



USAID COUNTRY PROFILE

PROPERTY RIGHTS AND RESOURCE GOVERNANCE

KYRGYZSTAN

OVERVIEW

In its first two decades of existence, the Government of Kyrgyzstan (officially known as the Kyrgyz Republic) transformed the core sector of its economy – agriculture – by abolishing state-owned and collectively operated production enterprises in favor of privately owned and operated smallholder, peasant farms and garden plots. This transformation was accompanied by rapid rates of growth in agricultural output, confirming the wisdom of the radical reform path that the country’s leaders, and especially its first President, Askar Akaev, had charted for this small, landlocked and mountainous country. These reforms, which were strongly supported by international donors, defined Kyrgyzstan as a market-oriented economy and enabled it to be reasonably successful in giving all Kyrgyz citizens a stake in the country’s future. While the post-Soviet period was ushered in by a short period of economic collapse, after the more privatized agricultural operations were established, average rates of growth were among the best in Central Asia. Poverty levels, while still significant, began to decline in the late 1990s.

Growth in Kyrgyzstan faltered during the 2008–2009 global economic downturn, and an outbreak of political instability in 2010 raised uncertainties about the future. While water and land use issues had reportedly fueled earlier conflicts between Uzbek and Kyrgyz populations, the cause of the 2010 conflict was in the view of some reporters more complex, reflecting broader concerns related to political power and economic opportunity. However, a new government has made efforts to restore order and is likely to continue to respond to what seems to be a strong consensus that new initiatives are needed to boost agriculture-based economic growth to levels high enough to further reduce poverty. For this to happen, greater attention to issues of both property rights and resource governance will be required.

The agricultural sector remains important as a source of income for the majority of the 5.3 million Kyrgyz people, with agriculture accounting for more than 30% of Gross Domestic Product (GDP). However, regaining an upward-growth trajectory will require: greater investment in production and processing technologies; better management of common resources (especially irrigation water and pastures); and focused efforts to increase the competitiveness of Kyrgyz products and their access to the markets of neighboring countries. Further, critical sources of economic growth are now expected to lie in expanded exploitation of Kyrgyzstan’s non-agricultural natural resources: gold; hydropower; and coal. Such expansion will require the Government to address the question of foreign investors’ access to these national assets.

USAID and other donors have directed significant efforts toward: introducing market mechanisms in rural land-management practices; stimulating effective rural and urban land markets; and promoting sustainable use of agricultural lands. More than 2.7 million real estate units are now registered in both rural and urban areas. Nearly 100,000 mortgages (mostly in urban areas) were registered by 2010. Ongoing projects supported by the international community are continuing to strengthen the overall system of property rights and institutional capacities for management of registration. But further assistance may be necessary to: maintain transparent land-market development while averting interventions that would raise issues of corruption or nepotism; advance sustainable development initiatives in agriculture, energy, and mining; and address issues in border areas that are particularly vulnerable to conflict over resources.

KEY ISSUES AND INTERVENTION CONSTRAINTS

- **Improve women’s land rights, access to natural resources and economic security.** The privatization of property in Kyrgyzstan has not eliminated gender as a determinant of land rights. Kyrgyzstan has a relatively progressive formal

legal framework supporting women's equality, but customary law, which places strong emphasis on the maintenance and support of the household as a unit, continues to support male domination in social, economic and political spheres. Many of the programs relating to land reforms, legal literacy and development of local governance-capacity have recognized the need for particular attention to women's rights. In many cases, however, program achievements have not ultimately released women and their families and communities from the grip of customary law and traditional practices. *USAID and other donors with experience in a variety of land-reform initiatives and natural resource governance programs are particularly well-placed to work with the Government of Kyrgyzstan (GOK) and with local women's non-governmental organizations (NGOs) to help women and girls understand, assert and enforce their rights under the formal law – especially their rights to land and other natural resources – and work with communities, local officials, governance bodies and decision-makers to develop the mechanisms and institutions needed to enforce those rights.*

- **Promote rural livelihoods by improving the livestock sector.** The division of authorities and responsibilities for managing access to grazing lands has been one of the causes of unsustainable over-use of pastureland close to farming areas and under-use in more remote areas. Local government has recently been given the authority to manage pastures, but the system for management, collection of income, and reinvestment has not been developed. *Donors, and perhaps especially USAID, can build upon recent legislation to support pasture-user associations, increase knowledge of and access to sustainable management practices and promote equitable access to pasturelands. In addition, if the sector is to contribute to rural economic growth, markets for animals and animal products (e.g., wool, hides) will require particular attention.*
- **Strengthen water resource governance.** Inefficient and poorly maintained irrigation infrastructure, water quality and conflicts over water use, distribution and access remain problematic. Despite investments in all of these areas, the sustainability of ongoing and future projects is questionable unless institutions and organizations involved in the water sector are better able to consider and plan for the ecological, economic and social dimensions of water use. *Donors could assist Kyrgyzstan in its progress toward Integrated Water Resources Management (IWRM), perhaps by focusing on a group of communities currently experiencing the full weight of existing water constraints, developing IWRM plans and providing support for their implementation.*
- **Develop policy and strengthen laws that promote sustainable forest use while meeting the needs of users.** The forestry sector has not been well attended to in Kyrgyzstan. The legislative framework is an unwieldy series of laws and resolutions that are disconnected from principles of sustainable forest management and participatory forest management approaches. Enforcement of forest laws is weak, and unsustainable and illegal forest use continues despite government decrees issuing moratoriums on logging and suspending allocations of land for community forestry. *Donors can assist the government in developing a forest management plan that can be successfully implemented and help support the desire for community forest management with program design and support for pilot programs.*

FOR MORE RECENT LITERATURE:

<http://usaidlandtenure.net/kyrgyzstan>

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SUMMARY

At the time Kyrgyzstan achieved independence in 1991, the country's incoming President, Askar Akaev, envisioned the country as "the Switzerland of Central Asia." The characterization reflected the country's geography as a small, landlocked mountainous country, but not the steep challenges that Kyrgyzstan would have to meet to establish an independent economy capable of trading successfully in international markets (Schmitt 1997, 1).

Following the dissolution of the Soviet Union, and Kyrgyzstan's Independence, the state-dominated economy of the Soviet era quickly collapsed; national income dropped by 74% between 1991 and 1994, and rates of poverty rose. The incoming government chose a path of radical market-based reforms, starting immediately with the restructuring of state-owned and collectively operated agricultural enterprises into cooperative or corporate farms, and continuing a few years later with efforts to

privatize ownership of all land and to institute other market-based reforms. Although agricultural growth has been positive since the mid-1990s, poverty levels have remained relatively high. Within Central Asia, Kyrgyzstan is second only to Tajikistan in terms of poverty rates.

More than 56% of Kyrgyzstan's land is technically classified as agricultural. However, most of this land is suitable only for livestock production and much of it is located relatively far from areas of year-round rural residence. Much of the land classified as arable (constituting slightly less than 7% of total land area) is irrigated cropland in the fertile Ferghana Valley. Only 0.4% of total land area is in permanent crops. Forestland covers 4.5% of the land and is home to rare and endangered species such as the giant buzzard and the snow leopard. Kyrgyzstan has the world's largest natural-growth walnut forest.

Farm output now consists largely of commodities consumed in Kyrgyzstan and neighboring countries (wheat, barley, dairy, potatoes and fruits and vegetables), although cotton and tobacco are also produced for industrial processing and export. Production of sheep and cattle has recovered from steep declines in the early 1990s, but productivity remains low. Poor nutrition resulting from the overuse of degraded pastures near residences and farms, disease and poor livestock management combine to constrain growth of the livestock sector.

Prior to independence, all land was state property, with use rights granted to occupants. In rural areas, most land was allocated to large, state-owned agricultural enterprises where production was carried out in accordance with principles of central planning. Small household plots were allowed, however, and accounted for a large share of local food production. More than a decade of reforms privatized most of the country's arable land, which is held by 2.7 million peasant farmers and households. The GOK controls pastureland and 25% of arable land (held in the Land Redistribution Fund or LRF), with legislation devolving authority to local government bodies. Kyrgyzstan's

BOX 1. MACRO INDICATORS

	Year	Score
Population, total	2008	5,277,900
Population ages 0–14: 15–64: 65+ (% of total)	2008	29.7: 64.9: 5.4
Population growth (annual %)	2008	0.8
Rural population (% of total population)	2008	63.7
Population density (people per sq. km)	2008	27.5
Literacy rate, adult total (% of people ages 15 and above)	2007	99.3
Land area: Surface area (sq. km)	2008	191,800: 199,900
Arable land (% of land area)	2005	6.7
Agricultural land (% of land area)	2005	56.0
Permanent cropland (% of land area)	2005	0.4
Irrigated land (% of cropland)	2005	73.8
Forest area (% of land area)	2005	4.5
Nationally protected areas (% of total land area)	2006	3.2
Renewable internal freshwater resources per capita (cubic meters)	2007	8,873.3
Annual freshwater withdrawals, agriculture: domestic: industry (% of total freshwater withdrawal)	2007	93.8: 3.2: 3.1
Crop production index (1999–2001 = 100)	2005	100.0
Livestock production index (1999–2001 = 100)	2005	101.4
GDP (current US\$)	2008	4,419,914,812
GDP growth (annual %)	2008	7.7
Agriculture: industry: manufacturing: services, value added (% of GDP)	2007	33.6: 18.9: 11.3: 47.5
Ores and metals exports: imports (% of merchandise exports: imports)	2007	3.6: 2.2
Aid (% of GNI)	2007	7.4

Source: World Bank, 2009

land reform program has reorganized and strengthened the system of land administration, streamlined procedures, and facilitated the registration of more than 2.7 million landholdings. The reforms continue, and include adoption of zoning regulations and revision of land allocation procedures to improve transparency.

Sixty-four percent of the population resides in rural areas. However, urban centers have seen rapid, unplanned growth. Migrants from rural areas seeking urban employment are populating informal settlements on the periphery of the cities. Much of Kyrgyzstan's urban population now lives in slums illegally located on public or private land.

Under the Constitution of the Kyrgyz Republic, women and men are considered equal. However, the application of customary law, which places strong emphasis on the maintenance and support of the household as a unit, leaves women in an unfavorable position in terms of land rights in the event of marriage, divorce or death of a spouse.

Kyrgyzstan's abundant water resources include glaciers, lakes, rivers, and groundwater. Water resources are unevenly distributed across the country, however, and irrigation is necessary for intensive cropping. Water pollution, inefficient and poorly maintained irrigation infrastructure, and international agreements directing shared use and development of water resources challenge the sector. Kyrgyzstan's increased use of water resources to generate power has increased tensions with other Central Asian countries.

Kyrgyzstan's forestry sector has not been well attended to. Despite legislation to improve forest management, there has been little positive impact on forest resources. Illegal logging continues despite a moratorium on timber harvesting and sales, and Kyrgyzstan's forestry resources are deteriorating. Allocations of land for community forest management have been suspended until issues of sustainable forest management and procedures for land allocation can be resolved.

Kyrgyzstan has high mineral potential, a long mining tradition, and well-trained technical personnel. Gold exports from the Kumtor Mine have been an important source of earnings since 1997, and exploration for and exploitation of further gold deposits, oil and gas reserves and other minerals has been increasing. However, poor environmental management of mines during the Soviet era has left Kyrgyzstan with heavy contamination of former mining sites and their surrounding communities. Some of the waste is radioactive.

I. LAND

LAND USE

Kyrgyzstan is a landlocked, mountainous Central Asian country covering approximately 192,000 square kilometers. The country has an average altitude of 2750 meters; about 40% of total land is over 3000 meters, three-quarters of which is under permanent snow and ice. Parallel mountain ranges run west to east and divide the country into three main zones. The northern zone includes the Talas and Chu river valleys, the southern edge of the great Kazakh steppe, and the upland tectonic basin. The central zone includes mountain ranges, high river valleys, upland steppe, and alpine and sub-alpine pastures and meadows. The southern zone includes the fertile Ferghana Valley and agricultural lowlands (FAO 1997).

Of Kyrgyzstan's 5.3 million people (2008), 36% reside in urban areas and 64% in rural areas. The population is ethnically diverse, composed of Kyrgyz (65%), Uzbek (14%), Russian (13%), Dungun (1%), Tajik (0.9%) and other ethnic groups (7%). The country's 2008 GDP was US \$4.4 billion, comprising 34% agriculture, 19% industry, and 48% services. More than half of the population works in agriculture. Kyrgyzstan is one of the poorest countries in the world, ranking 109th of 168 countries on the 2010 Human Development Index. Approximately 40% of the population lives below the poverty line, and 75% of the country's poor people live in rural areas, often in remote, mountainous regions with limited infrastructure and market access (World Bank 2009a; USDOS 2009; UNDP 2010).

Fifty-six percent of total land in Kyrgyzstan (10.7 million hectares) is classified as agricultural land. Forest land comprises 4.5% of the country's total land area, and deforestation is occurring at a rate of 0.3% a year. About eight million hectares (75%) of agricultural land is pasture, and livestock has accounted for 44% of the country's agricultural sector growth in the 1992–2004 period. However, the growth has been attributed to high prices;

productivity levels are quite low, a consequence of poor nutrition, disease and parasites and poor animal management. Traditionally, Kyrgyz herders used a transhumant system, grazing mixed herds at higher altitudes in the summer, middle altitudes in the spring and fall, and on low-lying pastures in the winter. In an effort to increase homogeneity in stocks (primarily sheep) the Soviets introduced a centrally controlled intensive livestock-production system that included a winter feeding program using imported feed. At independence, 80% of Kyrgyzstan's estimated eight million sheep were owned by state and collective farms. As the large agricultural enterprises were liquidated, the sheep and other livestock were distributed to households, but the loss of a guaranteed market for Kyrgyz wool, combined with low wool prices and high meat prices, resulted in a rapid reduction in the country's sheep (loss of 75–80%) and cattle (loss of 30%) herds (World Bank 2009a; World Bank 2007a; UNDP 2009).

Individual households have been rebuilding Kyrgyzstan's livestock numbers: the 2003 Livestock Census reported about two million sheep, three million cows, and one million horses – totaling 6.2 million sheep equivalents, 96% of which are owned by households and peasant farms. The individualization of livestock holdings, which resulted in large numbers of households with small numbers of animals (averaging 15 head/household), coupled with a distrust of professional herd management and fragmented administrative control over pastures, has concentrated grazing to local pastures year-round. As a result, remote pastures have become underutilized. An estimated 33% of the pasture near farms and settlements is substantially degraded, 19% suffers from erosion and inedible weeds have overtaken 33%. Experts believe that current animal numbers are below the pastures' actual carrying capacity, assuming the land is used efficiently and sustainably. If constraints to productivity – especially the use and management of pasture – are addressed, the subsector's growth potential is high (50–70%) (World Bank 2007a; Fitzherbert 2000; Akramov and Omuraliev 2009; USAID 2007).

Roughly 13% (1.4 million hectares) of agricultural land is classified as arable land. An estimated 0.4% of total land (77,000 hectares) is in permanent crops. More than 70% of the arable area depends on irrigation for its productivity. The country's main crops are wheat, barley, maize, potatoes, melons, oilseed varieties, vegetables and fodder. Sugar beets are cultivated as a cash crop in the Chui and Talas provinces (*oblasts*). Cotton and tobacco are grown as cash crops in the southern Ferghana Valley. Crops yields are generally low due to: lack of quality seeds and fertilizer; inadequate and poorly maintained machinery, equipment and processing plants; declining soil productivity; a decline in public spending for agriculture; and limited availability of agricultural services (World Bank 2009a; Fitzherbert 2000; Akramov and Omuraliev 2009; Light 2007).

LAND DISTRIBUTION

Prior to independence, all land in Kyrgyzstan was held in state ownership; individuals and groups of individuals had use rights. In the late 1980's, between 500 to 700 state farms (*souhozes*) and collective farms (*kolkhozes*) held 96–98% of the country's 1.4 million hectares of arable land. Hundreds of thousands of individual households had small household plots that collectively accounted for the 2–4% balance of arable land. Between 1991 and 2009, the GOK implemented a three-phased land reform process:

1. Beginning in 1991, Phase I of the land reform eliminated state subsidies for agricultural inputs and deregulated agricultural markets and prices. The government also restructured the state and collective farms into peasant farm associations and cooperatives, but the effort had little impact: control continued to be exerted by large agricultural enterprises, agricultural productivity dropped, and poverty increased.
2. In Phase II (1995–2003), the GOK privatized the state and collective farms. In 1994–1995, the GOK liquidated 262 state farms and 190 collective farms and distributed 75% of agricultural land (with the exception of pastureland) to individuals based on the size of the state farm and the farmer's employment, experience, and proximity to the farm. Twenty-five percent of the land was transferred to the LRF as a reserve. Individuals received 99-year transferrable use rights for land shares ranging from 0.1 to 1 hectare. In 1998, a constitutional amendment allowed for private land ownership, and all land use certificates were transformed into landownership certificates. A 1999 provision of the Land Code (subsequently lifted in 2001) saddled the ownership rights with

a 5-year moratorium on land sales in an effort to prevent ill-advised or premature sales by peasant households and land speculation. During this period, 78% of agricultural land was transferred to private ownership.

3. The third phase of the land reforms began in 2004 and focuses on providing support for agriculture through: (1) development of peasant farms and agribusinesses; (2) development of farmer associations and cooperatives; (3) encouragement of agricultural sciences and extension services; (4) development of marketing, processing, and export systems for agricultural products; (5) improvement of water and pasture management; and (6) social development of rural areas. Unlike the first two phases of land reform, the GOK has had difficulty implementing the Phase III initiatives.

(Akramov and Omuraliev 2009; Lerman and Sedik 2009).

Kyrgyzstan's land reforms succeeded in privatizing 75–80% of the country's arable land. In 1988, about 500 state and collective farms, with an average size of 2500–3000 hectares, controlled 1.3 million hectares of arable land. Hundreds of thousands of households controlled the remaining 60,000 hectares. As of 2008, roughly 2.7 million households (80% of the rural population) held 940,000 hectares of cultivated arable land in 900,000 household plots (averaging 0.13 hectares) and about 300,000 peasant farms (averaging three hectares). Women own about 14% of the peasant farms. Various types of agricultural enterprises hold an average of 220 hectares and control between 350,000 and 400,000 hectares of cultivated arable land. However, land distribution is still concentrated: the largest 10% of farms in Kyrgyzstan control about 80% of arable land (Akramov and Omuraliev 2009; Lerman and Sedik 2009; UNIFEM n.d.; ILC 2004).

The 20–25% of arable land that was not privatized is held by the GOK's LRF. The LRF was intended as a reserve to provide land to those who for a variety of reasons did not receive land rights during the initial round of reforms. The LRF also leases land to farmers who need more land and are willing to accept a short-term lease. However, its system of allocating leases is reportedly characterized in some areas by a lack of transparency, a lack of information that would help set lease prices, and corruption. The LRF is managed by the *aiyl okmotu*, self-governing rural communities comprising up to 20 small settlements. Some observers report that in some areas the *aiyl okmotu* councils have distributed much of the LRF land to elites. Pasturelands have not been privatized and are presently managed by three levels of government, as follows: local government (*aiyl okmotu*) manages close-in pasturelands; district government (*raions*) manages intensively used pastures; and provincial government (*oblast*) manages distant pastures. The 2009 Law on Pastures, which awaits implementing legislation, and 2009 amendments to the 1999 Land Code consolidate control of pastureland with the local governments (*aiyl okmotu*) (ARD 2005; GRM 2008; Lerman and Sedik 2009; Chemonics 2008; ILC 2004; ARD and Checchi 2005; GOK Land Code 1999b).

Kyrgyzstan's urban land and commercial buildings were state-owned during the Soviet era. At Independence, urban residents were presumed to have rights to their residential property but the legal framework did not support the rights, especially to multi-unit residential structures. Parcel boundaries were not recorded, records were often poorly maintained, and land administration services were inadequate and often corrupt, creating a high level of tenure insecurity. With the support of numerous donors, by 2008 the GOK's land reform efforts had successfully overhauled and strengthened the land administration system and privatized and registered about 1.3 million of the 1.4 million urban properties (Cook 2008; Chemonics 2008; World Bank 2010c).

Kyrgyzstan's urban areas have been experiencing steady population growth. With the support of donors, city planners have been filling gaps in the governance framework by passing zoning laws, creating land use plans, and modernizing procedures. The efforts are helping to support investment in urban areas, but housing shortages are common, and much of Kyrgyzstan's urban population lives in informal settlements. Many of the settlements were illegally constructed on land held by the Land Redistribution Fund and private parties, including agricultural land under cultivation. The squatter settlements are unplanned and commonly lack basic services such as sanitation and improved water sources. The number of squatters is disputed: for example, NGOs assert that at least 300,000 people live in settlements outside Bishkek, while the government estimate is 35,000 to 50,000 people. All agree, however, on the need to regularize residents' land rights, and the GOK's 2009–2013 Land and Real Estate Registration Project includes plans for systematic registration of plots in informal settlements (*novostroiki*) in

2011 (Cook 2008; Cox 2010; Chemonics 2008; Undeland et al. 2010; Mayevka 2010; UNECE 2008; World Bank 2010c; IWPR 2010).

LEGAL FRAMEWORK

The Constitution of the Kyrgyz Republic (1993, as amended in 1998, 2003, 2007, and 2010) recognizes private property rights and protects rights to private property. The principal law regulating land ownership is the Land Code (1999), which has been amended annually since 2000 and most recently in 2009. The Code governs: agricultural land; settlement areas (towns, urban areas and rural settlements); industrial land; forests; and specially protected natural territories and reserve land. A 1999 amendment placed a 5-year moratorium on the sale of privately owned land. The moratorium was lifted in 2001 (GOK Constitution 1993; Chemonics 2005; GOK Land Code 1999b).

Other formal laws and directives governing land rights in Kyrgyzstan include the following:

- Regulation on Process of Allocating Land Shares to Citizens (1994), establishing the process for redistributing collective farm land to citizens via land shares;
- Regulation on Reorganization of Agricultural Enterprises (1994), setting out the process for reorganizing collective farms;
- Law on Peasant Farms (1997), establishing procedures for registering and operating a peasant farm, and procedures for combining land shares to form an association and other types of farming organizations (1997);
- Law on State Registration of Rights to Immovable Property and Transactions, creating a single land registration system and requires registration of all transactions (1998);
- Law on Administration of Agricultural Land (2001), governing procedures for the administration of land transferred through sale, purchase, pledge, inheritance and gifts;
- Regulation on Sale and Purchase of Agricultural Land Parcels (2001), setting out the process for the purchase and sale of agricultural land and lifting the 5-year moratorium on the sale of land;
- Law on Local Self Government (2002), providing procedures for leasing out land of the LRF and certain pasture lands;
- Regulation on Lease and Use of Pasture Land (2002), establishing the procedure for lease and use of pasture land (repealed by the 2009 Law on Pastures);
- Model Regulation on LRF (2002), setting out the procedures and requirements for leasing and use of LRF land;
- Model Regulation on Allocation of Ownership and Lease Rights to Urban Land, establishing the procedures to allocate urban land for lease or into private ownership (2004); and the
- Law on Pastures (2009), transferring responsibility for pastures management of all near, intensive and distant pastures from the provincial government and regional government to the local government and local pasture users through the establishment of pasture user associations at the *aiyl okmotu* level. Implementation of the law is awaiting development of complementary subordinate legislation regulating the legal relationships of the parties.

(Chemonics 2005; HTSPE 2008; Scalise 2009; GOK Pastures Law 2009a; Kalikova and Associates 2007).

Customary institutions and practices reemerged after Independence, and customary law influences the application and implementation of legal rules regarding land rights, the resolution of local disputes and the extent of villagers' observance of the written law. For example, formal law recognizes common property (individuals owning land in

common) but does not specifically recognize land held by families or households, which in rural areas is the prevailing understanding of how property is held. When land disputes are resolved by traditional courts (*aksakals*), family property predominates over the notion of individual property rights. Thus, where conflicts exist between customary law and written law, customary law generally prevails in the villages because written law often fails to reflect the reality of the villagers' lives (Giovarelli and Akmatova 2002; Scalise 2009).

TENURE TYPES

Land in Kyrgyzstan is classified as private land or state land. Private land includes land owned or leased by individuals or legally registered to private enterprises or associations. Group or communal rights to private land are recognized (Chemonics 2008; Lerman and Sedik 2009).

Kyrgyzstan recognizes the following land tenure types:

Ownership. Under formal law, landowners in Kyrgyzstan have the right to exclusive possession of land and can freely transfer the land by sale, lease, mortgage or gift. By 2008, ownership rights to more than 2.7 million landholdings were registered. Amendments to the Land Code in 2009 prohibit private ownership of pastureland (Chemonics 2008; Cook 2008; GOK Land Code 1999b).

BOX 2. LAND TENURE INDICATORS		Score
<u>Millennium Challenge Corporation Scorebook, 2009</u>		
– Land Rights and Access (Range 0–1; 1=best)		...
<u>International Property Rights Index, 2009</u>		
– Physical Property Rights Score (Range: 0–10; 0=worst)		5.6
<u>World Economic Forum's Global Competitiveness Index, 2008-2009</u>		
– Property Rights (Range: 1–7; 1=poorly defined/not protected by law)		4
<u>World Economic Forum's Global Competitiveness Index</u>		
– Ease of Access to Loans (Range: 1–7; 1=impossible)		3.5
<u>International Fund for Agricultural Development, Rural Poverty Report, 2001</u>		
– Gini Concentration of Holdings, 1981-1990 (Range: 0–1; 0=equal distribution)		...
<u>International Fund for Agricultural Development, Rural Sector Performance Assessment, 2007</u>		
– Access to Land, 2007 (Range: 1-6; 1=unsatisfactory access)		...
<u>Food and Agricultural Organization: Holdings by Tenure of Holdings</u>		
– Total Number of all Agricultural Holdings, Year		...
– Total Area (hectares) of all Agricultural Holdings, Year		...
– Total Number of Holdings Owned by Holder; Year		...
– Total Area (hectares) of Holdings Owned by Holder; Year		...
– Total Number of Holdings Rented from Another; Year		...
– Total Area (hectares) of Holdings Rented from Another; Year		...
<u>World Bank Group, Doing Business Survey, 2009</u>		
– Registering Property-Overall World Ranking (Range: 1–181; 1=Best)		70
<u>World Bank Group, World Development Indicators, 2009</u>		
– Registering Property-Number of Procedures		7
– Registering Property-Days Required		8
<u>World Bank Group, World Development Indicators, 1998</u>		
– Percentage of Population with Secure Tenure		...
<u>Heritage Foundation and Wall Street Journal, 2009</u>		
– Index of Economic Freedom-Property Rights (Range 0-100; 0=no private property)		25
<u>Economic Freedom of the World Index, 2008 (2006 data)</u>		
– Legal Structure and Security of Property Rights (Range 0-10;0=lowest degree of economic freedom)		6.21
– Protection of Property Rights (Range 0-10; 0=lowest degree of protection)		4.97
– Regulatory Restrictions of Sale of Real Property (Range 0-10;0=highest amount of restrictions)		8.72

Leasehold. Under formal law, private and state land can be leased, with the terms subject to negotiation by the parties. Leases for commercial land and industrial development generally range from five to 50 years, depending on the extent of land and investment. Most state leases of pastureland and land held by the LRF tend to be for periods of five years (pasture) or less (arable land). Leases are usually arranged and negotiated through the *aiyl okmotu* council, which sets the lease rate and may share proceeds with *raion* or *oblast* authorities. Informal leases of agricultural land are common, with terms subject to negotiation. Between 11% and 20% of rural landowners lease land (ILC 2004; Lerman and Sedik 2009; Fisher et al. 2004).

Informal use and occupancy. In the period following the dissolution of the Soviet Union, land use and occupancy have in some areas occurred informally and outside the requirements of formal law. For example, although the formal law required permission and payment for use of pastureland, most herders used pastureland informally, without obtaining permission or making payment. Similarly, many migrants to urban areas have squatted in informal settlements without paying fees for

land use or services. Many of the settlements have been illegally constructed on land held by the Land Redistribution Fund or private parties (World Bank 2007a; Chemonics 2005; Chemonics 2008; IWPR 2010).

SECURING LAND RIGHTS

Citizens can obtain land in Kyrgyzstan through purchase, lease, inheritance or gift. Foreigners are not allowed to purchase land in Kyrgyzstan but can obtain long-term lease rights to some classifications of land. Under formal law, all landownership rights and leases of three years or longer must be registered. The state has engaged in large-scale systematic registration of parcels in Kyrgyzstan and guarantees registered rights through the consolidated and unified State Registration Service. Systematic registration is free of charge to the individual landowner. The land administration system also supports sporadic (demand-driven) land registration. Sporadic registration requires payment of 2.3% of the property value. The process requires four steps but takes only about five days, compared to a regional average of 38 days (World Bank 2010a; ILC 2004; Undeland 2007).

As part of its systematic registration process, the GOK adjudicated and regularized rights to roughly 650,000 holdings with disputed rights or ambiguous documentation. The sporadic registration process does not include adjudication of disputed rights to land; disputes must be resolved by agreement of the parties or are otherwise referred to the courts (Cook 2008; Chemonics 2008; ILC 2004).

An estimated 17% of Kyrgyzstan's urban labor force who lost their jobs due to factory closures after the dissolution of the Soviet Union moved to rural areas and took up farming full time. In the initial years of land reform, many of these new rural residents received land allocations. As the economy gained strength, private ownership was recognized and rural communities sought control over landholdings; agricultural land purchases were restricted to those who had lived in an *aiyl okmotu* for at least two years. The restriction limited the ability of urban residents and others who were unable to satisfy residence requirements to buy land (Light 2007; ARD 2005; GOK 2001).

Many landholders access land through formal and informal leasing. In the formal sector, the GOK leases pastureland for 5-year terms, and the *aiyl okmotu* council leases land held by the LRF. The LRF was intended to provide land access to agricultural enterprises, individuals who were excluded from initial land reforms and farmers seeking additional land. The *aiyl okmotu* council has been accused by local communities as lacking transparency, showing favoritism and bias and operating under conflicting policy priorities. With donor support, the GOK adopted model procedures designed to address the weaknesses in LRF allocations, the extent to which the reforms have been implemented, and their impact, is not yet known (USAID 2009; Lerman and Sedik 2009; ARD and Checchi 2005).

Informal leases are common in the rural sector. An estimated 20% of peasant farms have leased land in their holdings, and 11% of households lease additional land for cultivation and livestock-rearing. Informal leasing usually occurs between mutually trusted members of communities who, in lieu of executing formal agreements, rely on community self-policing as a guarantee of property rights and contractual obligations. If a transaction involves a party who is new to the community, a written agreement is more common (USAID 2009; Lerman and Sedik 2009; ARD and Checchi 2005).

In the years following Independence, procedures for urban land purchases and leases were incompletely conceived, leaving gaps that created ambiguity and allowed for corruption and rent-seeking by officials. Rules for auctions and land leases for commercial property were often not applied uniformly and procedures not published; permissible land uses and development were subject to negotiation rather than strategic urban planning. As part of its land reform program, the GOK is undertaking initiatives designed to revise and modernize the mechanisms and institutions for urban land access and regularization of rights to plots in informal settlements (World Bank 2010d; Chemonics 2008; Chemonics 2005).

INTRA-HOUSEHOLD RIGHTS TO LAND AND GENDER DIFFERENCES

Kyrgyzstan's women lost a significant amount of economic, social and political power in the years following the dissolution of the Soviet Union, and the country's women and girls have disproportionately suffered many of the effects of poverty. Prior to Independence, an estimated three-quarters of women in Kyrgyzstan were in the formal labor force, including many who worked on the former state and collective farms. In the transition to a market-led economy, at least half the employed women lost their jobs; public services such as childcare and nursing

disappeared; and women and girls shouldered much of the burden of providing the social and family services that had been part of the Soviet system. Girls' rates of school attendance fell. The rates of women in public office also fell, and discriminatory traditions and customs – including bride theft and polygamy – reemerged in many areas (ADB 2005).

Advocates for women's rights reacted strongly to women's disempowerment and the adverse impact on well-being of women and their families, and these advocates were instrumental in helping to pass a number of formal laws supporting women's rights. The Constitution mandates equality between women and men and prohibits discrimination on the basis of sex. The law entitled On Basics of State Guarantees for Ensuring Gender Equity (2003) grants equal rights and opportunities in social, political, economic and cultural spheres without regard for sex and guarantees gender equality in governance structures. The 2003 Family Code provides that both spouses are responsible for household labor and recognizes a marital couple's ability to contract regarding marital property rights (ADB 2005; GOK Constitution 1993).

In practice, however, Kyrgyzstan's formal law has not in most cases been successful in protecting and improving women's rights, including rights to access and own land. For example, under the Civil Code and Land Code, rights to house plots are held by the owners of the residence. If the house is jointly owned by both spouses, the plot is similarly owned by both spouses. However, despite gender-neutral language in the Land Code, most household plots are registered solely in the name of men, because custom and tradition assume they are the heads of household and usually control the households' productive assets, including land (GOK Constitution 1993; UNIFEM n.d; GRM 2008; ADB 2005).

Customary law and traditional practice have also prevented many women from receiving the benefits of land distribution, despite support for their rights under formal law. Under the land distribution procedures applied during the privatization of state and collective farmland, women and girls received approximately 51% of land shares granted, and their names appear on the land titles. Legislation stipulates that family shares cannot be physically divided, but family members have the right to the monetary value of their portion of the family's land. When women marry in Kyrgyzstan, they leave their birth family and the family land to live with their husbands. However, although the formal law gives them the right to sell their land share to their birth family and receive compensation, women seldom do so because such a demand would be considered shameful. In one survey, while the majority of women had received their official share of land during de-collectivization, 25% of respondents had given their land away without compensation – often to their parents when the respondents married (Prosterman et al. 2009; GRM 2008; Giovarelli 2004).

Similarly, Kyrgyzstan's formal succession law does not discriminate on the basis of sex; both daughters and sons have equal rights to inherit. However, under customary law when male children marry they usually receive a house and household plot from their parents; female children typically receive a dowry. The dowry, which may include household goods, clothing and cash, is the woman's personal property but is usually not equivalent to the value of the house and houseplot. Upon widowhood (without children) or divorce, women return to their parents' home, taking only their dowry with them. The community disapproves of women's claims to other property because customary law places strong emphasis on the maintenance and support of the household as a unit, even where the principle undermines individual rights. Divorced women have an especially difficult time asserting their right to a portion of the household land or its value. While formal law favors women's rights, only a small percentage of women are likely to have the means or confidence to pursue a claim in court; women have no guarantee that the court will apply the principles of equality contained in the formal law and may instead find themselves bound by an unfavorable judgment based on customary law (GRM 2008; World Bank 2010b; Giovarelli 2004).

The GOK has undertaken several efforts to address the inequality of women, including the adoption of a series of national action plans beginning in 1996. However, the state has been less successful in ensuring that the principles of nondiscrimination and support for women's rights have been incorporated into national

10 KYRGYZSTAN—PROPERTY RIGHTS AND RESOU

BOX 3. LAND AND GENDER INDICATORS		Score
<u>OECD: Measuring Gender In(Equality)—Ownership Rights, 2006</u>		
– Women's Access to Land (to acquire and own land) (Range: 0–1; 0=no discrimination)	...	
– Women's Access to Property other than Land (Range: 0–1; 0=no discrimination)	...	
– Women's Access to Bank Loans (Range: 0–1; 0=no discrimination)	...	
<u>FAO: Holders of Land Classified by Sex, 1993</u>		
– Percentage of Female Holders of Agricultural Land	...	

programs. Agricultural and food security programs have often failed to recognize women's role as primary food producers and providers for their families. Even with state support and donor engagement, many programs nonetheless struggle to support women's assertion of their rights in the face of customary law and tradition (ADB 2005; Giovarelli 2004).

LAND ADMINISTRATION AND INSTITUTIONS

At the time of Independence in 1991, Kyrgyzstan had several institutions that played a role in land reforms and land administration. These included the Republican Center for Land and Agrarian Reform (RCLAR), the State Property Fund, the Ministry of Agriculture, the State Agency for Land Tenure and Land Resources (*Goszemagentstvo*), and the State Institute for Land Resources and Land Engineering (*Kyrgyzgiprozem*). Each of these institutions also had *raion*-level subdivisions. Inter-agency cooperation was often poor, resulting in delays in issuance of land use documents, incomplete land documents, and procedural uncertainties. Corruption was common. Inefficiency and lack of transparency constrained land-administration processes (including the execution of formal land transactions) and inhibited land tenure security (Undeland 2007; ARD 2005; Cook 2008; Chemonics 2008).

Responding to these challenges, in 1999 the GOK created a single land-administration agency, GosRegister, which integrated the various functions of the different agencies. In 2009, GosRegister became part of a consolidated State Registration Service. Operating through a central office in Bishkek and 50 regional offices, the State Registration Service is the hub for land-administration services, including cadastral surveying and mapping, land valuation and land registration. The agency's development has been supported by several donors, including the Swedish International Development Cooperation Agency (SIDA), the World Bank, and USAID. Since 2000, data systems have been digitized, procedures have been streamlined and technical expertise expanded. Close to three million rural and urban landholdings have been registered. As of August 2010, despite government reorganization and political disruption, public confidence in the registration service had grown to 70% (Lauri 2005; Undeland 2007; ARD 2005; World Bank 2010c; Cook 2008).

In 2009, the GOK created the Ministry of Natural Resources, which has overarching responsibility for setting policy governing the rational and effective use of land, maintaining the land registry, establishing the method for the taxation of land, and resolving disputes with neighboring countries regarding land use. Other institutions involved in the control and use of agricultural land include: the President's Office; the Prime Minister's Office, which has a dedicated section for agriculture; the National Parliament Committee for Land Use; the National Parliament Committee for Agricultural Industries; and the Ministry of Agriculture (GRM 2008; GOK Decree N. 734 2009b).

LAND MARKETS AND INVESTMENTS

The development of Kyrgyzstan's formal urban land market has been constrained by: an inadequate legal framework; ambiguous procedures; poor land records; and lack of capacity and transparency in land administration services. Disputes in land ownership, required fees for owner-initiated land registration, and high turnover of local government staff with interest and expertise in urban land management have also been barriers to the development of the formal land market (Kaganova et al. 2008; UNECE 2008).

With donor support, the GOK and a dozen municipalities across the country have taken concrete steps to address some of the barriers, including adopting zoning regulations and land valuation and appraisal standards. Coupled with the integration and strengthening of the land administration system, the reforms have supported an increase in the number of formal urban land transactions. In the cities of Osh, Jalalabat, Karakol, Cholponata, and Karabalta, where much of the land is privately owned, the real estate market is quite active. In 2006, 5.3% of all registered residential properties and 3.3% of non-agricultural land sites were sold. In addition, the annual number of mortgages doubled between 2002 and 2007 (from 22,387 to 43,001) and rose to about 100,000 in 2010; the value of those mortgages increased from US \$85 million in 2002 to more than US \$1 billion in 2007. The number of transactions increased through 2009, when a 1.4% decrease in sales was recorded. Observers believe the decrease to be related to the period of political unrest and economic recession; recovery is expected (Chemonics 2005; ARD 2005; World Bank 2010c; UNECE 2008; GRM 2008; Kaganova et al. 2008).

The formal market in rural land has been slower to develop. The GOK granted private ownership rights to agricultural land in 1998, imposing a 5-year moratorium on land sales to allow new landowners the opportunity to benefit from the ownership and protect against land speculation and improvident sales. Under pressure from international donors to facilitate transferability of rural land, the state lifted the moratorium in 2001. Some of the legislative constraints on the market – including restrictions on land ownership and land valuation – have recently been lifted. Amendments to the Land Code adopt the market value of land and permit financial institutions to retain land obtained through foreclosure for periods up to one year, a liberalization that encourages banks to extend loans secured by land. Some restrictions, such as the permissible uses of agricultural land, remain (ARD 2005; GRM 2008; ILC 2004; GOK 2001; GOK Land Code 1999b).

Kyrgyzstan's formal and informal land-lease market in private and state land is active. Between 11% and 20% of rural landholders lease land, mostly on the informal market. The *aiyl okmotu* council is responsible for leasing land held by the LRF. About 50% of peasant farms and agricultural enterprises regularly lease LRF land, and procedures have been put in place to remove discretion and limit favoritism and bias in the allocation process (Akramov and Omuraliev 2009; GRM 2008; ARD and Checchi 2005).

COMPULSORY ACQUISITION OF PRIVATE PROPERTY RIGHTS BY GOVERNMENT

Under the Constitution of the Kyrgyz Republic, property is inviolable. No one can be deprived of property arbitrarily, and all seizures of property must be undertaken in accordance with the law. Under the Land Code (1999), the state can expropriate land if: (1) land is not being used for its targeted purpose; (2) land is needed for state or public purposes; (3) land has not been used for agricultural purposes for three years; (4) land has not been used for agricultural purposes for a period of time stipulated in the original provision; (5) land taxes have not been paid; (6) social taxes have not been paid; or (7) the state annuls a license for mining. A court decision is required for expropriation on the first four grounds. Compensation is paid for lands expropriated on the first, third, and fourth grounds (GOK Land Code 1999b; GOK Constitution 1993).

Public purpose is not defined in the law, and the Land Code's provisions on targeted purposes for expropriation are vague. In addition, the very limited regulatory procedures governing land takings limit transparency and procedural protections. As of 2010, while incidents of land grabs and squatting on public and private land continued, there were no reported cases of significant expropriations of land by the state (ARD 2005; UNPAN 2000; IWPR 2010; Amnesty International 2010; USDOS 2010).

LAND DISPUTES AND CONFLICTS

Land disputes and conflicts in Kyrgyzstan take place among individuals within Kyrgyzstan, between individuals and the state, between state actors and across international borders. Disputes occur over: boundaries of distributed plots; perceived favoritism and corruption in land allocations; and the use of LRF land. There are also reported disputes between users of different categories of non-privatized land, which the public may seek permission to use, such as forest areas, distant pasturelands and protected areas. Administrative bodies, such as the *raion* and *aiyl okmotu* councils, may themselves dispute administrative boundaries and jurisdiction (ARD 2005; GRM 2008).

Land disputes in Kyrgyzstan also take place on a larger scale and are closely related to ethnic conflict. Trans-border disputes in the Fergana valley between Kyrgyzstan, Uzbekistan and Tajikistan are ongoing, especially in areas where the border is not demarcated or where there is disagreement over the boundary lines. The border dispute between Uzbekistan and Kyrgyzstan centers on Uzbekistan's unilateral demarcation of the border and its alleged seizure of large tracts of Kyrgyz agricultural land. The GOK asserts that it loaned the disputed land to Uzbekistan for temporary use during the Soviet period but the land was never returned. In June 2004 Uzbekistan's attempt to build a border fence in the Tuya-Moyun area in southern Osh cut into southern Kyrgyz territory by 60 meters. Self-help actions, such as the removal of a 2-meter section of the fence on the road between the southern Kyrgyz regional capital of Osh and the small provincial town of Aravon in January 2000, expose the local populations' frustration with the disputed border. These transborder disputes have impacted trade between the two countries (with poor rural communities most affected), hindered transport links, and heightened communal tensions between the Uzbek minority in southern Kyrgyzstan and the Kyrgyz majority. In 1990, competition for scarce land led to violent conflict between Uzbek and Kyrgyz groups in the Fergana Valley. At least 170 people were killed and more than 5,000 crimes were committed as a result of this violence. Following the period of

political upheaval in 2010, land access became a pressure point between landless Kyrgyz migrants and communities of Uzbeks and Tajiks, and the interim government was forced to send troops to prevent the escalation of violence (IRIN 2004; Anderson and Pomfret 2004; Tishkov 1995; Khamidov 2008; Osmonalieva 2010).

Kyrgyzstan has a variety of informal and formal tribunals that hear land and resolve disputes. *Aksakal* courts regularly hear cases related to land rights, adjudicating the division of property between spouses, disputes between landowners and use of farmlands and pastures. The law permits these courts to apply customary norms that do not contradict formal laws. In rural areas these courts often act without supervision. Local village leaders and women's councils also act as informal tribunals. Women's councils are established under the organs of local self-governance and can sometimes be called to assist with the resolution of conflicts, especially disputes between women and men (GRM 2008).

A 1995 decree, On Approval of Temporary Regulations on Courts of Elders in the Kyrgyz Republic, gives elders authority to resolve disputes. However, elders usually lack the technical expertise required to resolve complex disputes, and in at least one study community members stated that they would be more likely to seek the assistance of the *aiyl okmotu* council. In some cases the *aiyl okmotu* council has received specific training in dispute resolution and has expertise in land legislation; in others, experience may be limited. In addition, while the *aiyl okmotu* council has authority to hear disputes in which a complainant alleges wrongdoing by the *aiyl okmotu* council itself, it is unknown to what extent the forum is fair and impartial (GRM 2008; ARD 2005).

Kyrgyzstan's formal court system includes a Supreme Court and courts at the *oblast*, district and municipal levels. The courts have jurisdiction to hear land disputes and often consider cases related to property division between spouses, including land-share allocation. However, many members of the public are reluctant to use the court system, which has suffered from a lack of uniform procedures and administrative standards. Access to legal tools and legal training has been limited, and judges have historically been poorly paid, which increases the potential for corruption. While the independence of the judiciary is a constitutional mandate, the executive branch has been accused of exerting inappropriate control through judicial appointments and other mechanisms. With the support of the European Commission (EC), USAID and other donors, the court systems are being modernized. In the meantime, some parties elect to arbitrate their disputes in an effort to limit exposure to the potential pitfalls of litigation (GRM 2008; ARD 2005; ARD and Checchi 2005).

KEY LAND ISSUES AND GOVERNMENT INTERVENTIONS

Kyrgyzstan's land reforms succeeded in de-collectivizing the agricultural sector, breaking up state farms and collectives, and giving landownership rights to an estimated 2.7 million rural residents. The reforms also modernized the land-registration system and instituted a systematic registration of urban land rights. The GOK was active in its support of the land reforms for at least thirteen years (1991–2004). The third phase of reforms, focused on improving agricultural productivity and strengthening local institutions, has proved more troublesome (Lerman and Sedik 2009; Akramov and Omuraliev 2009).

A 2004 Presidential Decree set out a list of priorities that included: (1) development of cooperatives; (2) development of peasant farms and agribusinesses; (3) focus on credit cooperatives, mortgage financing and agricultural insurance; (4) determination of optimal plot sizes and registration; (5) promotion of agricultural sciences and consulting and marketing services; (6) development of marketing, processing and export systems for agricultural products; (7) improvement of water and pasture management; and (8) social development of rural areas. The GOK has made progress on some of its priorities, particularly in the areas of water resources management and a creation of a new legal framework governing pastureland. The GOK has also initiated several programs to provide agricultural support services for farmers, including: the Rural Advisory Service (RADS), which provides advisory (extension) services to peasant farmers; the Kyrgyzstan Agricultural Market Information Services (KAMIS), which supports farmers by providing market and price information; and Legal Assistance to Rural Citizens (LARC), a donor-supported institution that provides legal services to rural citizens. However, while the institutions have offices in most rural districts, observers note that few farmers (7–20%) appear to be aware of these institutions, and only a fraction of them (2–16%) actually use their services. Effective delivery of the inputs, services and public support needed to raise agricultural productivity has yet to be realized (Akramov and Omuraliev 2009; Lerman and Sedik 2009).

DONOR INTERVENTIONS

Over the past 15 years, USAID has dedicated a significant portion of its technical assistance to land reform via legislative development, legal aid and public education. From 1999 to 2005, USAID funded the Kyrgyzstan Land Reform Project, which had three major components (rural land reform, urban land reform, and water law reform), with a focus on educating Kyrgyz citizens about their rights to obtain land and empowering them to participate in burgeoning agricultural and urban market opportunities. Achievements include the training of 45 land-rights counselors (*demilgelchi*) who provided land-rights information and services in rural areas. The project conducted over 1000 workshops reaching 60,000 citizens (30% women); published thousands of land reform bulletins; created a website; and sponsored a radio program that broadcast land reform information. Out of 45 *demilgechi*, 14 were women, some of whom struggled with and resolved their own land-rights issues through training they received from the project. In the urban sector, the project helped local authorities draft zoning laws and plans, market appraisal rules and transparent land-sale procedures. The project helped 12 cities adopt zoning laws and helped municipalities sell 926 parcels of land. The US \$1.24 million profit from these sales went directly into cash-poor local budgets and was frequently used to support public projects (ARD 2005; Chemonics 2005).

USAID's follow-on Land Reform and Market Development Project (2005–2008; 2008–2010) facilitated the development of urban land markets and helped to increase knowledge of land rights among land users and the government; introduce agricultural mortgage; implement a land consolidation program designed to enlarge plots of land; and support continued land reform by strengthening land legislation. The project succeeded in: amending the Land Code and enacting a Model Regulation to encourage open and transparent management of LRF land; surveying and inventorying 33% of state-owned land; strengthening local government and helping improve revenue through project-facilitated land auctions; and supporting *demilgechi* networks covering 122 villages (Chemonics 2008; LARC 2006).

The USAID-funded Program for a Legal Infrastructure for a Market Economy (2002–2005) was responsible for: helping the government draft a new law on pledges and mortgages; developing a framework for addressing issues adversely affecting the operation of the Land Redistribution Fund; creating a model regulation for LRF operations that was adopted by GosRegister; creating and expanding a database of judicial opinions; developing judicial reform initiatives; establishing the International Court of Arbitration; and developing a range of legal information products on Kyrgyz law and practice (ARD and Checchi 2005).

The World Bank/IDA US \$7.5 million Second Land and Real Estate Registration Project (2008–2012), implemented by GosRegister, supports the development of land markets and more intensive and effective use of land through promotion of a reliable and well-functioning system for registration of rights in immovable property. The project includes components to: help develop GosRegister and improve its services and resource management; expand spatial and legal land data; and support the development of education and expertise in topics such as real property economics, valuation, land management, land administration, land law, surveying and licensing arrangements. The project has helped the GOK reduce the average time for secondary transactions from three days to two days. Although sales transactions declined by 1.5%, the number of mortgages increased by 10%. The project has also presented a proposal to establish a single agency with consolidated finances and drafted a government directive to make digital spatial data accessible to the public, but implementation is delayed and some project restructuring will be required (World Bank 2008a; World Bank 2010d).

World Bank's US \$24 million Agriculture Investments and Services Project (2008–2013) assists the GOK in: improving the institutional and infrastructure environment for profitable and sustainable crop and livestock production; reducing instability of food prices; and developing broad-based agricultural productivity for food supply and security. The project has established and mobilized pasture management committees and an initial round of legal training has begun. The community framework for pasture management has been established in accordance with the new veterinary law. Results from the Global Food Crisis Response Program emergency community seed funds show good yields, and farmer associations (*koshuuns*) have been mobilized and are starting to procure extension advice from designated service providers with project support (World Bank 2010d).

The Asian Development Bank (ADB) is leading the Central Asian Countries Initiative on Land Management (CACILM), a partnership between Central Asian countries and the international donor community to combat land degradation, improve rural livelihoods, and help rural communities adapt to climate change in Kyrgyzstan, Kazakhstan, Tajikistan, Turkmenistan and Uzbekistan. CACILM's goal is to restore, maintain and enhance the productive functions of land in Central Asia, promoting improved economic and social well-being of those who depend on these resources while preserving the land's ecological functions. CACILM operates through a 10-year (2005–2015) framework program focused on sustainable agricultural projects, integrated land use planning and sustainable pasture management. The Southern Area Agriculture and Development Project and Mountain Pasture Management in Susamir Valley Project (2007–2012), which is supported by UNDP and implemented by the Global Environment Facility (GEF), is supported by CILM. The project seeks to develop economically beneficial and replicable mechanisms of pasture management (ADB 2010; GOK 2008).

Phase I of the United Nations Development Fund for Women (UNIFEM)'s Strengthening Women's Economic Security through the Land Reform in Kyrgyzstan project (2002–2003) included educational seminars and a media campaign intended to inform women of their land rights. In addition, 11 legal advisory offices provided legal advice to over 500 rural women. A description of Phase II and its results have not been reported (UNIFEM 2003).

2. FRESHWATER (LAKES, RIVERS, GROUNDWATER)

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Kyrgyzstan has abundant freshwater resources, including an estimated 13.6 cubic kilometers per year of groundwater, of which about 11 cubic kilometers per year is part of its 18 cubic kilometers of annual renewable surface water resources. Kyrgyzstan's surface water resources include lakes, rivers, glaciers, reservoirs and bogs. Glaciers originating in the Tien Shan Mountains account for 4% of the total land area and contain 650 billion cubic meters of freshwater. The country has close to 2000 lakes with a total surface of 6800 square kilometers. The largest lake is the Issyk-Kul, which covers 6236 square kilometers in the country's northeastern region and is the world's second largest alpine lake (after Lake Titicaca shared by Peru and Bolivia). Only 7% of the country's lakes are located in the most densely populated regions; almost 90% of lakes are in higher altitudes and inaccessible to most of the population. The country also has an estimated 3500 rivers and streams, including the Naryn (534 kilometers) and the Chatkar (205 kilometers). Kyrgyzstan receives an average annual precipitation of 533 millimeters, varying from 150 millimeters in the plains to over 1000 millimeters in the mountains. About 10% of the country is classified as arid. Most precipitation falls during the winter season when temperatures are low, limiting the amount of rainfed agriculture. Overall, Kyrgyzstan's water resources are unevenly distributed: the north has better access than the south, and urban areas generally have better access to water than rural areas (HTPSE 2008; Mamatov et al. 2007; FAO 1997; Anderson and Pomfret 2004; Slim 2002).

Kyrgyzstan's rivers drain to basins both within the country and in the neighboring countries of Kazakhstan and Uzbekistan, feeding the Aral Sea Basin. Soon after Independence, the five Aral Sea Basin countries (Kyrgyzstan, Tajikistan, Kazakhstan, Uzbekistan, and Turkmenistan) agreed to maintain the water-sharing and distribution rules established during the Soviet era. They also agreed to establish the Interstate Commission for Water Coordination (ICWC) as the body responsible for the definition of allocations in line with these rules. Under this international agreement, Kyrgyzstan has the right to 25% of the surface water in its territory, almost all of which it uses. Disputes over water access rights are common among members of the group (PA Consortium Group 2004; ARD 2005; World Bank 2005a; HTPSE 2008).

Kyrgyzstan's economically feasible hydropower capacity has been estimated at 55 gigawatts per year. The largest reservoir is at Toktogul, on the Naryn River. The Toktogul Power Plant has the capacity to produce 1200 megawatts per year, while four downstream power plants have the capacity to produce 1670 megawatts. When river flows are high, Kyrgyzstan has the ability to meet its internal demand, but when seasonal flow is reduced, the country must import oil and natural gas from neighboring Uzbekistan and Kazakhstan to meet its energy needs. The government plans to increase production of hydroelectric energy by improving the capacity of the Tash-Komur and Shamaldy-Sai hydroelectric power stations, reconstructing the Uch-Kurgan hydro-power station,

and constructing the Kambarata hydroelectric power stations. The Kambarata 1 power station project (estimated at US \$1.7 billion) was in the feasibility assessment stage in 2010 and will have an estimated capacity of 1900 megawatts. The initial generating unit in the smaller Kambarata 2 power station began operation in September 2010 and has a capacity of 120 megawatts. The station will eventually have three generating units, with a combined capacity of 360 megawatts (PA Consortium Group 2004; Bogdetsky et al. 2001; *New Europe* 2010).

Agriculture accounts for 94% of total water withdrawals, with the balance split between domestic and industrial use. The country has an irrigation potential of 2.3 million hectares, with roughly half of the potential developed. Irrigation is almost wholly surface irrigation, with water diverted from rivers into a system of 13,000 kilometers of canals and reservoirs. Irrigation has been developed mainly in the Syr Darya, Talas and Chu river basins and around Lake Issyk-Kul. Irrigation systems are old, designed for former state and collective farms, and prone to leakage. The systems have been poorly maintained; conveyance and distribution efficiency is estimated at only 55% (FAO 1997; HTSPE 2008; World Bank 2009a).

Ninety-nine percent of the urban population and 66% of the rural population have access to improved water resources. Water in many rural areas can be contaminated by agricultural runoff and livestock waste. Aquifers near industrial and mining centers have been contaminated by heavy metals, oils and sanitary wastes. The areas of lowest water quality are the heavily populated regions of the Chu Valley and Osh and Jalal-Abad provinces, and areas along the rivers flowing into Issyk-Kul. The quality of drinking water from this aging system is poorly monitored, and water resource management funds are limited (HTPSE 2008; UNDP 2007; Mamatov et al. 2007; UNESCO 2006).

LEGAL FRAMEWORK

Kyrgyzstan's 2005 Water Code governs the rights, obligations, and management of Kyrgyzstan's water resources. The Water Code provides that water resources – including land occupied by water bodies – are the exclusive and inalienable property of the state, and every person has the right to use water within the national borders in accordance with the Code's provisions. The Code establishes seven principles of water management: (1) stakeholder participation is key to planning and decision-making processes; (2) decision-making should provide for the sustainability of water resources; (3) planning should take into account the economic value of water resources; (4) a person who pollutes water resources should pay for the injury caused; (5) absence of full scientific information should not be used to postpone effective action where there are risks of serious harm to water resources, the environment or human life; (6) the rights of water-users should be guaranteed; and (7) information on the condition and use of water resources should be accessible to the public (GOK Water Code 2005).

The Water Code also: outlines the water resources governance system; calls for the development of water strategy and plans; requires regulation of uses of surface and underground water; identifies the need for provisions to govern emergencies and dam safety; calls for the establishment of a State Water Inspectorate; and requires recognition of obligations of international law (GOK Water Code 2005).

In 1994, the Ministry of Agriculture and Water delegated ownership and responsibility for on-farm irrigation infrastructure to local councils. The Law on Unions (Associations) of Water Users (2002) authorizes establishment of water users' associations (WUAs) to operate and maintain irrigation systems in rural areas (World Law Guide 2009).

The Agreement on Cooperation in Interstate Sources' Water Resources Use and Protection Common Management governs distribution of water among the five Aral Sea Basin countries. The Law on Interstate Use of Water Bodies, Water Resources and Water Structures of the Kyrgyz Republic (2001) defines the principles and regulations of interstate use of water bodies, water resources and water structures whose main purpose is to manage and regulate the principles of water supply by Kyrgyzstan to interested countries on reasonable and mutually beneficial grounds, taking into account market relations (World Law Guide 2009; Bogdetsky et al. 2001).

TENURE ISSUES

The Water Code outlines the rights and obligations of water users and standards for the management of water resources. Surface and groundwater water can be used without Water Use Permission for: drinking and domestic purposes, watering livestock and household plots, and firefighting. Water Use Permission, which is issued by the Water Department, is required for industrial and commercial water uses; use of sewage and wastewater for irrigation; use of impounded or stored water for power generation, fishing, fish-farming or other economic activities; any diversion, restriction or alteration of the flow of water within a water body; alteration of the bed, banks or characteristics of a water body; or extraction of gravel and other materials from water bodies. Water Use Permissions are granted for up to 15 years, and a Special Water Use Permission can be granted for a 50-year period where the applicant is making a substantial, long-term investment in a dam, a drinking-water delivery system or an irrigation system (GOK Land Code 1999b).

The Water Code provides for temporary and permanent suspension of water-use rights. Temporary suspension is applicable for certain forms of non-compliance, and natural disasters or emergencies. Permanent cancellation of a permit applies when it is necessary to reallocate water rights in the public interest, for non-compliance with the Code, lack of use, or liquidation or death of the holder of the right (GOK Water Code 2005).

Under the Soviet Union, the flow of water resources between upstream water-rich and downstream cotton-producing countries was coordinated by Soviet planners. After the fall of the Soviet Union, coordination became the responsibility of the republics' respective governments. Each country has competing demands for water and is reliant on the others for additional resources, such as oil and natural gas. The tension over resources has led to military buildups and verbal threats. However, as water scarcity increases and Kyrgyzstan seeks to capitalize on hydropower, water disputes could escalate if downstream countries are unable to meet their water needs (Dukhovny 2005; Karaev 2005).

Within the country, water disputes are particularly pervasive in the Ferghana Valley. Existing water scarcity is exacerbated by the region's high population density. In 1989, disputes between Tajik and Kyrgyz groups over water allocation led to riots in which several people were killed or injured. In 1999, Tajik and Kyrgyz groups were again in violent conflict over the allocation of water (Slim 2002).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The GOK, through its Parliament and offices of the President and Prime Minister, is responsible for: developing, approving and amending water legislation; ratifying international agreements; approving annual subsidies for irrigation and drainage; and setting rates for water use. The GOK approves the boundaries of the principal water basins; establishes the Water Council; approves Basin Council regulations; designates specially authorized state bodies to implement the Water Code; establishes a water-resource monitoring system; develops and implements the state water-economy program; and approves Special Water Use Permissions (GOK Water Code 2005).

The National Water Council is composed of heads of ministries, agencies, and other state bodies responsible for water resource management. The Council coordinates the activities of ministries, administrative agencies and other state bodies concerning the management of water resources; prepares the National Water Strategy for the approval of the GOK; prepares draft laws for presentation to the GOK; supervises the State Water Committee; and develops regulations and instructions for the implementation of the Water Code. Basin-level councils are made up of representatives of the Basin Water Administration, territorial bodies of the State Environmental Protection Body, local state administration bodies, NGOs, water users, and WUAs. Basin councils develop draft basin plans, coordinate activities in the water sector within the basin and approve the composition of the Local Irrigation and Drainage Committees (GOK Water Code 2005; GOK Decree N. 186 2010).

The State Committee on Water Management serves as the secretariat for the National Water Council, participates in Basin Councils and undertakes tasks such as monitoring and planning, regulating the use of underground water and taking action to protect water quality. In the field of irrigation, drainage and other water-economy activity, the State Water Committee is responsible for the operation, maintenance, repair and rehabilitation of irrigation and drainage systems; the supply of water of fixed quality in accordance with contracts; the collection of fees from the

water users in accordance with contracts for water supply; the preparation of plans of operation and maintenance of each irrigation and drainage system for presentation to the corresponding irrigation commission; and planting of forestry protection plantations along canals, and around state-owned reservoirs and other water storage and delivery structures. The territorial branches of the State Water Committee are the Basin Water Administrations (GOK Water Code 2005; GOK Decree N. 186 2010).

The Department of Water Management within the State Water Committee is responsible for implementation of water-resources policy. The Department consists of three main governing bodies: the Department of Water Resources (DWR); the Irrigation and Systems Maintenance Department; and the Department of Economics, Finance and Registration. The DWR is responsible for operating and maintaining the nationwide, off-farm irrigation network and delivering irrigation water to farmers. The DWR is responsible for promoting institutional development of WUAs. The DWR is located in Bishkek, but has seven *oblast* offices and 43 *raion* offices (Sehring 2009; HTSPE 2008; GOK Decree N. 186 2010).

Irrigation and Drainage Commissions are established at national, basin and local levels and are tasked with: reviewing the performance of relevant irrigation and drainage systems during the previous irrigation season and making recommendations regarding operation and maintenance in the following irrigation season; supervising the implementation of any recommendations made and the preparations for the forthcoming irrigation season; and serving as a forum for information exchange and coordination among irrigation-water users concerning irrigation (GOK Water Law 2005).

WUAs are community-based organizations created to manage water resources for irrigation and irrigation infrastructure at the local level. Kyrgyzstan currently has 450 WUAs, 439 of which are formerly registered and about 90 of which are considered fully mature, having reached the seventh stage of institutional development. The WUAs have roughly 166,000 members and have authority over an area of about 710,000 hectares. Almost all WUAs have offices and functioning management systems, and observers report that, in general, the WUAs are allocating and distributing irrigation water consistent with equitable principles, collecting irrigation service fees and maintaining records. Water Support Units have been integrated into the DWR, creating a link between the WUAs and the DWR. Recent reductions in conflicts over water have been attributed to the establishment of WUAs. One of the greatest challenges facing the WUA system is financial sustainability. Most of the financial and technical support for the development of the WUAs and Water Support Units has been provided by donors. The fees collected by WUAs do not cover the costs of operation, and the GOK budget does not include sufficient support for the WUAs and Water Support Units. The World Bank's Second On-Farm Irrigation Project, which runs through 2013, is one of several projects addressing the financial structure of the WUA system (GRM 2008; World Bank 2008b; Sehring 2009; HTSPE 2008; World Bank 2010d).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Kyrgyzstan faces three main issues related to water access, use and management: (1) trans-boundary water conflict; (2) water pollution and water quality; and (3) inefficient and poorly maintained irrigation infrastructure. The establishment of WUAs has been a significant step in the structural and institutional reform of irrigation systems. Some ambiguity was created by different jurisdictional standards (basin versus administrative boundaries), and the responsibilities of the WUAs and the DWR for the operation and maintenance of irrigation systems were not clearly defined. However, donor-funded projects focused on the creation and capacity-building of WUAs have helped clarify jurisdictional boundaries and roles (ARD 2005; Herrfahrdt 2006).

Tariffs for irrigation water currently do not cover expenses. Between 2007 and 2010, the government introduced staggered rises in tariffs to a level covering operating costs. The WUAs will increase payment collection-levels from their current 78% to a minimum of 95% in 2010. Between 2010 and 2020, a full cost-recovery of the irrigation system should be achieved on a stage-by-stage basis. The GOK, with assistance from Russia, has been pursuing the development of the US \$1.7 billion Kambar-Ata 1 hydropower facility. The Government of Uzbekistan opposes development of the facility. The project stalled in March 2010 when Russia halted funding and insisted on an international study to examine potential environmental impacts (Shepherd 2010).

DONOR INTERVENTIONS AND INVESTMENTS

USAID has been present in the country since 1992 and has developed several initiatives related to water-resource management. In 2001, USAID launched the US \$3 million Peaceful Communities Initiative to open lines of communication between cross-border communities in the area. In an effort to address specific sources of conflict, the initiative rebuilt the water distribution system in Jar-Kyshtak, a village of 2400 people bordering Uzbekistan in southern Kyrgyzstan. Current USAID initiatives also include programs to enhance agricultural productivity through improvements in agricultural practices, better management of the irrigation networks and access to inputs. USAID has also supported the development of trans-boundary basin planning tools for the Syr Darya River to facilitate decisions on the allocation and distribution of water and energy in the region and to facilitate trans-boundary water discussions between Kazakhstan and Kyrgyzstan. The Land Reform Project, of which water was one component, funded numerous stakeholders' meetings and input sessions relating to the drafting of the 2005 Water Code. USAID funded 10 separate white papers addressing a variety of issues raised by the new legislation and helped facilitate discussion and consensus. The Water Code replaced the very short list of water rights available under prior legislation with predictable, long-term water rights and provides incentives for water conservation. As the code progressed through draft phases, the project also educated citizens with a published bulletin (USAID 2010; Chemonics 2005).

The World Bank's 6-year (2006–2011) US \$19 million Water Management Improvement Project was designed to: (1) rehabilitate and modernize irrigation infrastructure to secure water supply to around 85,000 hectares, serving 40,000 families; (2) achieve sustainable and efficient water resources management through implementation of the Water Code, support to the DWR and support to WUAs; and (3) organize the formation and development of WUA Federations and the transfer of minor irrigation schemes to WUAs, thereby alleviating some of the pressures on the DWR to operate and maintain these systems. Under the first component (as of early 2010), out of an estimated 18 schemes, 16 schemes have been contracted, and the project expects to complete six subprojects by the end of 2010. Most of the technical advisory packages on water governance under the second and third components have been completed. However, due to a planned restructuring of the DWR and changes in the government, implementation of the recommendations for improved governance are unlikely to begin until after elections are scheduled for October 2010 (World Bank 2010d).

The World Bank is also funding the US \$15 million Village Investment Project II (2006–2011). As of July 2010, the project had provided about half a million people in project areas with improved access to water resources and constructed 368 new water points. The second Rural Water Supply and Sanitation Project (US \$10 million, 2009–2013) was designed to improve rural access to drinking water and sanitation services but has been hindered by delays in the GOK's adoption of more cost-effective and sustainable rural water supply standards and the unanticipated need to revisit rehabilitation and capacity-building systems installed by the first project. Project implementers anticipate that the project will be delayed a year and undergo restructuring (World Bank 2008b; World Bank 2010d).

The World Bank's US \$20.5 million (2007–2013) Second On-Farm Irrigation Project, implemented by the Department of Water Resources, aims to improve irrigation-service delivery through further development of about 500 WUAs and rehabilitation and modernization of irrigation and drainage infrastructure country-wide. The project plans to deliver: components for WUA strengthening; rehabilitation and modernization of irrigation and drainage systems on about 51,000 hectares managed by an estimated 29 WUAs; and project management support for the Department of Water Resources. As of July 2010, 26 WUAs commanding around 62,000 hectares have been selected for rehabilitation, and five projects have already been completed. The slight drop off in the performance of WUAs is attributed to lack of government funding for WUA Support Units (SUs), which were integrated in the Department of Water Resources. Over the course of 2010, the project plans to work more actively with the GOK resolving this issue to ensure that adequate resources are dedicated to the proper functioning of the SUs (World Bank 2007b; World Bank 2010d).

3. TREES AND FORESTS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

About 4.5% of Kyrgyzstan's total land area (869,000 hectares) is classified as forest. Forests are found throughout the country but are concentrated in the north and along the southern border. Although their extent is limited, Kyrgyzstan's forests are diverse. One-third of all forests are juniper species, primarily found in elevations ranging from 1300 to 3200 meters. Spruce forests account for one-eighth of forestland and are found in roughly the same elevations. At lower elevations are nuciferous forests, which can include as many as 300 different species of trees, shrubs and grasses. The nuciferous forests include walnut, apple, plum, wild rose and maple trees. Pistachio and wild almond are found in the drier areas. The floodplains and riverine areas have *tugai* forests of willow, elm and poplar (Kouplevatskaya 2006; BIOM and GFC 2008).

Kyrgyzstan is the most biodiverse of the Central Asian countries, and its forests are home to an estimated 500 different species of vertebrates, including 83 species of mammal and 368 species of reptiles. The country also has more than 2000 different fungi. The great buzzard, snow leopard, marbled polecat and dhole are among the 10% of Kyrgyzstan's species that are rare or endangered (GOK 2008; BIOM and GFC 2008).

Forestland is depended on by local communities for harvesting wood, livestock grazing and cultivation. The forests are rich in non-timber forest products, including nuts, fruits, fodder, mushrooms and medicinal herbs. Many local communities depend on forest products for cash income. Kyrgyzstan has the world's largest remaining natural walnut forests, which grow on slopes rising from the southern lowlands. The forest department manages the walnut forests, usually leasing out parcels on one- to two-year terms. In a good year, the walnut harvest can provide a family with sufficient income for the year. However, late frosts destroy the crop and most decades only have two to four good harvests (Schmidt 2009).

The country has six categories of protected areas: (1) state nature reserves (*zapovedniki*) devoted to conservation; (2) state national parks (*prirodnye natsionalnie parki*), which are zones for conservation and recreation activities; (3) state specialized reserves (*zakazniki*) are dedicated to the conservation of certain species or habitats; (4) objects of natural heritage, which include state and private property; (5) botanical and zoological gardens; and (6) natural areas for the promotion of health, such as places with mineral waters or therapeutic mud. Many of these protected areas are isolated and too small to maintain viable populations of plants or wildlife within their boundaries. With support from the international community, Kyrgyzstan has in recent years increased its protected areas. In 2006, an estimated 3.2% of the land was under some form of protection; as of 2008, the GOK classified about one million hectares (5.2% of total land) as protected. The extent of protected area exceeds the total amount of the country's forest and includes land that is not classified as forest. An estimated 2–3% of the country's protected areas are classified as forest (GOK 2008; BIOM and GFC 2008; Fitzherbert 2000).

Despite the expansion of its protected areas, Kyrgyzstan's forests are threatened with degradation of land and forest resources. Deforestation occurs at a rate of 0.3% a year. The primary causes of degradation and deforestation are: illegal logging; cattle-grazing; construction of settlements; clearing forestland for cultivation; road building; and overharvesting of non-timber forest products, primarily fuelwood, mushrooms and medicinal plants (World Bank 2008a; ILC 2004; GRM 2008).

The GOK has taken steps to support the natural regeneration of forests by closing some areas to grazing for extended periods and has undertaken reforestation of valuable wood species. Historically, the government has not emphasized production, but, faced with the loss of forestland and pressure to supply wood, the country also has begun to develop plantations. As of 2008, an estimated 24,000 hectares were devoted to productive plantations, primarily fast-growing wood such as poplar. With small grant programs, donors have supported the development of plantations by local self-governance units, the *ayil okmotu* (GOK 2008; FAO 2007; BIOM and GFC 2008; Kouplevatskaya 2008).

LEGAL FRAMEWORK

The primary legislation governing the country's forests is the Forest Code of the Kyrgyz Republic (1999). The purpose of the Code and supporting legislation is to protect and regenerate forests and ensure their rational and sustainable use with the objectives of conserving biological diversity, increasing the ecological and economic potential of the forest and satisfying the public need for forest resources. Principles of forest management adopted by the Code are: forest preservation and conservation; forest regeneration and reforestation; rational use of forests to increase productivity; and increased efficiency in forest management and use. The Forest Code includes the following terms:

1. Kyrgyzstan's forests are owned by the state. The only exception to state ownership is the recognition that landowners may grow artificial forests on their private land. Trees and scrubs on private land are considered to be the property of the landowner. Forest Fund plot-holders are entitled to take small deposits of common minerals available on the land surface.
2. All forested lands and lands allocated for forestry purposes, whether forested or not, are considered to be in the country's Forest Fund (*Goslesfund*). Forest Fund land includes non-forested land (such as agricultural land and forestland used for public utilities) that is integrated into forestland. The state can lease forestland to territorial state management bodies (*leshozes*, known as State Forest Cooperatives during the Soviet era) for unlimited terms. *Leshozes* are authorized to lease forest plots to individual forest users or groups of forest users.
3. *Leshozes* are responsible for: forest planning; constructing roads and other infrastructure; allocating Forest Fund plots; supporting the establishment of forest enterprises; ensuring the protection and regeneration of forests; and carrying out forest maintenance tasks.
4. Permissible forest uses include: land cultivation; haymaking; collection of forest products; timber harvesting; scientific research; and recreation and tourism. Forest recreation and collection of fruits and berries, mushrooms and herbs for personal purposes are free of charge. Fees are imposed for other uses.

(GOK Forest Code 1999a).

The Forestry Code is supported by several additional laws and resolutions, including: (1) Law No. 53/1999 On Protection of Environment, which declares environmental protection and management of natural resources to be a national policy; (2) Law No. 54/1999 On Environmental Expertise, governing the process for environmental impact assessments, which are known as *Otsenka Vozdeistviya na Okruzhayutchuyu Sredu* (OVOS); and (3) Law No. 48/1999 On Biosphere Territories, which sets the rules for the establishment and operation of biosphere territories. Biosphere territories are protected areas where ecological systems provide a stable balance of biodiversity, economic development and protection of cultural values (GOK 2008; BIOM and GFC 2008).

Resolution No. 226 (1997) governs leasing of forestland. The forest department can lease land in the Forestry Fund for (1) logging and collection of secondary forest materials (stumps, bark, stick and branches); (2) mowing, agriculture cultivation, bee gardens and gathering and processing of wild plants; (3) gathering fruits, nuts, mushrooms, berries and medical herbs; (4) gathering of moss, technical raw materials, leaves and reeds; and (5) operation of hunting and game reserves, implementation of scientific and research activity, recreation and tourism and sport actions. As of 2008, almost 11,000 households had leases for forestland and forest resources (BIOM and GFC 2008; GOK 2008).

Resolution No. 377 (2001) provided the terms for the adoption of community forest management (CFM) (also known as collaborative forest management) as a method of managing the country's forests. Under CFM agreements, local populations receive long-term use rights to forest plots. Community uses can include: gathering nuts, berries, medicinal herbs and other products; beekeeping; and livestock-grazing. With the income generated

by the forest use, communities are expected to carry out forest management duties and projects. Communities patrol forests to prevent logging and forest fires and engage in afforestation and reforestation (GOK 2008; BIOM and GFC 2008).

In 2006, in response to a trend toward increased deforestation, the President imposed a moratorium on logging, processing and sale of valuable wood (GOK 2008; BIOM and GFC 2008).

TENURE ISSUES

Leshozes have a primary role in the allocation of forestland. *Leshozes* can lease all Forest Fund land within their boundaries, which may include pasture and agricultural land in addition to forested land. Leases are required to be in writing and to state: the boundaries of the forest plot; the types and volume of forest uses permitted; the financial status of the lessee; the lease period; obligations of the parties regarding conservation and forest protection; and the lease payment. The length of the lease and the rent are negotiable and depend on the nature of the forestland, the permissible uses, and status of the lessee. For example, in the *leshozes* with walnut-fruit forests, leases allow people to collect a certain amount of fuelwood, to obtain agricultural plots, to collect hay or to harvest walnuts or fruit for sale. In exchange for access to forest resources, forest users are usually expected to: pay a share of the walnut harvest (40–70%); make a payment in cash; or carry out certain tasks for the *leshoz*, such as collecting seeds or preparing and planting seedlings. In some cases, an individual may use forest resources free of charge in exchange for labor. In 2008, an estimated 9,400 hectares of land were leased (GRM 2008; Fisher et al. 2004; FAO 2005).

Leshozes are also authorized to enter into agreements with local communities for community management of forestland. CFM agreements have an initial term of five years, with a possible extension to an additional 49 years. Under CFM, the forest user has rights to all forest products produced in exchange for meeting obligations to manage and conserve the forest. The GOK has identified about 45,000 hectares for CFM, of which 7200 were under various CFM arrangements in 2008 (BIOM and GFC 2008; GOK 2008; Fisher et al. 2004; Carter et al. 2003).

In 2007, the GOK suspended any further allocations of land for CFM. The State Agency on Environmental Protection and Forestry (SAEPF) reported that problems with questionable forest management techniques (such as fencing), allegations of unfair allocations of forestland, noncompliance with agreements and poor understanding of conservation principles led to the suspension of new allocations until problems could be addressed (BIOM and GFC 2008; GOK 2008).

Women are responsible for many household tasks requiring access to and use of forest resources, such as gathering forest products, grazing livestock and fetching water. However, men tend to dominate forest management activities, and women are less likely to attend public meetings or sign documents relating to forest rights and use. It is unknown whether any women hold forest leases or lead CFM groups (Carter et al. 2003).

Conflicts related to the forestry sector occur mainly in two areas. First, there is persistent nonviolent conflict over communities' access to forest resources in protected forests traditionally used by communities to supplement incomes. Second, many *leshoz* forest boundaries are not demarcated, and there is a reported lack of transparency in the allocation of leases (Fisher 2004; ADB 2009; Lovera 2008).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The State Agency on Environmental Protection and Forestry (SAEPF) is the lead agency responsible for developing the country's policies and strategic plans for: forest management; biodiversity conservation; environment protection; and development of forest enterprises. The Agency develops national and regional programs for the development of forests; distributes haymaking areas and pastures within the Forest Fund; makes zoning decisions governing forest uses; and organizes forest monitoring. *Oblast*-level state offices carry out statistical reporting on forest management activities; participate in the development of annual and long-term plans; help develop programs for the economic development of forestry; and regulate forest relations with the central level (GOK Forest Code 1999a; GRM 2008).

More than 40 state forest agencies (*leshozes*) are responsible for the protection and management of the forests and of state-owned non-forested land located on *leshoz* territory – mainly in the form of pastures but also of arable land. A *leshoz* is typically made up of a central office with technical and administrative staff and several forest rangers; the *leshoz* reports to the *oblast* forest administration. Specific duties assigned to the *leshozes* are: allocating forest plots, drafting leases and managing relationships with lessees; issuing orders regarding the use of forest resources and requirements for forest conservation and regeneration; and organizing forest enterprises (Fisher et al. 2004; GOK Forest Code 1999a).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

The GOK has adopted a series of programs and plans defining its forest sector objectives. Activities under the National Action Plan for Forestry (2006–2010), many of which were supported by donors, included the development or creation of: national forest inventory and mapping systems; an atlas of rare species; location-specific forest management plans; and a management system for municipal forests. The legal framework for the environmental protection of forests was also refined. Transboundary biosphere reserves were established in reserves in the Western Tien-Shan (Kazakhstan, Kyrgyzstan and Uzbekistan) and Pamir-Alay (Kyrgyzstan and Tajikistan), and the country joined the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (GOK 2008).

While the GOK has succeeded in implementing several portions of its forest plan, in general, sector governance is still weak. Capacity development has been constrained by a low budget, lack of sufficient staff, and inadequate incentives for adoption of sustainable forest management techniques by communities and other forest users. Laws governing protected areas are poorly enforced, and technical plans for sustainable management of various forest resources have not been prepared. Poaching and illegal logging have continued despite a government ban, and the public's awareness of principles of conservation and sustainable forest use is low (GOK 2008).

DONOR INTERVENTIONS AND INVESTMENTS

The Swiss Agency for Development and Cooperation (SDC) has been supporting the development of the forest sector, forest conservation, and private investment in forests since 1995. The agency works with the GOK to develop national forest strategy and has supported the development of modern forest management tools and the establishment of community forest management programs. Phase V of the project is scheduled to be completed in 2010 (GOK 2008; Carter et al. 2003).

A joint program funded by the Food and Agriculture Organization and the United Nations Development Programme (FOA/UNDP), Capacity Strengthening of National Assessment and Monitoring of Forest and Wood Resources (2007–2010), has provided technical assistance relating to the sustainable use of forest products. The team helped create a cross-sector commission that includes the SAEPPF, the Ministry of Agriculture, and local self-governance councils to coordinate forest sector work (GOK 2008; BIOM and GFC 2008).

The European Union (EU)'s Sustainable Management of Juniper Forests of the South Kyrgyzstan (JUMP) worked in Kyrgyz Ata Nature Park and 10 locations in the Osh and Batken regions. With the participation of local communities, the project created integrated management plans for sustainable management of the country's juniper forests. Another EU-funded project in the western Tien Shan helped Kazakhstan, Kyrgyzstan, and Uzbekistan create a transboundary park and launch programs to support the socioeconomic development of the communities living within buffer areas of protected areas. From 1997 to 2005, GTZ implemented its Biosphere Reserve Issyk-Kul project. Project activities included creating the legal framework for the development of the biosphere area, preparing a zoning plan to manage land use in the *oblast*, and establishment of an administrative framework for management of the biosphere (GOK 2008; BIOM and GFC 2008).

4. MINERALS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Kyrgyzstan has significant deposits of gold, rare earth metals, coal, oil, copper, iron, mercury, tungsten, antimony, precious and semiprecious stones and arsenic. Eighty percent of the country is covered by geological surveys and

mapping, and spending on geological exploration in Kyrgyzstan increased 34% between 2003 and 2004. Large mining companies are responsible for most of Kyrgyzstan's production, but the country also has an artisanal mining sector that produces alluvial gold, tin, coal, and construction materials. Approximately 5000 people are involved in artisanal gold mining. Between 2000 and 2004, the minerals sector provided an average of 10% of GDP, and minerals accounted for an average of 41% of export revenue. (Note that the 41% number cited in this paragraph differs from the 3.6% number reported by the World Bank's World Development Indicators (WDI), cited in Box 1, *supra*. The WDI statistics on mineral exports do not take into account fuels (12% of total exports) or those minerals categorized as raw agricultural products. Adding revenues from these two categories to the 3.6% reported by the WDI is still unlikely to account for the entire discrepancy in numbers, however. The 41% number is cited here because, apart from the WDI, several sources consistently report export revenues from Kyrgyzstan's mineral sector at or near to 41% of the country's export revenues.) (World Bank 2005b; Bogdetsky et al. 2001; Perez et al. 2010).

Gold accounts for most of Kyrgyzstan's production. However, foreign investment in exploration and investment in other mineral resources, including development of oil and gas reserves (about 4% of total mining production), rare earth and coal, are increasing. Companies from China, Canada, Russia, the US, Australia, and Kazakhstan are primary investors in geological exploration. In some areas, former Soviet mines are being reopened. The Canadian Stans Energy Corporation, for example, is reopening the Kutessay II mine (located 140 kilometers from Bishkek) as the first major rare earth mine outside China (Watts 2010; World Bank 2005b; BISNIS 2007; Mbendi 2010).

Kyrgyzstan has an estimated 90 million ounces of gold reserves and began industrial production in 1986. Foreign investment in gold began in 1993, and in 1996 the Kumtor Gold Mine, located in the Tian Shan Mountains about 350 kilometers southeast of Bishkek, began production. Kumtor has estimated reserves of more than 300 tons of metal and an annual production capacity of 650 thousand ounces. Canadian-based Centerra Gold holds a 100% interest in the mine, which produced 7.2 million ounces of gold between 1997 and 2007 and is the largest gold mine in Central Asia operated by a western company. Exploration of the area surrounding the mine has produced promising results, and the company plans to expand operations (Centerra Gold 2010; World Bank 2005b).

Kyrgyzstan has an estimated 24 billion tons of coal deposits, only 20% of which are under development. The country's coal mining operations began in the latter half of the 19th century, and by 1913, 27 coal mines were providing coal for the whole Central Asia. Coal mining increased in the decades that followed (employing 60% of the industrial labor force in the 1980s), but fell off in the early 2000s as resources in some mines were depleted, competition from Kazakhstan increased, and profitability suffered. The country consumes about 1.9 million tons of coal annually, and the industry expects production to increase as investors have shown renewed interest in exploring cost-effective methods of developing the country's coal deposits (Bogdetsky et al. 2001; World Bank 2005b; Perez et al. 2010).

Because mining operations in Kyrgyzstan are located mainly in mountainous areas, mineral extraction often exacerbates natural processes characteristic of mountains, such as landslides, landslips and erosion of slopes. Road construction, drilling and increases in human population have damaged forests and grasslands. Increased hunting and destruction of ecosystems have put pressure on wildlife. Mining has also contributed to pollution of air, water and soil. The poor environmental management of mines during the Soviet era has left Kyrgyzstan with heavy contamination of former mining sites and their surrounding communities. Some of the waste is radioactive, and the GOK lacks funds to institute adequate safety measures (Bogdetsky et al. 2001; World Bank 2005b).

In 1998, a truck accident on the road to the Kumtor Mine killed several people and caused 1.8 tons of sodium cyanide to spill into a river. Thousands of residents were evacuated from downstream communities, and a disputed number of people sought medical treatment. The government, which had a two-thirds interest in the mine at the time of the accident, and the company (a predecessor of Centerra) hired scientists to conduct a study of the spill's impact. The study concluded that minimal damage had been done and sufficient compensation paid. Local communities assert that the spill caused significant adverse health impacts, including a high mortality rate. The communities have continued to stage protests and have pending claims for additional compensation (Norlen 2000; Mines and Communities 2005).

LEGAL FRAMEWORK

Kyrgyzstan's Law on Subsoil (1997) is the primary law governing the mineral sector. The law provides that the state owns the country's mineral resources. Individuals and entities – including foreign entities – can obtain rights of exploration and exploitation through licenses and concessions. The Law on Subsoil imposes standards relating to geological studies and determinations regarding the optimal use of resources; requires accounting of extracted and non-extracted main and associate minerals; prohibits wasteful or harmful extraction practices; and gives the state the authority to determine mineral resource production levels (Bogdetsky et al. 2001; World Bank 2005b).

Other laws governing the sector are as follows:

1. *Law on Concession and Foreign Concessionary Enterprises in Kyrgyzstan (1992)* is applicable to mining concessions and sets standards for foreign companies and terms of concessions.
2. *Law on Coal (1999)* provides subsidiaries to coal operations.
3. *Law on Oil and Gas (1998)* governs the exploration for and exploitation of petroleum and natural gas and imposes state standards on the exploitation of oil and gas reserves.
4. *Resolution No. 563 (2000)* devolves to local administrations the responsibility for: preparation of mineral development proposals; preparation of proposals for land-right allocations for mining; and development of environmental plans. Local administrations also have authority to resolve local disputes over mining operations.
5. *Resolution No. 224 (2001)* regulates alluvial gold prospecting. Regional administrations are responsible for issuing certificates authorizing individuals to engage in alluvial mining. Individual prospectors (gold-panners) are entitled to use only the gravity exploration method in the extraction of gold, and the use of strong toxic substances is prohibited. Small-scale enterprises and individual prospectors are required to pay an annual fee for the certification and must pay local and national taxes.
6. *Law on Production Sharing Agreements (2002)* permits private entities to enter into agreements with the government under which the government participates in the company's profits and can take its earnings in the form of product.

(Bogdetsky et al. 2001; Madykov and Ten 2009).

Mineral exploration and extraction are also governed by laws regulating the Tax Code, the Labor Code, the Civil Code, and the Land Code. There is also a range of laws that directly regulate relations between government and mining manufacturers. The most important of these are the laws on deposits, coal, oil and gas, precious metals and precious stones. The principal environmental, health and safety laws applicable to the mining industry are: (1) Law on Environmental Review (1999); (2) Law on Environmental Protection (1999); and (3) Law on Industrial Safety of Hazardous Production Facilities (2001) (Madykov and Ten 2009; Bogdetsky et al. 2001).

TENURE ISSUES

The state owns all mineral deposits in Kyrgyzstan and grants exploration licenses, mining licenses and licenses for construction and operation of subsurface structures. The government grants concessions on a competitive basis. Both foreign and domestic companies can obtain mineral and mining rights. Domestic companies conducting exploration of mineral resources must obtain temporary land use rights from local state administrations. The right of foreign companies to obtain temporary land use rights can be subject to further regulation by the government. Only small deposits of commonly found minerals on municipal or private land are exempt from the licensing procedure (Bogdetsky et al. 2001; Madykov and Ten 2009).

Artisanal mining operation permits are obtained by registering with local authorities. Approximately 5000 people are involved in artisanal gold mining in Kyrgyzstan. Artisanal miners pay taxes to local and district authorities (Bogdetsky et al. 2001).

The mining laws provide for suspension or termination of mining rights. In the event mining companies feel their rights have been violated, they can apply to domestic courts or, if the parties have an arbitration agreement, to domestic or international arbitration tribunals. Kyrgyz companies and government bodies tend to avoid arbitration as a dispute resolution mechanism and have been reluctant to sign agreements referring disputes to local or international arbitration (Madykov and Ten 2009).

As of 2001, there were no reported conflicts related to the expropriation of land for mining interests (Bogdetsky et al. 2001).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The Ministry of Natural Resources, which was created in 2009, is the main government authority responsible for the minerals sector. The Ministry assumed the duties formerly undertaken by the State Agency for Geology and Mineral Resources, including issuing licenses and executing license agreements. The Ministry is responsible for: preparing mineral forecasts and estimates; attracting investment; confirming reserves; monitoring mining company activity and the raw-material base for these companies; and ensuring that work in this sector is carried out satisfactorily. However, the Ministry's ability to maintain geological information is hindered by a paper-based system. Although the Ministry has a substantial amount of information regarding the country's minerals, its thousands of typed geological reports are difficult to access. In addition, reporting standards for license-holders have not been created, and the flow of geological information is not controlled. Industry observers report that the Ministry has been working to bring relevant regulations in line with international standards, but no detailed information about this effort is available (Madykov and Ten 2009; Mbendi 2010; World Bank 2005b; Bogdetsky et al. 2001; Madykov 2010; GOK Decree N. 734 2009b).

The State Agency for Environmental Protection and Forestry is responsible for environmental protection relating to mining operations. The office of State Mining and Technical Control under the Ministry of Ecology and Emergencies oversees mining-company compliance with technical safety regulations (Madykov and Ten 2009; Bogdetsky et al. 2001).

The joint stock company, *Kyrgyzaltyn JSC*, is the largest company in Kyrgyzstan specializing in the development of gold deposits. *Kyrgyzaltyn JSC* has created gold-receiving desks that support artisanal and small-scale gold miners by purchasing their mined gold on a commercial basis (Bogdetsky et al. 2001; Mbendi 2010).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Kyrgyzstan has high mineral potential, a long mining tradition, well-trained technical personnel and, in many areas, adequate to good mining infrastructure. However, the sector is constrained by: (1) a complicated, fragmented, and often contradictory legal framework; (2) insecure rights of exploration and extraction resulting from overlapping and contradictory laws, ambiguity regarding the impact of land law on mining rights and gaps in the legal framework; (3) high investment costs and risk due to significant state authority over operations and lack of exclusivity of rights; (4) limited accessibility of exploration data and mining records, which are maintained in paper archives; and (5) despite some reforms, relatively high taxes and royalties. Political unrest has also contributed to an unstable situation for potential investors (BISNIS 2010; Bogdetsky et al. 2001; World Bank 2005b).

Kyrgyzstan is a candidate country for the Extractive Industries Transparency Initiative (EITI), a global initiative supporting the improvement of the management and effective utilization of natural resources through transparent accounting of revenue. Kyrgyzstan's EITI implementation is coordinated by the Energy and Mineral Resources Department in the Office of the Prime Minister and overseen by a multi-stakeholder steering group. The GOK released its first official EITI report in 2004, but the process stalled in 2006 and 2007. The GOK appointed a new EITI Secretariat in 2008, and a decree reestablished the EITI steering group. Kyrgyzstan submitted its first Validation report in 2010, which the EITI Board reviewed. The EITI Board issued a statement in October 2010

that while the country was close to compliance, some validation indicators had not been met. The GOK has until April 2011 to respond to the Board's suggested remedial measures. The World Bank has earmarked US \$180,000 to support the Ministry of Finance and EITI Secretariat's efforts to meet requirements (EITI 2010; World Bank 2009b).

In an effort to encourage development of the mining sector, the GOK has been pursuing the following measures: simplifying the licensing process; reducing royalty rates; amending the Tax Code to include taxation of subsoil use; establishing an agency responsible for minerals and mines; revising decrees in order to reduce state interference in the industry; and reducing state shares in the mining industry (Bogdetsky et al. 2001).

DONOR INTERVENTIONS AND INVESTMENTS

The closure of the uranium mines formerly operated by the Soviet Union left an estimated 800 million tons of uranium enrichment waste in Central Asia. Kyrgyzstan's share of the waste is estimated at 50 million cubic meters of highly toxic tailings spread over 30 different sites and posing a risk to the health, agriculture and ecology in the affected areas, including the Fergana Valley. Other mining operations have left tailings that contain toxic salts, mercury, lead, cadmium and arsenic. The International Atomic Energy Agency (IAEA), UNDP, EU, the Organization for Security and Co-operation in Europe (OSCE), and the Eurasian Economic Community (EurAsEC) are collaborating with the GOK to create sustainable solutions for the management and maintenance of the toxic waste sites. EurAsEC is focused on reclaiming hazardous wastes in Kyrgyzstan to reduce the potential risks associated with burying radioactive wastes (Levina 2009; Bogdetsky et al. 2001).

Kyrgyzstan is the last remaining major supplier of mined mercury to the international marketplace, and the United States Environmental Protection Agency (EPA) is supporting a joint United Nations Environment Programme and United Nations Institute for Training and Research (UNEP/UNITAR) project to assist the GOK in developing an action plan to reduce the release of mercury into the environment. As part of the overall project, project staff are conducting assessments to facilitate the involvement of donors (such as the World Bank and ADB) in initiatives to eliminate mercury mining activities and remedy mining-related contamination (UN 2009).

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