetative cover. The collection of dung reduces land fertility as nutrients are not returned to the soil.

Access to pastures across the Tajik-Kyrgyz border and delivery of coal supplies from the Sary-Tash coal deposit in the Alai valley in the Kyrgyz Republic to inhabitants of Murghab *rayon* in Tajikistan would reduce the intensity of pasture degradation. ¹²⁴ Access to the mountain communities of the Pamir and Pamir-Alai ecosystem from the capital cities of both countries is difficult. Facilitating trade in perishables such as meat and dairy products between communities across the boundary line is important and would create new markets for livestock owners on both sides. Concerted efforts from both countries to address current barriers to trade and enhance the transparency of custom practices are crucial.

The conclusion of a bilateral agreement which includes specific provisions concerning transboundary pasture management in the Pamirs would provide an important enabling instrument. The agreement should also clarify the ambiguity created by article 13 of the Kyrgyz law on pastures.

National legal teams of the PALM project have developed concepts, principles and regulatory requirements to improve the enabling environment for sustainable land management in the PALM region. The legal teams also recognize the importance of the development of a bilateral agreement. The legal teams specifically recommend provisions which would allow Tajik citizens to rent pasture plots in the Kyrgyz Republic and enable constant delivery of coal from the Sary-Tash deposit. They recommend special regulations for pasture use in border areas. 125

The development of a transboundary strategy which defines responsibilities of pasture management authorities at each level of government would provide an important starting point for the coordination of transboundary institutions. The strategy should be developed with national, oblast, rayon and local governments and coordinate activities between each level of government and with the corresponding level of government across the border. Overlapping and conflicting responsibilities among national agencies in both countries results in duplication of effort. Ministerial responsibility for pastures should be clearly defined to reduce overlaps. Coordinated planning for the whole Pamir and Pamir-Alai ecosystem would facilitate a comprehensive ecosystem-level approach to pasture management. The bilateral agreement referred to above should include provisions which require the parties to amend existing national laws on pastures to facilitate harmonized practice across the border. The absence of a specific law on pasture use in Tajikistan is an opportunity to develop more specific rules on pasture use in Tajikistan while addressing transboundary pasture use. Drafters of a Tajik law on pastures can also benefit from the Kyrgyz experience in implementing the pasture law. When developing the Tajik pasture law, a local level counterpart to Kyrgyz jait committees would be desirable. There are valuable lessons that can be gained from the Kyrgyz experience in developing and implementing its pasture law. Though the Kyrgyz experience can be used as an important example to be effective, it is critical that rather than transplanting the Kyrgyz law verbatim the new legal instrument addresses issues specific to Tajikistan.

The existence of legal rules will not guarantee effective law. Enforcement is crucial for the objectives of substantive law to be realized. 126 Regulatory instruments require efficient institutional backing and adequate implementation

^{5.2} Coordinate Institutions and Harmonize Laws

¹²⁴ *See* Shazanarov, note 40 above.

¹²⁶ Michael Faure, Morag Goodwin and Franziska Weber, 'Bucking the Kuznets Curve: Designing Effective Environmental Regulation in Developing Countries' 51 Virginia Journal of International Law 95 (2010).

resources. The optimum result arises when instruments work in concert and are supported by credible institutions with appropriate resources. 127 Transboundary pasture management involves resources and expertise additional to what is required for pasture management that occurs within national boundaries. Designated institutions with responsibility for transboundary pasture management are required to coordinate the enforcement of transboundary laws and the implementation of transboundary strategies.

5.3 Creation of Clear Mechanisms for Dispute Resolution

The discussion above highlighted the lack of effective community-level dispute resolution mechanisms to address conflicts between pastures users that arise under the Kyrgyz pasture law. Transboundary pasture use increases the potential for conflict between pasture-users and by extension the national governments of Tajikistan and the Kyrgyz Republic. Clear and simple dispute resolution mechanisms within both countries at local and national levels are therefore essential.



This paper has highlighted the challenges for effective pasture management in the Pamir and Pamir-Alai ecosystem, the inadequacies of pasture-related legal instruments, and the absence of institutions for the implementation of these instruments. Transboundary management is further hampered by the lack of international agreements between the two countries, differences between national level laws and institutions and the traditional lifestyles of the ethnic majorities in each country. Meaningful transboundary agreements and the harmonization of

national level laws would be a significant step towards achieving sustainable transboundary pasture management. On their own these legal tools are insufficient. Long-term effective pasture management in the Pamir and Pamir-Alai ecosystem necessitates that the causes of degradation are addressed. Mountain communities would also need to be convinced of economic and other benefits before changes in current resource-use practices could be expected. Institutional and capacity building and adequate funding are also fundamental to ensuring the effectiveness of any legal instruments that are developed and any strategies that are employed.

ACKNOWLEDGEMENTS

Special thanks to Prof. Paul Martin (Australian Centre for Agriculture and Law, University of New England) for many helpful comments on various drafts of this paper and to Maksatbek Anarbaev (National Centre of Mountain Regions Development of the Kyrgyz Republic) for invaluable assistance in all aspects of field work. Thanks also an anonymous reviewer for their recommendations. This study was carried out in the context of the GEF/UNEP/UNU project "Sustainable Land Management in the High Pamir and Pamir-Alai Mountains (PALM)-An integrated and transboundary Initiative in Central Asia" (Project Number: IMIS: GFL-2328-2770-4984). The article reflects only the authors' views. Neither the GEF, UNEP or UNU can be held liable for any use of the information.

¹²⁷ Paul V. Martin et al, Developing a Good Regulatory Practice Model for Environmental Regulations Impacting on Farmers (2007).