



USAID COUNTRY PROFILE

PROPERTY RIGHTS AND RESOURCE GOVERNANCE

MOZAMBIQUE

OVERVIEW

Mozambique is a large, sparsely populated country in southern Africa with a coastline nearly as long as the eastern seaboard of the United States. Following a 16-year civil war that began shortly after independence from Portugal in 1975 and ended in 1992, Mozambique achieved political and economic stability and began to experience very rapid growth on its small economic base. With substantial assistance from international donors, the country is rebuilding its war-damaged and neglected infrastructure, investing in health and education and laying the policy and institutional foundation for continued economic growth. An important part of this foundation includes laws governing land and forest use that recognize traditional community rights while also encouraging investment.

While Mozambique has grown very rapidly since the end of its civil war, more than half of its population remains poor. Mozambique's agricultural sector consists primarily of small farmers with limited amounts of unproductive land under rainfed cultivation. Most irrigated land is used by a small number of large commercial farmers. Large tracts of land, including former colonial farms, have generally not been parceled out, and there are very few medium-sized farms.

About a quarter of Mozambique is forested, and the country's legal framework supports traditional uses of forest and forest resources, the harvesting of timber and non-timber forest products, and the creation of community-based forest enterprises. However, the regulatory framework tends to favor national and international companies over small and medium businesses, and rural populations have high incentives to operate informal forest-product-based businesses and engage in unsustainable exploitation practices.

Mozambique has significant deposits of titanium, aluminum, coal and diamonds, but the civil war prevented development of the minerals sector. Historically, a large percentage of mining has been done by small-scale and artisanal miners, and the mining law supports small-scale enterprises. Nonetheless, the majority of small-scale miners operate without effective environmental and health safeguards. The government is investing in major public infrastructure to facilitate the growth of the mining sector, and foreign investors have responded by constructing large-scale coal, aluminum and titanium operations. It is not clear what impact sector growth may have had on artisanal and small-scale operators, and there is little evidence of government efforts to support those smaller enterprises.

KEY ISSUES AND INTERVENTION OPPORTUNITIES

- **Implementation of land law.** The dual objectives of Mozambique's progressive land law – support for rural community land-rights and encouragement of private investment – have been unevenly implemented. The legal framework provides communities with some degree of tenure security over their land, but despite significant public awareness building efforts, a majority of the thousands of rural residents are unaware of their land rights as communities and as individuals. Those who are aware of their rights almost uniformly lack the financial and technical support necessary to assert those rights effectively. Communities that lack that support are ill-equipped to delimit their land, prepare development plans, consider investment opportunities or meaningfully engage in negotiations with prospective investors. Smallholders who lack such support are unable to demarcate and register their land rights, limiting their ability to participate in programs, access credit and defend their rights against third parties. Experts who have been engaged with the design and

development of the land law in Mozambique have called for an integrated approach to implementation that develops and provides the services that communities must have to realize the benefits of their land rights within the overall context of rural development. The Millennium Challenge Corporation (MCC) is funding a comprehensive Land Tenure Services Project that includes work on policy and legislative review through the Land Policy Consultative Forum, which was established by Government of Mozambique (GOM) decree in October 2010. MCC's project also includes activities designed to help the GOM implement the Land Law, including support for public outreach and dispute resolution.

Donors can help the GOM's implementation the Land Law by extending ongoing efforts into new areas of the country or developing complementary activities. For example, donors could help develop a services center model for delivery of the services that communities and their members need in order to recognize and benefit from their land rights in the larger context of rural development. Donors could help private actors and entities provide communities and individuals with information about the land law, natural resource inventories, land delimitation services, legal aid, help with program development, and training in negotiation and partner-investor relations. Specific attention should be given to developing and offering services tailored to women and marginalized groups.

- **Dispute resolution.** Mozambique has a system of about 1600 community courts that evolved separately from the formal court system. The community courts are highly accessible, and community members often elect to bring land disputes to these forums even though the adjudicators do not receive professional training and the procedures and outcomes often lack consistency. *Donors who have been assisting the government in strengthening its formal court system and improving judicial administration are well-suited to help to help support and deepen ongoing efforts to develop effective mechanisms and forums to resolve land disputes. Donors could, for example, assess the community court system and options for strengthening the informal system and linking it to the formal system. Particular attention should be paid to community court functions related to land disputes, including the courts' use of formal documentation and records, the use of community courts by non-community members, and the relationship of community court officials with government counterparts.*
- **Registering land use rights related to small and medium-size holdings.** Until recently, most donors engaged in land issues in Mozambique have supported public awareness building and delimitation of community land. Less attention has been paid to small and medium-size holdings, whether the right-holder seeks individualized rights to land within a land use right (*direito de uso e aproveitamento das terras* or DUAT) held by a community, or seeks access to agricultural land through a land use right granted by the government. These land use rights (DUATs) are equivalent under the law, and delimitation of the landholding and registration of the DUATs will create a public record of the individual plots and will help farmers qualify for investment loans and participate in carbon-sequestration and reforestation projects. MCC's Land Tenure Services Project includes an activity to assist smallholders and individuals register their DUATs. *Donors could help support and extend the MCC activity or provide complementary activities with a particular focus, such as supporting the rights of women farmers or particular smallholder enterprises.*
- **Land law revision.** The GOM has convened a Land Policy Consultative Forum to help the legislative reform process. The 2007 USAID-commissioned study identifies several areas in which legislative reforms are indicated, including removing constraints on transfer of rural land rights, developing an appropriate authorization fee for land grants, compensating investors for real property improvements at the end of use-periods, and transitioning the government from a land management role to a land administration role by limiting its involvement in reviewing compliance with exploitation plans. In addition, MCC funding is supporting an initiative to seek first registration of statutory land rights in an effort to recognize those rights prior to awards of DUATs to investors, and members of civil society are calling for development of a law on community consultations to help improve the consultation process. *Donors can continue to provide technical assistance and support to the government as it engages in the process of collecting input on legislative reforms and proposed language and revisions.*
- **Forestry sector SME development.** Mozambique has significant forest resources and a substantial number of small and medium enterprises (SMEs) operating in the forestry sector. The vast majority, however, operate outside the formal law in an effort to avoid the requirements imposed on forestry concessions, which are burdensome to small operators. *USAID and other donors experienced in working with SME programs could assist government plans to support SMEs by helping revise the legal framework to encourage SMEs to move into the formal sector. This revised legal framework should seek to ensure that appropriate safeguards are in place to support sustainable use of forest resources and participation of all community members – especially women and marginalized groups – in forest enterprises.*

FOR MORE RECENT LITERATURE:

<http://usaidlandtenure.net/mozambique>

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SUMMARY

Mozambique's independence from Portugal in 1975 was followed by 16 years of civil war. The war displaced millions of people, destroyed infrastructure and prevented significant investment in several sectors, including agriculture and mining. As the country emerged from the war and entered a period of national reconstruction, the government gave substantial attention to creating legal frameworks governing land, and these frameworks recognized traditional community rights while encouraging investment. The resulting legislation was progressive: land is owned by the state, and communities and good-faith occupants have perpetual use- rights to land. Grants of 50-year renewable use-rights are available at next to no cost for investors and others seeking land, subject to approved exploitation plans. Investors are required to consult with communities before obtaining concessions for agribusinesses and other development.

To date, most of the population are not yet benefiting adequately from the legal reforms, and more than half are poor. Most of the country's producers are small farmers primarily growing for their own consumption. Mozambique's farmers have an average of 1.8 hectares of rainfed land and use limited inputs. Productivity is low, and most production is subsistence farming. Most irrigated land is used by a small number of large commercial farmers, primarily growing sugarcane. The law requires government approval of land uses and transactions in land use rights, which restricts development of a formal land market. Former colonial farms and large tracts of long-term land use rights purchased for investment have generally not been parceled out. In many cases, private investors purchased rights under very favorable terms and hold large portions of land for future use or speculation. The government's failure in many instances to require investors to prepare exploitation plans and demonstrate their ability to develop the land, coupled with lax enforcement of the Land Law's audit provisions, have contributed to the underutilization of land. The state has also maintained large holdings intact, hoping to attract large commercial enterprises that will bring large amounts

BOX 1. MACRO INDICATORS

	Year	Score
Population, total	2008	21,780,614
Population ages 0-14: 15-64: 65+ (% of total)	2008	44.1: 52.7: 3.2
Population growth (annual %)	2008	1.9
Rural population (% of total population)	2008	63.2
Population density (people per sq. km)	2008	27.7
Literacy rate, adult total (% of people ages 15 and above)	2007	44.4
Land area: Surface area (sq. km)	2008	786,380: 799,380
Arable land (% of land area)	2005	5.6
Agricultural land (% of land area)	2005	61.8
Permanent cropland (% of land area)	2005	0.3
Irrigated land (% of cropland)	2003	2.6
Forest area (% of land area)	2005	24.5
Nationally protected areas (% of total land area)	2006	5.8
Renewable internal freshwater resources per capita (cubic meters)	2007	4,693.0
Annual freshwater withdrawals, agriculture: domestic: industry (% of total freshwater withdrawal)	2007	87.3: 11.1: 1.6
Crop production index (1999-2001 = 100)	2005	108.8
Livestock production index (1999-2001 = 100)	2005	101.5
GDP (current US\$)	2008	9,735,328,201
GDP growth (annual %)	2008	6.5
Agriculture: industry: manufacturing: services, value added (% of GDP)	2008	28.3: 25.6: 15.1: 46.1
Ores and metals exports: imports (% of merchandise exports: imports)	2007	64.0: 0.3
Aid (% of GNI)	2007	24.4

Source: World Bank, 2009

of capital investment to the region. As a result of these practices, the country has few medium-sized (10–100 hectare) farms.

The land legislation has provided communities with some degree of tenure security, but in general the law has been inadequately implemented in most areas. Local officials and communities are often unaware of the law governing the land rights of communities and individuals. Registration of community and individual occupancy rights is voluntary, and few communities and individuals with occupancy rights to land have had the financial and technical support necessary to delimit their land and register their rights. As a result, third parties often do not have notice of those rights. In many cases, the required consultation between investors and communities has been met only in form, not substance.

In cities, the majority of residents live in informal settlements with limited services. The land legislation provides a basis for long-term residents to formalize their rights, but most are unaware of the process, and those who are aware consider the cost prohibitive. Meanwhile, the informal market in land use rights is active.

Mozambique has not yet taken advantage of its abundant surface and groundwater resources. Civil war, neglect, and lack of technical capacity have caused destruction and decay of water distribution and irrigation infrastructure. Rural areas have only 30% water coverage and water quality is poor. The country has significant potential for irrigation, especially in the central provinces.

About a quarter of Mozambique is forested, and the legal framework governing the sector is reasonably progressive. Local communities have rights to use the forest and forest resources for traditional uses, and they can obtain licenses to harvest timber and non-timber forest products. The legislation supports community forest management and some projects (with significant and ongoing NGO and donor support) have created successful community-based forest enterprises. In general, the regulatory framework works against small and medium businesses, and most operate in the informal sector, leaving the most valuable forest concessions to national and international companies.

Mozambique's minerals sector suffered from lack of investment during the years of civil war and has only recently begun to be developed. The country has significant deposits of several minerals, including titanium, aluminum, coal and diamonds. The government is concentrating on development of infrastructure, such as railways, port expansion and creation of electronic data sources to support the industry. Mozambique is a candidate country for the Extractive Industries Transparency Initiative.

I. LAND

LAND USE

Mozambique has a total land area of 786,380 square kilometers, comprising three geographic areas: (1) a plateau and highland region running from the northern border to the Zambezi River (27% of total land); (2) a middle plateau region that extends south of the Zambezi River to the Save River (29%); and (3) a low-lying coastal belt running south from the Save River to the southern border (44%). The northern and central areas of the country have tropical and subtropical climates; the south is dry semiarid steppe and arid desert climate. The dominant vegetation is woodland, which covers roughly 78% of total land. About a quarter of the country's woodlands and forests are generally free from cultivation. Average annual deforestation is 0.3%. Protected areas comprise 6% of Mozambique's land area (World Bank 2009a; FAO 2005a; ARD 2002).

The country's population is estimated at 21.8 million (2008), 63% of whom live in rural areas. During the 16 years of civil war that followed the country's independence from Portugal in 1975, much of the large rural population migrated to urban centers and across international borders to escape the violence. Following the declaration of peace in 1992, many returned to their rural homes, relying on subsistence farming, forest products and the development of cash-cropping for their livelihoods (Hatton et al. 2001; ARD 2002; FAO 2005a)

Mozambique's 2008 GDP was US \$9.7 billion. Agriculture accounts for 28% of GDP, industry 26% and services 46%. An estimated 54% of Mozambique's population lives below the poverty line (2008). Life expectancy has fallen to 41 years, primarily due to the prevalence of malaria, HIV/AIDS, tuberculosis and waterborne disease. The national adult HIV and AIDS prevalence rate is over 16%, with four provinces registering rates above 20% (World Bank 2009a; UNDP 2009; USDOS 2010a; USDOS 2010b; FAO/WFP 2010).

Agricultural land makes up 62% of Mozambique's total land area. Cultivated area was estimated at between 3.8 and 5.3 million hectares in 2002, with the large range attributed to inconsistent definitions, use of woodlands for cultivation and lack of data. About 3% of cropland is irrigated. An estimated 90% of producers (three million peasant families) are smallholders cultivating rainfed land. Most smallholder production (63%) concentrates on staple food crops (maize, pigeon peas, cassava and rice) for household consumption. The balance of production is cash crops such as cotton, tobacco, oil seeds and tea (17%) and vegetables (4%). Tree crops, especially coconut and cashew, are grown by small farmers and are a significant source of income in coastal areas of Inhambane and Gaza provinces north of Maputo. Much of the country's soil is nutrient-poor. Most smallholders have limited inputs, and yields are generally low. Smallholders also raise cattle, pigs, chickens and goats, although cattle production is limited by the prevalence of the tsetse fly in two-thirds of the country (ARD 2002; World Bank 2009a; FAO 2005a; USDOS 2010; FAO/WFP 2010).

The remaining 10% of producers are commercial farmers producing crops for the national market, agro-industry and export. Major agricultural exports are cotton, cashew nuts, sugarcane, tea and cassava. Large commercial operations cultivate an estimated 100,000 hectares, including about 40,000 hectares of industrial sugarcane plantations (35,000 hectares of which is under irrigation) near sugar mills in the southern Maputo and Sofala provinces (ARD 2002; USDOS 2010; FAO/WFP 2010).

Mozambique's coastline is 2515 kilometers long, and a wide range of marine fish products are available and marketed. The domestic market is mainly confined to the marine and coastal areas, although aquaculture production is increasing. Fishing accounted for 2% of GDP in 2008 (FAO 2010).

Thirty-seven percent of Mozambique's population lives in urban areas. An estimated 75% of urban residents live in unplanned informal settlements, many without access to safe water and sanitation. Most urban residents are engaged in subsistence agriculture at the outskirts of cities or in the informal labor market. About half the urban population lives on less than US \$1.25 a day (UN-Habitat 2009; UN-Habitat 2008; World Bank 2006; Negrão 2004).

LAND DISTRIBUTION

Mozambique has an ethnically diverse population, with about 70% of the population belonging to one of three ethnicities. The Makhuwa (or Makua-Lomwe, 37% of total population) live primarily in the regions north of the Zambezi River. The Tsonga (23%) tend to live in the regions south of the Zambezi River, while the Shona (9%) live mostly in the central region. Smaller groups include the Makonde, who live primarily along the Rovuma River on the northern border with Tanzania, and the Yao (or Ajawa), who live in Niassa Province in the country's northwest region. Other groups include the Nguni, Maravi and Chopi. Europeans, Indians and Euro-Africans comprise less than 1% of the population (USDOS 2010a; Joshua Project 2010).

Landholdings in Mozambique tend to be either smallholdings (averaging 1.8 hectares) or very large concessions on the scale of hundreds and thousands of hectares. There are relatively few medium sized (10–100 hectare) landholdings. Land ownership does not appear to be disproportionate among ethnic groups, and Mozambique does not have a minority group controlling large amounts of productive land. At Independence in 1975, the vast majority of Portuguese colonialists left the country, and the state nationalized large colonial farms and attempted to organize peasant producers into agricultural collectives. Most farms failed to meet expectations for productivity. In an effort to stimulate agricultural production, the government offered the farms and other large tracts of land at little or no cost to investors who had the capital and experience to operate commercial enterprises in a country with limited infrastructure and a long civil war. In the late 1980s through early 1990s, the state awarded an estimated 28,000 square kilometers in concessions. Concessions were generally awarded without regard for customary rights and land use practices of local communities. In some cases, entire villages were included within concessions granted to third parties (Tanner 2002; Norfolk and Tanner 2007; NAI 2007).

Following the end of the civil war in 1992, the country entered a period of reconstruction, and demand for land grew on the coastlines and in areas with fertile soil, market access and good roads. State concessions were readily available. Investors were not required to demonstrate their financial ability to develop the land and paid only administrative fees for rights to use the land. Reliable comprehensive information regarding large land concessions is limited, but records from 2001 to 2003 indicate that the government received 5500 applications for land during that period, covering 3.9 million hectares, which was about 90% of the total land under cultivation in

the country. The government accepted most of the applications, but the amount of land covered by the accepted applications was not recorded. The extent to which the concessions encompassed land held under customary law by communities is unknown but presumed to be a significant percentage (NAI 2007; Tanner 2002; Norfolk and Tanner 2007).

LEGAL FRAMEWORK

Article 109 of Mozambique's 2004 Constitution states that all ownership of land vests in the state and all Mozambicans shall have the right to use and enjoy land as a means for the creation of wealth and social well-being. The Constitution further provides that the state shall recognize and protect land rights acquired through inheritance or by occupation, unless there is a legal reservation or the land has been lawfully granted to another person or entity (GOM Constitution 2004).

The 1997 Land Law reasserts the state's ownership of land and provides that individuals, communities and entities can obtain long-term or perpetual rights to use and benefit from land. The Land Law was drafted with the objective of supporting and protecting the land rights of communities, women and smallholder farmers while also encouraging investment. The Land Law protects the customary rights of communities to their traditional territories and recognizes rights obtained through traditional and good-faith land occupancy as equivalent to rights obtained by government grant. Community land use rights are legally equivalent to rights granted by the

government to individuals and entities. Women and men have equal rights to hold land. Nationals have unrestricted rights of access to land; foreign individuals and entities must have local residence and an approved investment plan. Land use is free for family uses, local communities, the state, and smallholder associations and cooperatives (GOM Land Law 1997; Norfolk and Tanner 2007).

The 1998 Rural Land Law Regulations provide rules for the acquisition and transfer of use-rights. The process for identifying and recording the rights of local communities and good-faith occupants is governed by the 2000 Technical Annex to the Land Law Regulations (Norfolk and Tanner 2007).

Decree No. 1/2003 established new provisions for the National Land Registry and Real Estate Cadastre, procedures for the registration of inherited land use rights and secure rights to customary rights-of-way (GOM Decree 1/2003).

The 2006 Urban Land Regulations apply to existing areas of towns and villages and to areas subject to an urbanization plan. The regulations govern the preparation of land use plans, access to urban land, rights and obligations of owners of buildings and DUAT holders, and transfer and

BOX 2. LAND TENURE INDICATORS		Score
<u>Millennium Challenge Corporation Scorebook, 2009</u>		
— Land Rights and Access (Range 0–1; 1=best)		0.647
<u>International Property Rights Index, 2009</u>		
— Physical Property Rights Score (Range: 0–10; 0=worst)		4.8
<u>World Economic Forum's Global Competitiveness Index, 2008-2009</u>		
— Property Rights (Range: 1–7; 1=poorly defined/not protected by law)		3.5
<u>World Economic Forum's Global Competitiveness Index</u>		
— Ease of Access to Loans (Range: 1–7; 1=impossible)		2.2
<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)		3.8
<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)		141
<u>World Bank Group, World Development Indicators, 2009</u>		
— Registering Property-Number of Procedures		13
— Registering Property-Days Required		50
<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)		30
<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)		4.13
— Protection of Property Rights (Range 0-10; 0=lowest degree of protection)		4.72
— Regulatory Restrictions of Sale of Real Property (Range 0-10;0=highest amount of restrictions)		6.54

registration of rights (GOM Urban Land Regulations 2006).

TENURE TYPES

The state owns all land in Mozambique. Land ownership rights may not be sold, mortgaged or otherwise alienated (GOM Land Law 1997).

The Land Law recognizes a use right to land, known by the Portuguese acronym, DUAT (*direito de uso e aproveitamento dos terras*). DUATs can be held individually or jointly. Two types of DUATs are available. The rights are classified according to the means by which they are obtained:

DUAT obtained by occupancy. DUATs can be obtained through: (a) occupancy of land according to customary norms and practices; or (b) good faith occupation of land for 10 years. Local communities have DUATs to their traditional territory. DUATs obtained by occupancy are perpetual and do not require plans for exploitation of the land. Delimitation and registration is voluntary: communities are not required to delimit or register their land to assert their DUAT. However, pursuant to a 2008 resolution, if local communities want to register their DUAT, they must prepare an exploitation plan. Members of local communities can also obtain DUATs for individual plots within the community land. Local communities can also grant third parties, such as investors, rights to use land within their territories (GOM Land Law 1997; Akesson et al. 2009).

DUAT obtained by grant. The state grants DUATs for renewable periods of 50 years. There are no minimum or maximum sizes of land available by government grant. Grant applicants must prepare an exploitation plan. The state reviews the application and issues a provisional grant for either two years (to foreign persons or entities) or five years (to nationals). The level of state review is based on the extent of land sought: for parcels up to 1000 hectares, the Provincial Governor issues the approval, the Ministry of Agriculture approves grants of 1001 – 10,000 hectares, and grants of more than 10,000 hectares are approved by the Council of Ministers. If the exploitation plan is fulfilled, the grant becomes final. If the exploitation plan is not fulfilled, the land reverts to the state. In that event, the state receives rights to any improvements made to the land; the grantee has no right to compensation (GOM Land Law 1997).

Any investment made on the land, as opposed to the land itself, is private property, and can be bought, sold or mortgaged. Urban tenements (defined as the structures and land that serve them in cases where the source of income depends principally on the structure rather than the land) can be freely transferred. When the structures or improvements on land are transferred to a buyer, the rights in the land (DUAT) also transfer to the buyer. Rural tenements (defined as a demarcated portion of land and structures where the source of income depends principally on the land) require state authorization for transfer of the DUAT (NAI 2007; Norfolk and Tanner 2007).

SECURING LAND RIGHTS

Land use rights are obtained by inheritance, occupation, state grant, purchase or lease. In urban Mozambique, most residents access land through the land market (62%), either obtaining land on the formal market by buying or leasing use-rights held by DUAT-holders or, more commonly, obtaining use-rights on the informal market. Other means of accessing land include customary rights systems such as inheritance or borrowing (19%), state allocation (13%) and occupation (6%). Most rural land is held by communities, which have perpetual DUATs based on their traditional occupancy. Foreign persons and entities with local residences may obtain DUATs in connection with approved investment projects (GOM Land Law 1997; UN-Habitat 2009; UN-Habitat 2008; World Bank 2006; Negrão 2004).

Applicants for state grants of land use rights file applications with the local, provincial or national government authority, depending on the size and location of the land. The applicant must submit a land development plan and participate in a community consultation process to determine if the land is occupied. If the land is occupied, the applicant must consult with the local community regarding the planned land development as part of the application. The state is required to process applications for DUATs within 90 days. If the application for a DUAT is accepted, the land must be surveyed and boundaries determined, and the DUAT issued must be registered in the cadastral register maintained by the National Directorate of Land and Forests (DNTEF) of the Ministry of Agriculture. The DUAT is subject to revocation if the holder does not develop the land within specified periods (two years for foreigners, five years for nationals). The state's judgment regarding land development is discretionary, and enforcement of the requirement is uneven. The question of land occupation is

controversial: communities and NGOs supporting community rights contend that little if any land is unoccupied in Mozambique, while government reports suggest at least 7 million hectares is available because it is vacant or underused (Norfolk and Tanner 2007; Kanji et al. 2005; Adams and Palmer 2007; AfDB 2008).

In 2009, the government cancelled a DUAT provisionally granted to the ProCana group in 2007 for development of 30,000 hectares for production of biofuel in Massingir District, Gaza Province. Only 800 hectares had been developed at the time that the DUAT was cancelled. The project involved relocation of people, loss of community grazing land, dependence on limited local water sources, and loss of a planned wildlife reserve – issues that resulted in a significant amount of negative media-coverage and limited the speed of the land development. The government’s cancellation of the DUAT was, perhaps, less evidence of the government’s systematic analysis of investor compliance with exploitation plans than an indication of poor tenure analysis and lack of planning prior to granting DUATs for commercial investment, and the government’s vulnerability to local and international pressure (Weltz 2009; Gunter 2010).

The requirement that investors consult with communities before obtaining a DUAT is a legislative effort to protect customary rights to land and encourage local participation in rural development. In practice, investor consultations with communities have tended to be substantively limited and have had little positive impact on planning for development. Challenges to local participation include community lack of knowledge regarding their land rights and the investor’s obligations, low participation in decision-making of some community members, including women and marginalized members, and lack of capacity among local government officials charged with managing the process. Communities that have had the benefit of NGO support have fared better than most in this process. Civil society has called for development of a law on community consultations in order to improve how the consultations are conducted and help prevent disputes and tension between communities and investors (Cotula et al. 2009; Norfolk and Tanner 2007; Dobrilovic 2011).

Registration is intended to secure land use rights by making the DUAT public. DUATs obtained by grant are registered under the Land Law and Regulations in the cadastral register maintained by the National Directorate of Land and Forests (DNTF) of the Ministry of Agriculture. Occupancy-based DUATs can also be registered with DNTF to give notice of rights, but need not be registered for the holder to assert and defend the use-rights to occupied land (Norfolk and Tanner 2007; GOM Land Law 1997; GOM Land Regulations 1998).

DUATs can also be registered under the Real Estate Registration Code in the deed-based registry maintained by the Ministry of Justice. Registration of land rights under the Registration Code is only required for mortgages, although registration of DUATs in both systems is required by banks extending land-secured credit. Registration under the Registration Code requires eight procedures, an average of 42 days and payment of 11% of the value of the property registered. Registration of a DUAT obtained by grant creates a presumption of legitimacy of rights, and a registered DUAT obtained by a grant will prevail over a conflicting unregistered DUAT. The vast majority of DUATs registered under the Registration Code are held by wealthy and corporate right-holders because knowledge of the requirement is limited and the process requires the applicant to have an identity card, which many residents do not have and can acquire only by navigating additional procedures. The actual registration process is considered expensive and inconvenient because the registry office is either in Maputo or the provincial capital (NAI 2007; Norfolk and Tanner 2007; World Bank 2010a).

DUATs based on occupancy need not be registered to be recognized and protected by law. If the occupation is challenged, the occupant must provide proof of customary or long-term occupancy. Such proof may be in documentary form or introduced by the oral testimony of other community members. Although unregistered land-use rights obtained by custom are widely recognized and viewed as akin to ownership, land rights acquired by occupation remain invisible on official maps, and government officials may be unaware of the extent of rights held by communities and individuals. The increasing demand for land by investors makes such “invisible” rights vulnerable to allocation to third parties by the state. Delimitation of community land and recording of the DUAT gives notice of rights obtained through occupancy. As of 2009, an estimated 258 rural communities (of the several thousand rural communities nationwide) had delimited their land. Costs vary by the extent and location of land, but as of 2003 the average cost of delimitation and registration of community land was estimated at about US \$8000 (CTC 2003; Chilundo et al. 2005; Norfolk and Tanner 2007; Tanner 2002).

INTRA-HOUSEHOLD RIGHTS TO LAND AND GENDER DIFFERENCES

In general, Mozambique's formal law supports and protects women's rights to land. The 2004 Constitution provides for the equality of men and women in all spheres of political, economic, social and cultural life and prohibits discrimination on the basis of sex. The 2004 Family Law reasserts the equality of women, provides that both women and men have rights to administer marital property and have equal rights to devolve and inherit property. The 1997 Land Law gives women the right to participate in all land-related decisions and the right to register DUATs individually. However, the primary formal law governing inheritance and succession is out of step with these progressive laws; the Succession Chapter of the 1966 Portuguese Civil Code is based on paternalistic principles and favors men over women for inheritance and management of marital property. Formal courts have continued to apply the succession law to divest women of rights despite the more recent and contrary pronouncements in the country's constitutional and statutory law. Revisions are being made to the succession law in order to harmonize it with the Constitution, the 1997 Land Law and the 2004 Family Law (GOM Constitution 1990; GOM Land Law 1997; Schroth and Martinez 2009).

Revision to the succession law alone is unlikely to improve women's rights to inherit land in Mozambique. Despite the progressive framework supporting the equality of women, customary law and traditional practices continue to dictate most women's social

and economic rights in Mozambique, including access to land and access to secure tenure. The formal law allows for joint ownership of marital assets and the right to register land individually, but few women (and especially very few rural women) have any assets in their names. Women generally obtain access to land through their natal families until they are married and through their husbands after marriage. Under customary law, women

generally do not inherit land. In patrilineal societies in the southern regions, land passes from fathers to sons and, in the absence of male offspring, to close male relations such as uncles. Even in matrilineal societies, which can be found in the northern regions of the country, land passes to male members of the female line (Schroth and Martinez 2009; Hendricks and Meagher 2007; Alfai 2007; van den Bergh-Collier 2003).

Without assets, and dependent on relationships with men for access to land, women are extremely vulnerable. Widows and divorced women in both patrilineal and matrilineal areas risk losing their homes and access to agricultural land. In some cases, families will provide land, but the women will be considered socially subordinate and the land will often be of poor quality. Village leadership is generally male-dominated and may offer women little support (Schroth and Martinez; Alfai 2007; van den Bergh-Collier 2003).

Other cultural barriers also negatively affect women's land rights in Mozambique. In general, women have lower literacy and lower levels of formal education than men, and are less likely to be aware of their rights. Women are often excluded from or poorly represented in local governance bodies and thus have more limited access to information. Women tend to have less experience with administrative procedures and are less likely to invoke the legal system to support their rights. However, when legal assistance and support is provided to women, widows in particular benefit. In a 2006 program operated by the Association of Women Legal Professionals in Nampula, the most common cases brought were widows seeking land and housing taken when their husbands died; in most cases, widows received some benefit as a result of the intervention (Schroth and Martinez 2009; Waterhouse 2001; Alfai 2007; Hendricks and Meagher 2007).

LAND ADMINISTRATION AND INSTITUTIONS

The National Directorate of Land and Forests (DNTF) of the Ministry of Agriculture has responsibility for land administration and cadastre. DNTF works through a variety of provincial and district services. The general (rural) or urban (municipal) cadastre services issue DUAT documents. For rural land, the Provincial Service of Geography and Cadastre (SPGC) has primary operational responsibility (Norfolk and Tanner 2007; CTC 2003).

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)	0.5
— Women's Access to Property other than Land (Range: 0-1; 0=no discrimination)	0.5
— Women's Access to Bank Loans (Range: 0-1; 0=no discrimination)	0.5
<u>FAO: Holders of Land Classified by Sex, 1993</u>	
— Percentage of Female Holders of Agricultural Land	...

In general, Mozambique's land administration bodies lack the necessary capacity to perform their statutory functions. In some cases, land administration personnel have maintained a top-down or investor-focused approach and have failed to accept the participation of local communities in land management and development decision-making. In some areas cadastral authorities at provincial and district levels appear to believe that they are primarily responsible for serving the interests of investors. In other cases -- and particularly in local offices -- personnel have not received adequate training and support. Most public resources allocated to land administration are devoted to supporting outside investment in urban and rural areas; relatively few resources are available to help communities delimit land and prepare for and conduct consultations with investors (Norfolk and Tanner 2007; CTC 2003; Dobrilovic 2011).

NGOs and donors have played a significant and ongoing role helping the government implement the 1997 Land Law. With the exception of a small government-sponsored pilot program conducted at the time the Land Law was passed, NGOs and donors are primarily responsible for building community awareness of land rights and helping communities and local governments delimit community land and register community DUATs. However, most holders of individual DUATs based on occupancy have not delimited their land or registered their rights; many lack information about their rights and cannot afford the costs of delimitation and registration (CTC 2003; Chilundo et al. 2005; Kanji et al. 2005).

LAND MARKETS AND INVESTMENTS

Demand for land in Mozambique is increasing, especially in urban and peri-urban areas, rural areas with access to markets and infrastructure and areas favorable for tourism development. In urban areas, land use rights (DUATs) can be transferred with buildings and other improvements. In rural areas, government permission is required to transfer a DUAT. Relatively few people transfer land use rights on the formal land market. In urban areas, many parties are unaware of the requirement of registering land transactions, the cost of registering transactions is high (11% of property value), and the process is cumbersome. In rural areas, the requirement of government approval of the transfer invites a highly discretionary government evaluation of land exploitation, which brings with it the risk that the DUAT will be forfeited. In addition, the Land Law does not specifically provide for partition of land under a DUAT, creating uncertainty as to whether the holder of a DUAT can transfer a portion of subject land (Norfolk and Tanner 2007; Tanner 2002; NAI 2005; World Bank 2010a).

The informal market in land use rights is active in urban and peri-urban areas, and several studies suggest the number of transactions is increasing, especially in areas with basic infrastructure and urban growth. Individuals with DUATs or informal rights evidenced by sales agreements are transferring all or some portion of their rights through rental agreements, loans and subdivisions. Land speculation is occurring in some areas. Those with assets buy plots, secure their rights through construction of a substandard house or building, and sell the plots for higher prices. There is less evidence of an informal market in agricultural land, but the modest capacity of land administration offices and lack of registered DUATs covering smallholdings suggests that an informal market exists and will presumably grow, absent efforts to support the development of a formal market in rural land (Norfolk and Tanner 2007; NAI 2007).

COMPULSORY ACQUISITION OF PRIVATE PROPERTY RIGHTS BY GOVERNMENT

Article 82 of the Constitution provides that the government can expropriate land only for reasons of public necessity, utility or interest. The government must pay fair compensation to the landholder (GOM Constitution 2004).

Under the 1997 Land Law, the right to use property may be lost in four circumstances: (1) failure to carry out the investment plan in connection with which the DUAT was issued; (2) revocation for reasons of public interest; (3) expiration of the term of use, if any; and (4) renunciation by the titleholder. In cases of revocation for reasons of public interest, the government is required to pay "fair indemnification and/or compensation." The law does not specify procedures or standards for establishing fair compensation. Where use-rights have been lost, the rights revert to the state (GOM Land Law 1997, Art. 18).

One report states that compensation amounts and procedures for land expropriations are often agreed to by the principal stakeholders on a negotiated case-by-case basis. Anecdotal evidence suggests that in some cases

displaced people have received land and assets of equal size and value to those taken. There is considerable doubt, however, whether such cases are representative of the norm (Swedish Geological AB 2003).

LAND DISPUTES AND CONFLICTS

Land disputes are relatively common in rural areas where concessions have been granted within or near a community's traditional territory. Because the Land Law does not require communities to register their rights, local governments and investors often fail to recognize the extent of community land and the nature of community land uses, and community consultations are often ineffective. The lack of knowledge of community rights and lack of understanding among parties necessary to investment projects is a leading cause of disputes. Other causes for disputes in rural and urban areas include boundary disputes, inheritance and intra-family rights and land transactions (CTC 2003; Unruh 2001; Hendricks and Meagher 2007; Kanji et al. 2005).

Mozambique's formal court system has jurisdiction over land-related disputes. The country's system includes an administrative court to hear challenges to state administrative actions, and district courts, provincial courts and a supreme court. Particularly at the higher levels, the formal court system suffers from lack of skilled administrative personnel, lack of qualified judges, and inadequate facilities and equipment. The litigation process is lengthy (the average contract enforcement action consumes more than 1000 days), requires parties to be represented by lawyers and includes high fees (10% of the estimated value of the claim). The judicial system has historically lacked independence and has been plagued with corruption. Since the early 2000s, more focus has been placed on legal education, and judicial training programs are helping to reform the judiciary at all levels (CTC 2003; AfDB 2008)

The Judicial Patronage and Assistance Institute (IPAJ) is a state institution created in 1994 to provide pro bono legal assistance to the poor. IPAJ has offices in the provincial capitals but has lacked necessary financial support to ensure adequate staffing and skill (Alfai 2007).

Mozambique also has a system of about 1600 community courts that evolved separately from the formal court system, and these handle civil and criminal matters, including land disputes. Community courts are staffed by elected community members. No training is required, and community courts apply a local and often highly individual and inconsistent blend of formal law, customary law and other principles. There is no established link between community courts and the formal judicial system; parties to disputes are free to initiate an action at the district court without exhausting remedies available in community court (Hendricks and Meagher 2007; Ikdahl et al. 2005).

Most of the population uses informal mediation and conciliation processes to resolve disputes. Elders, traditional leaders, neighborhood heads, district officials and many NGOs provide informal dispute-resolution services. Some bodies, such as district administrators, provide arbitration and adjudication services, and some provinces have special dispute-resolution commissions supported by technical advisors on issues such as delimitation processes. Most disputes are resolved in these forums, particularly in rural areas where access to another forum would require significant travel and expense (Alfai 2007; CTC 2003; Hendricks and Meagher 2007).

KEY LAND ISSUES AND GOVERNMENT INTERVENTIONS

In 2007 the government established a Community Lands Initiative (*Iniciativas de Terras Comunitárias*, or ITC) with a dedicated land fund. The purpose of the initiative is to strengthen the land rights of rural communities and support the development of the technical capacity of communities to manage land sustainably. The fund supports community land delimitation and development of projects. The funded activities are implemented by NGOs, the private sector and government bodies. The ITC initially focused on Cabo Delgado, Manica and Gaza provinces and with MCC funding expanded to include Niassa, Nampula and Zambezia provinces. The fund is demand-driven and able to respond to particular needs, a flexibility that potentially allows it to support other identified land-related public needs, to the neglect of community land delimitation (De Wit and Norfolk 2010; Nhancale et al. 2009).

With support from UN-Habitat, the Ministry of Housing and Public Works, the Ministry of State Administration and the National Association of Municipalities are jointly conducting a 36-month, US \$1.5 million pilot program

to streamline registration of rights to plots in informal settlements in Maputo, Manica and Nacala (UN-Habitat 2008).

Government support to the agricultural sector focuses on two main strategies: the Food Production Action Plan (*Plano de Acção da Produção Agrícola*, PAPA, 2008–2011) and the Strategic Plan for Development of the Agricultural Sector (*Plano Estratégico de Desenvolvimento do Sector Agrário*, PEDSA, 2009–2019). These initiatives aim to increase domestic production of main food staples and integrate the markets of different regions to strengthen agricultural value-chains. The strategies are consistent with the more general Action Plan for the Reduction of Absolute Poverty (PARPA II, 2006–2009), which prioritizes increasing agricultural productivity and integrating the sector into the rest of the economy. None of the strategies appears to include components addressing agricultural land access or land tenure security (FAO/WFP 2010).

DONOR INTERVENTIONS

USAID was an initial supporter of land initiatives in Mozambique and played a critical role in guiding the development of the 1997 Land Law. Immediately following the end of civil war, USAID funded a program of applied research on land-tenure issues, conducted by the Land Tenure Center at the University of Wisconsin. That work, in combination with research conducted by the FAO, helped guide the creation of the country's Inter-Ministerial Commission for the Revision of Land Legislation. The FAO worked with the government on the participatory process that led to the drafting of the Land Law and has been a strong strategic partner supporting the implementation of the law. The FAO has helped train local government officials and NGOs on the legislative framework and delimitation process and prepared a highly accessible manual for communities. The FAO also helped establish and support the Centre for Legal and Judicial Training, which provides training to NGOs and local governments to implement and enforce the land law and assist local communities to: delimit community land; register their DUATs; and negotiate with investors for development of natural resources on community territory. The program also includes training of judges and prosecutors on: basic constitutional rights; the use of land and other rights to promote equitable development; and improved conflict-resolution and application of the rule of law (Tanner 2005; Adams and Palmer 2007; CTC 2003; NAI 2005).

USAID's FY11 Mozambique programs are supporting the development of a more market-oriented, productive agricultural sector through development and improvement of primary trade and transportation corridors, knowledge-sharing and market development. Although USAID's program does not have specific land-access and tenure security components, USAID is coordinating with the US Millennium Challenge Corporation (MCC), which is executing a US \$507 million compact with Mozambique's government. The compact includes a US \$39 million Land Tenure Services Project that includes attention to: improving the policy framework; upgrading land information systems and services; helping communities and individuals register land rights; and improving the accessibility of land for investment. MCC, DFID, and European donors have created a multi-donor land fund that supports community land delimitation and registration (USDOS 2010b; MCC n.d.; MCC 2007; MCC 2009; Adams and Palmer 2007).

The U.S. Government's Feed the Future Implementation Plan for FY10 identifies the need to assist the government of Mozambique with land-tenure policy reform designed to encourage investment through increased support for women's rights to land and reduction in state control over land management. The US Government identified MCC as the lead agency for the effort (USG 2010).

The African Development Bank (AfDB) has a program to assist the government in the development of the judicial and administrative systems relating to land rights, in part to assist the government in resolving land-related disputes and speed up the processing of applications for land use rights. The AfDB has also been assisting the government in updating the land registration system, but progress has not been reported (AfDB 2006; AfDB 2008).

2. FRESHWATER (LAKES, RIVERS, GROUNDWATER)

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Mozambique has 104 identified river basins and shares nine major river basins with other countries. The basins mostly carry water from the central African highland plateau to the Indian Ocean. The rivers have a highly seasonal, torrential flow regime with high waters during three to four months and low flows for the remainder of

the year. In addition, Mozambique shares two large lakes with neighboring Malawi: Lake Niassa (Lake Malawi) and Lake Chirua (Lake Chilwa) (FAO 2005a).

Mozambique has abundant groundwater (17 cubic kilometers produced annually); annual internal renewable water resources are estimated at 100 cubic kilometers, and the country receives another 117 cubic kilometers of surface water annually, primarily from the Zambezi River, which enters Mozambique from the border of Zambia and Zimbabwe. With an installed capacity of 2060 megawatts, the Cahora Bassa Dam on the Zambezi River in Tete Province is the largest hydroelectric plant in Southern Africa (FAO 2005a).

The country receives an average annual rainfall of 1032 millimeters, which varies widely across the country and from north to south. The north and central regions receive up to 2000 millimeters of rainfall per year, the coast receives 800–1000 millimeters, while the southern inland and border areas receive as little as 500–600 millimeters per year (FAO 2005a; NEPAD 2004).

The main source of water in the country is surface water, although groundwater is relied on for drinking-water in urban centers and many rural areas. Agriculture accounts for 87% of water use, while 11% of water withdrawals are for domestic uses and 2% for industry. The country has an estimated irrigation potential of 3.1–3.3 million hectares. About 120,000 hectares are currently equipped for irrigation, although much of the infrastructure is in disrepair. About 55,000 hectares are actually irrigated, mostly in large schemes (over 500 hectares) devoted to sugarcane (35,000 hectares total), rice and vegetables and primarily in Maputo and Gaza provinces. Most of the irrigation potential is in the northern and central regions (60% of the potential is in Zambezi province). The southern regions have the greatest need for irrigation, but only a small share of suitable land (World Bank 2009a; FAO 2005a; FAO/WFP 2010).

About 43% of Mozambique's population (30% of rural residents) have access to safe water (2009). Most rural water is provided through piped village systems and boreholes with hand pumps. At any given time, up to 35% of the rural systems are not functioning because of poor management, and donor-financed water and sanitation sector interventions often fall quickly into disrepair. An estimated 36% of the population obtains water from unprotected wells, and cholera, dysentery and other waterborne diseases are chronic problems (*AllAfrica* 2010; USAID 2006; Water-Technology 2010).

LEGAL FRAMEWORK

Mozambique's 2004 Constitution provides that all water resources are owned by the state. Echoing the Constitution, the 1991 Water Law provides that all water is a state-owned public good. The state is responsible for managing water resources for the benefit of the entire population. Priority for water-use is given to human consumption, sanitation and environmental needs. Water management is based on a river basin approach: water in the same basin should be managed to benefit all states involved, and research, exchange of information and project development should be prepared and conducted jointly (FAO 2005a; FAOLex 1991).

In 1995, the government adopted the National Water Policy, the primary objective of which is to guarantee a sustainable water supply and proper sanitation. The policy reformed and clarified the administrative, regulatory and development roles within the water supply and sanitation sector. In combination with the Water Tariff Policy, the National Water Policy established a commercially-oriented regime designed to support cost recovery and long-term sustainability of the water supply system. The policy is primarily focused on urban areas, but does encourage private-sector participation in water supply and distribution, including existing irrigation and hydroelectric schemes (FAO 2005a; USAID 2006).

The National Irrigation Policy and its Implementation Strategy were adopted in 2002. The policy states that:

1. Water resources, although renewable, are not inexhaustible and therefore it is necessary to manage them in a sustainable manner.
2. Water is an economic resource that deserves an appropriate economic and social value.
3. Water and irrigated land are public assets that may only be used by license.

4. The government will focus on ensuring integrated water management for multiple purposes in agriculture and rural development with a special emphasis on irrigation systems for the family sector so as to transform what is primarily subsistence farming to production that is gradually integrated in the market.
5. The government should promote decentralization and greater participation of the beneficiaries, communities and the local authorities in the integrated water resources management.
6. The role of women in agriculture must be acknowledged and supported through their participation as beneficiaries of irrigated agriculture.

(FAO 2005a).

TENURE ISSUES

In Mozambique, all water is a state-owned, public good, and all infrastructure, bridges, dams and canals are constructed and owned by the state. The 1991 Water Law has a rational-use-based approach to the resource: the government manages water resources for the benefit of the population. Domestic and small-scale water-use is generally free; large-scale users require permits and concessions (Leestemaker 2009).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The National Water Directorate (DNA) within the Ministry of Public Works and Housing (MOPH) is in charge of overall planning and management of the country's water resources and the provision of water supply and sanitation services in both rural and urban areas. In urban areas, the DNA delegated authority over systems covering the country's cities as part of the 1995 National Water Development Program. The Water Supply Investment Fund (*Fundo de Investimento e Património do Abastecimento de Água*, FIPAG) is a public entity that leases out operations and management to private entities. The Water Regulatory Council (*Conselho de Regulação do Abastecimento de Águas*, CRA) is an independent regulatory agency that sets the tariff regime to ensure a viable and sustainable water sector. The institutions and regulatory framework established have generally been considered successful (USAID 2006).

Regional Water Administrations are basin authorities responsible for water development and management. Mozambique's five Regional Water Administrations control irrigation systems and collect water fees within their jurisdictions. The Regional Water Administrations have administrative, organizational and financial autonomy but report to the DNA (FAO 2005a).

The government body charged with coordinating activities relating to irrigation and drainage is the National Directorate for Agricultural Hydraulics (DNHA) within the Ministry of Agriculture and Rural Development (MADER). The DNHA performs studies, executes agricultural hydraulics projects and supports smallholder irrigation development. The Fund for Agricultural Hydraulics Development (FDHA) has responsibility for promoting and funding agriculture-related water projects (FAO 2005a).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Mozambique's water supply and sanitation (WSS) sector has implemented policy and institutional reforms that have increased its capacity to provide urban WSS services. Reforms have improved water-supply regulation, dependability and quality, as well as the financial viability of many urban service providers. The achievements have largely depended on outside donor funding, however, and reforms have not reached rural areas. An evaluation by the AfDB identifies continuing issues as including: (1) the ability of the sector to mobilize funding through growth of implementation capacity; (2) adoption of monitoring and evaluation systems; (3) reduction of dependence on outside funding sources by increasing cost-recovery strategies; and (4) balancing urban and rural subsector budget allocations and expenditures (AfDB 2009).

With the assistance of donors, the government created a water and sanitation sector working group to help coordinate government implementation of water and sanitation projects and donor initiatives. A technical subgroup, the Water and Sanitation Group (*Grupo de Água e Saneamento*, GAS), includes representatives from major sector donors, international NGOs and private-sector firms. GAS is a forum to discuss and evaluate sector progress (USAID 2006).

In 2009 Mozambique received a US \$27 million loan from the AfDB to fund the Niassa Provincial Towns Water and Sanitation Project. The project, which will be implemented over four years beginning in 2010, is designed to improve access, quality, availability and sustainability of water supply and sanitation services in two provincial towns, Cuamba and Lichinga. The project includes support for institutional development, rehabilitation and extension of the water supply scheme (AfDB 2009).

DONOR INTERVENTIONS AND INVESTMENTS

USAID is investing in interventions that integrate water and sanitation into existing PEPFAR, health and hygiene programs. As part of the 5-year compact between the MCC and the Government of Mozambique (GOM), the Rural Water Supply Project (RWSP) aims to reduce the incidence and severity of water-related diseases and the burdens associated with collecting water. Approximately 600 rural communities in the northern provinces of Nampula and Cabo Delgado may participate voluntarily in the project, which will increase access to groundwater through safer and more accessible sources. The US \$203 million Water and Sanitation Project is focusing on six cities and two mid-sized towns in Zambezi, Nampula and Cabo Delgado provinces (USDOS 2010b; MCC n.d.).

The World Bank's 5-year (2007–2012) US \$30 million Mozambique Water Services and Institutional Support Project aims to increase water-service coverage in the cities of Beira, Nampula, Quelimane and Pemba and to establish an institutional and regulatory framework for water supply in smaller cities and towns. The project is financing: investments in the four cities under the responsibility of FIPAG; capacity-building and institutional and operational support to DNA; and operational support to CRA. The capital works program for the Water Services and Institutional Support Project is progressing well; as of the end of 2009, the network expansion was about 38% complete (135.5 kilometers) (World Bank 2007; World Bank 2009c).

The related US \$6.5 million Water Sector Contracts Output-Based Aid (OBA) for Coverage Expansion Project (2007–2011) is a World Bank-funded project designed to increase piped-water access to over 468,000 poor Mozambicans living in five cities by providing an output-based subsidy to private operators after their delivery of functioning yard-taps and demonstration of continued service for a period of time. Approximately 29,000 yard-taps will be installed, each of which will serve three households. As of the end of 2009, project staff believed that the objective of increasing yard-taps connections for Maputo will be achieved because a private operator was in place and the connections are demonstrated to be sustainable. However, in the other four cities the private sector has expressed little interest and the project may require restructuring (World Bank 2009b; World Bank 2009c).

3. TREES AND FORESTS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

About 25% of Mozambique's land area (30 million hectares) is covered with forest. Most of the forest is miombo woodlands, a dry tropical forest dominated by open broadleaved forest with grassy understory. Most of the tall and medium forests are located in the northern and central regions of the country. Other closed-canopy forests can be found along rivers and in mountainous areas along the western border with Zimbabwe and Malawi. The drier southern part of the country is primarily savanna grassland and thorn scrub vegetation with less than 20% tree cover. Mangrove forests cover an estimated 400,000 hectares along the coast. The mangroves provide critical habitat for fish and crustaceans and have been subject to significant degradation around Beira, Maputo and the Zambezi Delta. About 10% of the country's forests are in protected areas (ARD 2002).

Both the formal and informal sectors are engaged in production of timber, non-timber forest products and forest services. As of 2007, the country had granted 156 timber concessions covering about 1.6 million hectares. The country derives 4% of GDP from forest products. Forests also make a significant contribution to the local economy and livelihoods. Fuelwood from forests supplies about 80% of Mozambique's energy, and bushmeat is a major source of protein. Rural households sell fuelwood, charcoal, forest foods, honey and medicinal plants. Forests provide a source of income and subsistence that is especially critical in times of flooding, drought, conflict and unemployment (FAO/WFP 2010; Nhancale et al. 2009; ARD 2002; De Wit and Norfolk 2010).

Fire is traditionally used to manage forestland and vegetation and to clear land for agriculture. Countrywide, almost 40% of Mozambique's forests are affected by fire each year; in the northwestern and central parts of the country, 74% of forests are burned every year. An estimated 90% of fires are intentionally set by humans. The

practice is controversial: fire is a traditional method of adding nutrients to the soil, revitalizing forest species and preparing land for cultivation. However, fire is often uncontrolled and can cause significant forest degradation while also opening the forest to illegal logging and charcoal production. In 2002, the government estimated that 50–70% of logging was illegal, and that only 1–5% of charcoal production was registered, costing the government US \$4–6 million annually in lost revenue (World Bank 2008; FAO 2008a; FAO 2008b; Del Gatto 2003).

LEGAL FRAMEWORK

The 1999 Forestry and Wildlife Law and Forestry and 2002 Wildlife Regulations set out the principles and basic rules governing the protection, conservation, and sustainable use of forest and wildlife resources. The following principles guide the interpretation and implementation of the Forestry Law.

1. Mozambique's natural forest and wildlife resources are the property of the state.
2. Economic and social development policies and policies on the preservation and conservation of biodiversity should involve local communities, the private sector and civil society in general, with the objective of achieving sustainable development.
3. Assessments of impact should precede introduction of animal and plant species and modern technologies into the forest.
4. Anyone damaging the flora and fauna must rectify or compensate for the damage.
5. Conservation and sustainable use of the forest shall be within the framework of decentralization and consistent with customary practices.
6. The private sector shall be encouraged to participate in the management, conservation and exploitation of forest resources with a view to increasing added value and stimulating greater development for local communities.
7. The country will promote forest research and education, including exchange of knowledge between local communities to build their capacity to manage and conserve forest and wildlife resources.
8. Mozambique will work with other countries and international organizations for the protection, conservation and management of forest and wildlife resources.

(GOM Forestry Law 1999; Nhancale et al. 2009).

The Forestry Law recognizes three forest types: (1) conservation forests, which are within protection zones and subject to special management regimes; (2) productive forests, which have plant formations with high forestry potential and are located outside protection zones; and (3) multiple-use forests, which have plant formations with low forestry and are located outside protection zones (GOM Forestry Law 1999).

Protection zones are delimited areas maintained for the preservation of biodiversity and fragile ecosystems. National parks, national reserves and zones of historical and cultural use and value are within protection zones. National parks are total protection zones, and all forest and agricultural exploitation, mining, hunting and any other use that modifies the landscape or may disturb the flora and fauna is prohibited. National reserves have all the protection of national parks, except that some forest resources may be exploited, subject to license requirements and a management plan, and provided the use is not detrimental to the purpose of the reserve. Forestland and resources within zones of historical and cultural use and value may be used in accordance with the customary practices of the local communities (GOM Forestry Law 1999).

The Forestry Law promotes the development of plantations for conservation and for commercial, industrial and fuel-producing purposes. The Forestry Law requires parties causing forest degradation or deforestation to rehabilitate the area in accordance with applicable regulations (GOM Forestry Law 1999).

The Forestry Law authorizes the government to impose penalties – including fines, imprisonment, and compulsory restoration of damaged forestland – for violations of the law and supporting regulations. Forest

burning is punishable by imprisonment. However, enforcement of prohibitions and restoration requirements is weak (GOM Forestry Law 1999; Nhancale et al. 2009; Norfolk 2004).

TENURE ISSUES

Forestland and forest resources are the property of the state. Individuals and groups can obtain rights to use and benefit from the forest through occupancy or specific authorization. All rights to use and benefit from the forest require an exploitation license, except where exploitation is for personal consumption. Local communities have the right to use forest resources to meet subsistence needs without payment of any fee, and can designate forest areas of cultural significance (GOM Forestry Law 1999).

Two types of licenses are available: simple licenses and forestry concession contracts. Simple licenses are available to national operators and local communities and allow for exploitation in productive and multiple-use forests for commercial, industrial or fuel-producing purposes. The terms of simple licenses are subject to species, quantity and time limits set by the forest department and must be consistent with the forest management plan. Applicants for simple licenses must present proof of technical capacity, a hand-drawn map of the proposed area, an estimate of timber resources and proposed extraction volume, and a record of consultation with local communities in the area. There are 630–1266 simple license holders in Mozambique (GOM Forestry Law 1999; Nhancale et al. 2009).

Forestry concession contracts are available to individuals, corporate entities and local communities for exploitation of productive and multiple-use forests. Applications require preparation of a forest resources inventory, a topographical map and evidence of the technical and industrial capacity to process timber within the concession area. Applicants must also consult with local communities and prepare a management plan. Concession contracts are limited to a 50-year period, with 5-year renewals. Studies suggest that the requirements for concessions are not rigorously adhered to by forestry officials. There are an estimated 166 forest concession operators in the country (GOM Forestry Law 1999; Nhancale et al. 2009).

The Forestry Law provides that local communities will receive a percentage of any amounts received by the state from the exploitation of forests and wildlife. Current regulations set the percentages at 20% of forestry tax revenue the government derives from concessions and 50% of the value of fines paid for forest law violations. In practice, however, communities report that they do not receive the legislated benefits, or that they end up losing benefits they previously enjoyed, because companies reduce their access to forest resources to offset the required 20% tax (GOM Forestry Law 1999; FAOLex 2010; Del Gatto 2003; Norfolk 2004; CTC 2003).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The National Directorate of Forests and Wildlife (DNFFB) of the Ministry of Agriculture and Rural Development is responsible for Mozambique's forests and forest resources. The Provincial Forests and Wildlife Services Office under the control of the Provincial Agricultural Directorate is responsible for cutting licenses, forest concessions and implementation of forestry laws at the provincial level (FAO 2005b; FAO 2004; FAO 2007).

The Forestry Law establishes local resource management councils (*Conselhos Locais de Gestão de Recursos Florestais e Faunísticos* or *Comités de Gestao Participativa*) composed of representatives of the local community, private sector, forestry-related associations and government officials. The purpose of the councils is to protect, conserve and promote the sustainable use of forest and wildlife resources. The councils are charged with responsibility for ensuring that local communities benefit from the exploitation of forest resources. The law specifically permits the state to delegate forest-management responsibilities to local communities, associations or the private sector (GOM Forestry Law 1999; Del Gatto 2003).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Mozambique's National Strategy for Forestry and Wildlife, introduced in 1997, provides for community-based forest management and supports local job-creation through requirements for local processing of forest products. The strategy envisions local communities forming Community Management Committees (*Comite de Gestao Comunitaria*, CGC), which were intended to represent community interests regarding forest resources and enter into consultations and negotiations with the forestry department and investors on behalf of the local community.

The strategy has remained in place for more than a decade; CGCs have been created in some areas, and local small and medium forest enterprises developed. However, the strategy has not included capacity-building for local forestry officials or local communities and as a result has remained largely unimplemented. Enforcement of requirements for community consultation and participation in forest management is generally poor. Moreover, the government has not supported legislative efforts to provide communities with commercial rights to forest resources (Nhancale et al. 2009).

Mozambique's Action Plan for Reduction of Absolute Poverty (PARPA I and PARPA II) have identified the forest sector as an area for potential growth and contribution to GDP, with an emphasis on sustainability through the use of production-technologies that conserve the environment. PARPA II (2006–2009) also recognizes the role that micro, small and medium enterprises can play in community development and economic growth. The Plan identifies the need for institutions supporting SMEs; analysts also note the importance of simplifying the regulatory scheme governing forest concessions and eliminating barriers to the competitiveness of SMEs to operate in the global forest-products market (such as lack of technical expertise, equipment and collateral) to encourage informal operators to move into the formal sector (Nhancale et al. 2009; IMF 2007).

DONOR INTERVENTIONS AND INVESTMENTS

USAID's FY11 country plan includes support for conservation of natural areas and promotion of private investment in plantation forests. As an example, USAID has supported the government's Mountain Restoration Project in Mount Gorongosa, a 600-square-kilometer forest that is home to hundreds of bird and plant species, some of which can be found nowhere else in the world. The forest is threatened by slash-and-burn agricultural practices. The reforestation project has doubled the number of tree nurseries, conducted awareness-building meetings with more than 8000 local people and replanted trees on 50 hectares of land on the mountain. Overall, USAID projects have been responsible for restoring an estimated 400,000 hectares of forest in Mozambique (USDOS 2010b; USAID n.d.).

FAO and the Government of the Netherlands provided early support for the National Directorate of Forests and Wildlife (DNFFB)'s development of community forestry in the late 1990s and early 2000s. With the assistance of the FAO, the African Safari Lodge Foundation, NGOs and donors, communities in forest areas have delimited their land and established contractual relationships with investors, such as hunting concession and tourism operators, in exchange for benefits such as a share of revenue, employment opportunities and use of forest products. In Sofala province, community land rights are registered over a significant part of the Gorongosa National Park, as well as in buffer areas. In the Massingir region of Gaza province, the Swiss NGO Helvetas assisted the local community in delimiting its land and establishing the Covane Community Lodge, which operates as a community-developed tourist facility (De Wit and Norfolk 2010; Mansur and Zacarias 2003).

Mozambique has several community-based carbon sequestration projects. One of the largest involves 9800 hectares of community land bordering a national park in Sofala Province. In exchange for avoided-deforestation, reforestation and agroforestry activities, community members with individualized plots are receiving employment opportunities and a share of carbon revenue paid over seven years. The project also funded the delimitation of the community land. The project manager, a private company operating several projects in Mozambique, receives one-third of the carbon revenue (Envirotrade 2010).

4. MINERALS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Mozambique has abundant quantities of natural gas, coal, aluminum, titanium and heavy sands. Currently exploited minerals include titanium, tantalum, marble, gold, coal, bauxite, granite, limestone and gemstones. The country produces relatively significant amounts of cement and natural gas, with further exploration for natural gas underway. The country also has known deposits of pegmatite, platinoids, uranium, bentonite, iron, cobalt, chromium, nickel, copper, granite, fluorite, diatomite, emeralds, tourmaline and apatite (EITI 2010; AfDB 2006; Yager 2009).

Mozambique's mining sector has historically been poorly developed, a result of the long civil war which limited foreign investment and the development of geological data. The sector operates well below potential: in 2008 mining contributed only about 5% of GDP. Recognizing the sector's potential, the GOM has developed large-

scale aluminum, natural gas and titanium projects in recent years. These include the Southern Africa gas pipeline, the Moma Heavy Sands titanium mine and the Moatize coal mine. Other large projects under development include the Mphanda Nkuwa hydropower project and a gas-fired power plant in Temane. With construction of the US \$2.1 million aluminum smelter in Maputo Province (a joint Australian-South African project) Mozambique became one of the world's largest exporters of aluminum, and aluminum accounts for half of the country's manufacturing output (EITI 2010; World Bank 2008; *Business Monitor* 2009; *African Economic Outlook* 2010).

Mozambique has a large artisanal and small-scale mining sector. The formal law supports the sector by restricting activities to nationals, designating specific areas for artisanal and small-scale mining, and imposing regulations on working conditions. However, at least in some areas, the regulations are not enforced, and the majority of the sector (as much as 70% in central Mozambique) operates informally. Absent government control, artisanal miners are subjected to exploitative working conditions, including health hazards from the use of mercury to extract gold from mineral ore. In addition, soil and water sources are polluted with heavy metal and chemicals used for processing. Technicians working for entities that buy gold from artisanal miners are also exposed to levels of mercury vapor up to 35 times higher than WHO guidelines (Blacksmith Institute 2010; Doneyne et al. 2009).

LEGAL FRAMEWORK

Mozambique's 1990 Constitution and 2002 Mining Law provide that all mineral resources are the property of the state. The Mining Law states that all mining activities must be conducted in accordance with rights granted in the form of permits and licenses, and all mining activities shall be conducted with recognition of registered and unregistered land use rights recognized by the 1997 Land Law. Mining operations have priority over other land uses whenever the economic and social benefits of mining operations are higher. Land right-holders must be compensated for loss of land use rights and any damage caused to their land or improvements as a result of the mining operation (GOM Mining Law 2002).

The Mining Law classifies mining activities for purposes of determining standards for environmental management of mining operations. Basic environmental rules must be followed for all activities, and more extensive activities require environmental impact studies and plans (GOM Mining Law 2002).

Mozambique's Mining Law and regulatory framework do not require state participation in mining operations. Mining operations are subject to an annual surface tax and a production tax based on the value of the output (GOM Mining Law 2002; *Business Monitor International* 2009).

TENURE ISSUES

The 2002 Mining Law provides for the following license and rights.

1. *Reconnaissance licenses* are available to national and foreign individuals and collectives. Reconnaissance licenses are available for periods of two years, and are not renewable and not transferable.
2. *Exploration licenses* are available to national and foreign individuals and collectives. Exploration licenses are granted for 5-year periods and are renewable and transferable.
3. *Mining concessions* are available to any collective, person or company registered to do business in Mozambique. Applicants for mining concessions must obtain environmental licenses and land use permits. Mining concessions are granted for the economic life of the mine, subject to a maximum of 25 years. Mining concessions include rights to use the land necessary to conduct operations and use land for agriculture necessary for personal consumption. Mining concession holders have the right to sell or dispose of mineral products resulting from operations.
4. *Mining certificates* are available for small-scale mining operations undertaken by national and foreign individuals and collectives. Mining certificates are issued for periods of two years and are renewable for successive 2-year terms.
5. *Mining passes* are restricted to Mozambique nationals. The state designates certain areas as suitable for unsophisticated exploration, extraction and processing methods and permits mining by

those holding mining passes. Mining passes are granted for periods of 12 months and are renewable but not transferable. Holders of mining passes can conduct small-scale mining operations.

(GOM Mining Law 2002).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The Ministry of Mineral Resources and Energy (*Ministério dos Recursos Minerais e Energia*, MIREME) oversees mining activities, including the issuance of permits. The administering body within the Ministry is the National Directorate of Mines (*Direcção Nacional de Minas*, DNM). Environmental issues related to mining are the responsibility of MIREME and the Ministry for the Coordination of Environmental Affairs (*Ministério da Coordenação da Acção Ambiental*, MICOA), respectively (Swedish Geological AB 2003).

In 2009, the government established a state-controlled mining company, *Empresa Mocambicana de Exploracao Mineira* (EMEM). The principal objectives of EMEM will be: (1) exploring geological mining, production and trade of mining products; (2) advising, consulting and undertaking research, and (3) prospecting for mining resources (*Business Monitor International* 2010).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Government objectives for the mining sector during 2006–2010 are to: (1) substantially increase participation of the Mozambican private sector in mining activities; (2) attract increased private investment by strengthening the legal and fiscal regime; (3) conduct research and inventory of mineral resources; (4) promote improvement of the livelihoods of populations engaged in small-scale mining enterprises; and (5) ensure environmentally sustainable mining practices. The government has been successful in attracting foreign investment in large-scale mineral resource development projects. For example, an Australian company, Riverdale Mining, plans to invest US \$800 million in the development of a coal mining operation in Tete Province, and Brazil's *Companhia Vale do Rio Doce* (Vale) is investing an estimated US \$1.3 billion in a coal mining operation in the Maotize Basin, is anticipated to produce 40 million tons of coal a year. Several foreign companies are exploring for oil in the Rovuma Basin and in Sofala province (IMF 2007; *African Economic Outlook* 2010).

The government is addressing the need to develop mining infrastructure, including construction of railways and improvement of ports. The government is also taking steps to speed up the awarding of mining licenses by making maps and mining license data available online. The creation of an electronic database will streamline the process investors must navigate in order to determine the availability of areas for reconnaissance and exploration. However, there are no reports of how the government is progressing in its plans to improve the livelihoods of small-scale and artisanal miners or ensure environmentally sustainable mining practices (*Business Monitor International* 2009; *AllAfrica* 2008; IMF 2007).

The government is a candidate country for the Extractive Industries Transparency Initiative (EITI), a global initiative supported by a coalition of governments, private companies and civil society. By establishing and enforcing standards for companies to disclose what they pay and for governments to disclose what they receive from extractive industries, EITI helps countries manage mineral resources for the benefit of the entire population. With support from the World Bank, Mozambique has established a multi-stakeholder group to implement EITI in Mozambique. The country has until May 2011 to complete the validation process (EITI 2010; World Bank 2010b).

DONOR INTERVENTIONS AND INVESTMENTS

AfDB invested in the MOMA development —“mega-project” which includes a titanium mining component. AfDB and the World Bank have also supported capacity-building within the government institutions overseeing minerals development and Mozambique's participation in the EITI. The US \$158 million World Bank Beira Railway Project (2004–2011) is reconstructing the Sena railway line that links the port city of Beira to the coal mines in the central Tete Province, with branches to Malawi and Zimbabwe. The project is proceeding on a revised schedule; the first freight and passenger train has been successfully operated between Beira and Marromeu and the Zangue Bridge has been completed. Tariffs for coal and rail concessionaires have been negotiated and set (AfDB 2006; World Bank 2008c; World Bank 2010b; World Bank 2004; World Bank 2009c).

The environmental group the Blacksmith Institute is working with the Ministry for the Coordination of Environmental Affairs (MICOA), the United Nations Development Programme (UNDP) and the United Nations Industrial Development Organization (UNIDO) in Manica Province to identify and train staff who will train artisanal miners on techniques to reduce exposure to toxic mercury vapor and the release of mercury into the environment. The project introduced bowl- and pipe-shaped mercury retorts, technologies that reduce the exposure of operators to mercury fumes and minimizes the open release of mercury. The project is also building: an Amalgamation Centre to store amalgamation tailings; a small mill made of gas tanks to amalgamate their concentrates and avoid manual amalgamation; and a PVC filter that can be attached to a bicycle wheel to remove excess mercury from amalgams while avoiding manual contact with mercury (Blacksmith Institute 2010).

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