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## USAID COUNTRY PROFILE

### PROPERTY RIGHTS AND RESOURCE GOVERNANCE

# MADAGASCAR

#### OVERVIEW

Madagascar's unique wildlife and biodiversity resources have attracted both increasing numbers of tourists and significant donor investments over the last three decades. The Government of Madagascar committed itself in 1988 to a new focus on environmental management and, in 2003, to the goal of tripling protected areas from 1.6 million hectares to 6 million hectares by 2012. A new park management system was introduced in 2006. In addition to protecting Madagascar's ecosystems and biodiversity, the new system enabled local communities to benefit from conservation activities through revenue sharing and requirements that local guides be employed.

Agriculture, however, dominates the overall use of the island's land and water resources and provides the livelihoods for more than 60% of Madagascar's population of 20 million. The country is unique among African nations in having more than 40% of its cropland under irrigated rice production. Rainfed agriculture, including livestock production, is also important; cattle reportedly serve as a key source of wealth for a majority of farm households, though the importance of cattle is diminishing due, in part, to a lack of adequate pastureland. Average productivity in the agricultural sector is low, access to quality land is a challenge, and rural poverty rates are relatively high.

In 2005, the US government's Millennium Challenge Corporation (MCC) negotiated one of its first Compacts with Madagascar, identifying improvement of land administration and tenure security as one of three key areas of action. A *coup d'état* in March 2009 led to suspension of the MCC Compact as well as other donor support. Contributing to the change of government was an agreement made in November 2008 by the then-president with Daewoo, a South Korean company, to lease 1.3 million hectares of land, equivalent to half of Madagascar's arable land area. Not only did the area reportedly committed for the lease include a biodiverse forested region targeted for conversion to palm oil, the deal would also have converted rainfed lands used for livestock grazing into maize production. This arrangement, along with other issues, fueled the violent protests that led to the coup.

Madagascar has yet to hold elections following the *coup d'état*, and many donors have not re-engaged with Madagascar or have limited their funding to humanitarian interventions. This period of suspension has placed Madagascar in a difficult position, with little non-humanitarian aid being provided and a great loss of momentum on economic and environmental reforms. Reports of illegal logging activity indicate that the political crisis and lack of enforcement of conservation policies have opened the door to irreversible resource loss.

#### KEY ISSUES AND INTERVENTION CONSTRAINTS

US Government intervention and support to Madagascar in the areas of property rights and resource governance cannot resume until elections occur and a constitutional government is once again in place. *In the interim, the best course of action for the USG and other donors is, through relationships with partner non-governmental organizations, to monitor park/forest management and conservation efforts and encourage these partner organizations to work with communities for local sustainable management and maintenance of resources.*

FOR MORE RECENT LITERATURE:

<http://usaidlandtenure.net/madagascar>

Keywords: Madagascar, tenure, agrarian, land law, land reform, property rights, land conflicts, water rights, mineral rights

## SUMMARY

Madagascar has a diversity of terrain dominated by a central mountainous plateau encircled by a band of lowlands. The country has substantial freshwater resources, and almost a quarter of the land is forested. Most of the population is rural and engaged in cropping and livestock-rearing; cattle graze on over half of the island's land. River valleys and marshes support irrigated rice cultivation. Most farmers are owner-operators with about 1 hectare of land devoted to crops. Tenancy is common in most areas, and almost half of tenancies are sharecropping arrangements. Almost all urban residents live in informal settlements with limited services.

Madagascar's forests contain animals and plants that are found nowhere else on earth. The island's forests are threatened by the high demand for agricultural and grazing land, illegal logging, charcoal production, and mining. Madagascar's mineral sector has received increasing amounts of investment, and the sector is expected to grow despite the political instability. Significant onshore and offshore oil reserves are being explored in the western region with production scheduled to begin in 2018. The country is in the process of being validated under the Extractive Industries Transparency Initiative (EITI).

Madagascar's progress in managing its wealth of biodiversity and unique natural resources, and addressing the tenure-related issues that constrained agricultural success, was halted with a *coup d'état* that took place in March 2009. Contributing to the violent protests that led to the coup was public outrage at the government's grant or lease of large tracts of agricultural land to Daewoo of South Korea. This caused predictable resentment among the rural population, especially the 70% living below the national poverty line and relying on agricultural resources for their livelihoods. The coup, however, caused all donors to suspend support to the government.

Prior to the 2009 coup, the Government of Madagascar committed to the restoration and preservation of the country's biodiversity and forest resources, pledging to triple protected areas from 1.7 million hectares to 6 million hectares by 2012. The extensive National Environmental Action Plan, launched in 1991 was in its third and final phase when the government was overthrown. In 2005, Madagascar launched its National Land

### BOX 1. MACRO INDICATORS

	Year	Score
Population, total	2008	19,110,941
Population ages 0-14: 15-64: 65+ (% of total)	2008	43.3: 53.7: 3.1
Population growth (annual %)	2008	2.7
Rural population (% of total population)	2008	70.5
Population density (people per sq. km)	2008	32.9
Literacy rate, adult total (% of people ages 15 and above)	..	..
Land area: Surface area (sq. km)	2008	581,540: 587,040
Arable land (% of land area)	2005	5.1
Agricultural land (% of land area)	2005	70.2
Permanent cropland (% of land area)	2005	1.0
Irrigated land (% of cropland)	2003	30.6
Forest area (% of land area)	2005	22.1
Nationally protected areas (% of total land area)	2006	2.6
Renewable internal freshwater resources per capita (cubic meters)	2007	18,114.0
Annual freshwater withdrawals, agriculture: domestic: industry (% of total freshwater withdrawal)	2007	95.7: 2.8: 1.5
Crop production index (1999-2001 = 100)	2005	108.0
Livestock production index (1999-2001 = 100)	2005	104.4
GDP (current US\$)	2008	8,969,877,669
GDP growth (annual %)	2008	6.9
Agriculture: industry: manufacturing: services, value added (% of GDP)	2008	25.2: 17.3: 15.3: 57.5
Ores and metals exports: imports (% of merchandise exports: imports)	2007	3.3: 0.3
Aid (% of GNI)	2007	12.2

Source: World Bank, 2009

Program. The program included an effort to merge the country's formal and customary land tenure systems by recognizing and formalizing customary (usually individualized) land rights.

The Madagascar Action Plan (MAP), slated for implementation from 2007–2012 to manage economic and environmental policies for the country, was suspended for lack of support. The MAP focused on eight commitments: responsible governance; connected infrastructure; educational transformation; rural development and a green revolution; health, family planning and the fight against HIV/AIDS; high economic growth; respect for the environment; and national solidarity. It remains unclear whether the government will maintain these policies.

Prior to the suspension, donors and international and local NGOs supported a range of environmental and biodiversity projects throughout Madagascar. Management and regulation of forestry resources, as well as the expansion of protected areas, restricted rights of customary users to land and natural resources. Interventions were designed to strike a balance between dictating local land-use and resource exploitation and establishing effective community-based natural resource management programs.

## I. LAND

### LAND USE

Madagascar is the world's fourth-largest island, with a total land area of 582,000 square kilometers. The island is characterized by a high (1000–2000 meters) central mountainous plateau sloping to narrow coastal lowlands bordering the Indian Ocean to the east and Mozambique Channel to the west. About 70% of the island is agricultural land, and 22% is forest. Most of the country's cultivated land is found inland, although forests and hillsides throughout the country are often cleared for farming. As of 2007, nationally protected areas made up 3% of land area, and prior to the 2009 coup Madagascar announced plans to triple the amount of protected land (World Bank 2009a; CI 2005; FAO 1991; FAO 2005).

Seventy-one percent of Madagascar's population of 19.1 million people (2008) lives in rural areas. Sixty-two percent of the country's working population works in the agricultural sector, which produces mainly food crops such as rice, maize, cassava, and groundnut, and has a significant livestock subsector. In 2008, the country's GDP was almost US \$90 billion, portioned as follows: 25% agriculture; 17% industry; and 58% services (World Bank 2009a; World Bank 2007a; Frasin 2003; Kistler and Spack 2003; Tilghman et al. 2005).

Thirty percent of cultivated land in Madagascar is devoted to rice, which is the staple food. In the lowlands and alluvial marshes and plains, rice fields are irrigated. Shifting cultivation of rice is common on hillcrests and upper slopes. Families often hold an upland or hillside parcel that they plant rotationally, periodically leaving that land fallow or using it to grow cassava. Most parcels are eventually abandoned due to decreased soil fertility (Freudenberger and Freudenberger 2002; Barrett 2008; Kistler and Spack 2003; Freudenberger 1995).

Sixty-eight percent of Madagascar's land is savanna, with the largest expanses located in the western and southern parts of the island. Pastoralism is a significant use of land and economic activity in Madagascar. Though the importance of cattle is diminishing due to lack of available pasture, cattle-grazing occupies 55% of the country's land area, and cattle supply the primary household income for 60% of households (2000 data). In some areas, possession of cattle is a more significant determinant of wealth than land ownership. Historically, conservation circles have viewed pastoralists as a major cause of forest destruction and loss of biodiversity. More recent research suggests that while pastoralists may be responsible for loss of some forestland, they also protect forests resources to help support their livestock. In some areas pastoralists maintain pastures within forests, propagate trees, and protect areas against clear-cutting by agriculturalists (Kaufmann and Tsirabamba 2006; World Bank 2003; Freudenberger 1998; Rasambainarivo and Ranaivoarivelo 2003).

## LAND DISTRIBUTION

Ownership of agricultural land is a significant determinant of welfare in Madagascar. Seventy-seven percent of the rural population is below the national poverty line, and those without land are the poorest. Landholdings in Madagascar are highly fragmented. The average landholding is about 1 hectare, ranging from an average of 0.5 hectares for the poorest households to an average of 1.8 hectares for the wealthiest. Land quality also factors into unequal land distribution. Forty percent of the land held by the wealthiest households is irrigated, compared to 27% of the land held by poorer households. Inequality in landholdings appears to be increasing. Many wealthier households are enlarging the size of their landholdings through land purchases and encroachment of forestland while the size of landholdings of poorer households is shrinking. Poorer households are generally unable to invest in larger landholdings because they cannot afford inputs and are often forced to sell their land due to economic stress (IFAD 2007; Randrianarisoa and Minten 2001; Jacoby and Minten 2005).

Population pressures and decreasing soil fertility have resulted in increasing numbers of families moving into forest areas, causing land degradation from the construction of settlements and clearing and cultivation of forestland. Farmers burn vegetation on hillsides and grow rice and vegetables. As the population grows and land becomes scarcer, fallow periods between cultivation decrease, depleting nutrients in the soil, causing erosion, and reducing biodiversity (Freudenberger and Freudenberger 2002; World Bank 2007a; World Bank 2008; Styger et al. 2009).

An estimated 93% of Madagascar's urban residents live in informal settlements with limited or no services. Most urban land is held under customary tenure and residents do not have title recognized under formal law (UN-Habitat 2010).

## LEGAL FRAMEWORK

Madagascar has a pluralistic legal environment governing land. The country has a formal land tenure system that recognizes individual freehold tenure under formal law and a community-based customary land tenure system. The systems are governed by national-level, formal law and community-based rules that regulate access and use (Evers et al. 2006; Leisz 1998).

In 1989, the government made an effort to bring all land under the individual land tenure system. In an effort to prevent encroachment of protected areas, the 1989 Environmental Action Plan (EAP) mandated the replacement of the community-based tenure system with a formal land tenure system under which all land would be titled in the name of individuals. The program was suspended due to costs and the difficulty of reconciling incompatible formal and customary tenure systems (World Bank 1998).

In 2004, the Government of Madagascar launched its National Land Program. A 2005 Letter for Land Policy focused on four tasks: (1) restructuring and modernizing land ownership and topographical records; (2) improving decentralized land management by creating Land Management Offices at the *commune* (subdistrict) level authorized to issue and manage land certificates according to locally established procedures; (3) updating the legislation to incorporate the principles of decentralized administration and to formalize local landholdings; and (4) establishing a national land tenure training program to build local capacity. A Land Observatory was charged with monitoring progress (Teyssier et al. 2008; IFAD 2006).

Following the Letter for Land Policy, Madagascar passed a new land law in 2005, Law No. 2005-019. The 2005 Land Law classified land as state or private, delineated land tenure types, and provided procedures for land registration. The law specifically recognized the rights of individuals and groups to unregistered land,

<b>BOX 2. LAND TENURE INDICATORS</b>	
	<b>Score</b>
<u>Millennium Challenge Corporation Scorebook, 2009</u>	
– Land Rights and Access (Range 0–1; 1=best)	0.622
<u>International Property Rights Index, 2009</u>	
– Physical Property Rights Score (Range: 0–10; 0=worst)	4.6
<u>World Economic Forum’s Global Competitiveness Index, 2008-2009</u>	
– Property Rights (Range: 1–7; 1=poorly defined/not protected by law)	3.6
<u>World Economic Forum’s Global Competitiveness Index</u>	
– Ease of Access to Loans (Range: 1–7; 1=impossible)	2.5
International Fund for Agricultural Development, Rural Poverty Report, 2001	
– Gini Concentration of Holdings, 1981-1990 (Range: 0–1; 0=equal distribution)	0.80
International Fund for Agricultural Development, Rural Sector Performance Assessment, 2007	
– Access to Land, 2007 (Range: 1-6; 1=unsatisfactory access)	3.4
<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)	144
<u>World Bank Group, World Development Indicators, 2009</u>	
– Registering Property-Number of Procedures	7
– Registering Property-Days Required	74
<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)	50
<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)	3.32
– Protection of Property Rights (Range 0-10; 0=lowest degree of protection)	4.31
– Regulatory Restrictions of Sale of Real Property (Range 0-10;0=highest amount of restrictions)	3.65

which had previously been considered state land. The following year, the government passed Law No. 2006-031 (*Loi No. 2006-031 de 24 Novembre 2006 fixant régime juridique de la propriété foncière privée non titrée*), which allows individuals and groups asserting rights to untitled land to obtain certificates recognizing their rights from the local land administration office (*la Collective Décentralisée*). The 2006 law does not extend to grazing land (ROM Land Law 2005; ROM Law No. 2006-031; Teyssier et al. 2008).

Under customary law, land in Madagascar is perceived as the land of the ancestors (*tanindrazana*). Although land may become individualized, many believe that land must be titled or recorded in some fashion before an individual can claim perpetual ownership rights to the plot (Bellemare 2009).

## TENURE TYPES

Madagascar’s formal law recognizes state and private land.

State land is classified as either in the public domain or private state land. Land in the public domain is classified as natural (e.g., rivers, parks), artificial (e.g., man-made lake), or legal, which is land that could be in the private domain but by law has been classified as within the public domain (e.g., public utility). Land in the private domain of the state includes land titled in the government’s name, land that the government has expropriated in the public interest, and land that has never been subject to first occupancy rights or first ownership rights. Private land is owned by individual, entities, or groups (ROM Land Law 2005).

Madagascar’s formal law recognizes the following tenure types:

**Ownership.** Land can be owned by the state, individuals or groups. Landowners have the rights of exclusive possession and use of their land, and land is freely transferrable. Land can be held in ownership if it is titled or the ownership rights of an individual or group are recognized by a land tenure system and can be recorded. An estimated 90% of farmers are owner-operators (World Bank 2003; Bellemare 2009; ROM Land Law 2005).

**Leasehold.** Landowners are free to transfer their rights by lease. Leaseholds are subject to the terms of the parties’ agreement. Leasing is relatively common, with between 10% and 30% of land leased in cropping

areas. About 36% of tenancies are fixed-rate lease contracts. Agreements tend to be entered into for a single season, and many landowners make a practice of contracting with new tenants every two to three years in order to reduce the possibility of the tenants obtaining land rights (World Bank 2003; Bellemare 2009).

**Sharecropping.** An estimated 40–47% of all tenancies are sharecropping relationships. One study found that most sharecropping arrangements split the production with no sharing of inputs (Bellemare 2009).

**Concession.** Concessions can be granted on state land up to a period of 30 years. Concessions are subject to the government's terms regarding land use and can be revoked for noncompliance (ROM Land Law 2005).

The 2005 Land Law does not govern forestland, protected areas and land with natural resources subject to special legislation, or land set aside for investment (ROM Land Law 2005; Teyssier et al. 2008).

The majority of landholders in Madagascar assert rights to the land under customary law. Population pressure has led to individualization of customary land previously controlled as commons. Most land used for crops is individualized while pastureland is held communally (Teyssier et al. 2008; Jacoby and Minten 2006; Evers et al. 2006; Rasambainarivo and Ranaivoarivelo 2003).

## SECURING LAND RIGHTS

Roughly 90% of farmers own the land that they cultivate. Approximately 78% of farmers obtain their land through inheritance. Local land-sales and rental markets are increasingly active; in highly commercialized areas purchased plots can make up 40% of holdings. Some holders acquire land rights through use; individuals can apply for title based on *mise en valeur* (improvement) if they occupy and improve the land for a 10-year period. In some areas, village elders (*rayamandreny*) allocate plots to clan members. Pastureland tends to be held communally, with communities holding rights to areas they have used for generations. The formal law does not permit grazing land to be registered (World Bank 2003; Jacoby and Minten 2006; Rasambainarivo and Ranaivoarivelo 2003).

Some landholders received plots through government land allocations in the 1960s and 1970s. About 10% of plots in the Lake Alaotra basin, which was the subject of several government projects, including land titling, were received by farmers through a redistribution program (World Bank 2003; Jacoby and Minten 2006).

Foreigners can purchase and lease land in Madagascar, and the 2005 Land Law specifically excludes from its requirements land designated for investment. In 2004, Madagascar passed legislation permitting foreign land ownership (up to 2.5 hectares, according to USAID/Madagascar) conditional upon a US \$500,000 investment in Madagascar's real estate, banking, insurance or tourism industries. There has been extensive foreign investment in agricultural land in Madagascar; an estimated 800,000 hectares of agricultural land has been leased out to investors in the 2004–2009 period. In November, 2008, Madagascar's then-President entered into an agreement with the South Korean company Daewoo for a 99-year lease of between 1.3 and 1.9 million hectares of land. The plans for the land would have reportedly converted both forest and grazing land into cropland, with the production exported to South Korea. The lease, which was subsequently terminated, was one of the issues leading to the 2009 coup (Global Property Guide 2009; Cotula and Vermeulen 2009; Manunike 2009).

Tenure security varies in Madagascar depending on the strength of customary systems and conflicts between the customary systems and formal land laws. Most land rights held under customary tenure are clearly defined and understood. A prior government policy that did not recognize many customary landholdings was a growing source of tenure insecurity. Law No. 2006-031 (2006) recognizes private property rights to untitled, customarily held land. The legislation seeks to bring formal and informal tenure systems into alignment and thereby maintain or increase tenure security (Leisz 1998; Teyssier et al. 2008).

Madagascar established a Torrens land registration system during the colonial period. Registration under the system proceeded slowly and inefficiently. Records of land once formally registered have fallen out of date because landholders have shunned the costly formal registration process. Under the formal law, registration requires an average of 74 days to navigate seven different procedures. The cost is 9.7% of the property value.

Only roughly 7% of the country’s agricultural land is titled. The inefficiencies and costs of using the formal system lead most landholders to rely on an informal, local means of securing land rights, known as *petits papiers* (small papers). Although unregulated, the *petits papiers* system is surprisingly uniform throughout the country. Under this system, the current landowner drafts a document (the *petit papier*) describing the land and the origin of the land right and nature of the transaction. The local community recognizes and records the document (Leisz 1998; World Bank 2009b; Teyssier et al. 2008; Jacoby and Minten 2006).

The National Land Program (2005) partially formalized the *petits papiers* system by decentralizing the formal registration process. By the end of 2007, 39 *commune* land offices, many of which had only been operational a few months, logged 12,000 land certificate requests (compared to 1200 land titles issued annually under the former land registration system) (Teyssier et al. 2007).

Under the new land rights certification process, a Local Recognition Committee comprised of elected *commune* representatives and community representatives visits land sites to determine land rights and boundaries. Their findings are recorded in a report that describes the various land rights and any disputes. Based on this report, the office agent prepares land certificates for the mayor’s signature. These rights are systematically recorded in a Local Plan for Land Occupation (PLOF). However, concerns about the decentralized land certification process remain because *commune* workers are often poorly trained and there may be instances of favoritism for the well-connected (Teyssier et al. 2008).

Under formal law, both women and men have equal rights to land and natural resources. Land is typically titled in the name of the male head of household. This practice holds in many local communities that are implementing the decentralized land certification program (Leisz 1998).

#### INTRA-HOUSEHOLD RIGHTS TO LAND AND GENDER DIFFERENCES

Property ownership rights within families are governed by the Marriage and Family Code (1962, as amended). Under Law No. 90-014 (1990), if a legally married couple divorces, the property acquired during the marriage must be divided equally. Under customary law, the division is typically one-third of the property to the wife and two-thirds to the husband. Under the country’s formal inheritance law, when a spouse dies intestate, the wife is a distant eighth in the line of succession for the husband’s separate property or property obtained prior to marriage (R. Giovarelli 2009, pers. comm.).

<b>BOX 3. LAND AND GENDER INDICATORS</b>		<b>Score</b>
<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
— Women’s Access to Property other than Land (Range: 0-1; 0=no discrimination)		0
— Women’s Access to Bank Loans (Range: 0-1; 0=no discrimination)		0
<u>FAO: Holders of Land Classified by Sex, 1993</u>		
— Percentage of Female Holders of Agricultural Land		..

In much of the country, land traditionally passes from fathers to sons, though matrilineal inheritance exists within some groups. The 1968 Law on Inheritance provides that daughters and sons have the right to inherit equally. As land is divided among a larger number of heirs, equal inheritance of land may increase land fragmentation. As a result, equal inheritance is often viewed negatively (Evers et al. 2006; Freudenberger and Freudenberger 2002).

In practice, women most commonly access land rights via a male relative, such as their husband, father, or brother. If women inherit land from their parents, they typically leave it in the care of their brothers when they move to their husbands’ villages. If a woman is subsequently widowed or divorced, she may reclaim the land (Leisz 1998).

#### LAND ADMINISTRATION AND INSTITUTIONS

Under the National Land Program, officially launched in 2005, many land administrative functions were decentralized to the *commune* level. *Communes* have permanent Land Management Offices that hold land records and oversee land certification. Local Recognition Committees adjudicate local land rights, which are recorded in a Local Plan for Land Occupation (Teyssier et al. 2008).

At the national level, the Ministry of Agriculture, Livestock, and Fisheries (MAEP) oversees the National Land Program and decentralization. The Land Observatory was established in 2007 to: monitor and assess the progress of implementing the National Land Program; gather information to help inform future policy decisions on the Land Program; and measure the Land Program's impacts on different beneficiary sectors (Teyssier et al. 2008).

### **LAND MARKETS AND INVESTMENTS**

Land sale and land rental markets are increasingly active in Madagascar. The latest data (from the 1990s) indicates that 13% of households bought or sold land in the five years preceding the study, and 8–11% of cultivated land is rented out. In commercially oriented agricultural areas, the markets tend to be formalized, and a higher percentage of farmers (up to 40% in some areas) purchase their plots. In contrast, land markets in less developed rural, urban, and peri-urban areas are largely informal (Radison et al. 2008; Randrianarisoa and Minten 2001; Jacoby and Minten 2006).

In areas dominated by local land tenure practices, local rules govern who can buy and sell land. In these areas, landholders will typically only sell land if they are under financial stress. When land is sold, local practices favor purchases within families and local communities. In some cases, land may transfer to outsiders without approval from the traditional authorities. However, ownership claims derive their legitimacy through the support of communal institutions. Transactions are usually formalized with a handwritten sales receipt that is signed by the local authority (Jacoby and Minten 2006; Randrianarisoa and Minten 2001; Leisz 1998).

### **COMPULSORY ACQUISITION OF PRIVATE PROPERTY RIGHTS BY GOVERNMENT**

Under Madagascar's Constitution, land can only be expropriated for public use and expropriation is conditional upon prior payment of fair compensation. Under the 2005 Land Law, expropriated land becomes government land within the government's private domain, a classification that allows the government all ownership rights to the land, including transfer (ROM Constitution 1992; Reynolds and Flores 2009; ROM Land Law 2005).

If an area of rural land over 5 hectares is unused for five or more years, the land right reverts to the state without compensation (Evers et al. 2006).

### **LAND DISPUTES AND CONFLICTS**

Land disputes in Madagascar can be divided into two broad categories: (1) conflicts between private persons over land ownership at the local level, often between or within families; and (2) conflicts between the state and private persons over ownership and control of land and local resources. Conflicts between the state and private persons are often the result of differences between formal law and customary practice. In protected areas such as the Makira Forest, conflicts have arisen over the use of forestland for agriculture (Evers et al. 2006; WCS 2008).

Communities usually have clearly defined land tenure rules and processes for resolving local conflicts between private persons. However, these local understandings of tenure rules are often at odds with the formal system regarding the acquisition and ownership of land. In areas where formal laws are applied, local community dispute resolutions systems lose their authority to resolve local conflicts, in some cases creating a vacuum in local dispute resolution (Evers et al. 2006; Leisz et al. 1995).

Complex procedures and the need to travel to regional courts and seek legal advice can deter private persons from pursuing resolution to disputes with the state. Under the National Land Program's decentralized land certification program, approximately 3% of certification requests have been disputed. Roughly 20% of the disputes are resolved through mediation conducted by local authorities. If mediation is unavailable or unsuccessful, municipal authorities arbitrate the dispute with an option for appeal to the court system if needed (Leisz et al. 1995; Teyssier et al. 2008).

## KEY LAND ISSUES AND GOVERNMENT INTERVENTIONS

The former government's 5-year (2007–2012) Madagascar Action Plan (MAP) included stated commitments to improve governance, promote rural development, and respect the environment. Connected to the MAP, the *Politique Nationale Foncière* (PNF) sought to improve rural and urban land tenure security in order to encourage increased private investment, agricultural production, sustainable natural resource management, and development of decentralized governance. Under PNF, land tenure offices were to be restructured and computerized, land tenure rules and procedures were to be updated, and there was to be increased training in professions supporting land market activities (USAID 2008b; World Bank 2007a).

Beginning in 2004, Madagascar developed and began implementing its National Land Program (Teyssier et al. 2008).

## DONOR INTERVENTIONS

As a result of the March 2009 coup, most non-humanitarian international aid to Madagascar was suspended. The following activities were underway prior to the coup.

USAID/Madagascar supports a five-year Food for Peace program, which is implemented by the Adventist Development and Relief Agency (ADRA), CARE, and Catholic Relief Services (CRS). The US \$85 million project is focused on reducing food insecurity and vulnerability for 492,500 people in 120 selected communes. The project includes infrastructure development, training in agricultural and marketing techniques, and establishment of producer associations. The Adventist Development and Relief Agency (ADRA) has been helping rehabilitate irrigation systems, training model farmers, and providing access to markets (USAID 2008b).

USAID historically supported farmer education and projects to strengthen farmer associations. Donors including the World Bank, the European Union (EU), and the French Development Agency (AFD) supported implementation of the government's National Land Program. In 2005, Madagascar became the first country to benefit from the Millennium Challenge Account (MCA). The project supported the government's National Land Program by establishing local land offices and assisting in the adjudication and issuance of land rights certificates. In 2005, The International Fund for Agricultural Development (IFAD) supported the drafting of the new land policy. IFAD piloted a land rights adjudication system and supported several local land offices (Teyssier et al. 2008; MCC 2008; USAID 2007; World Bank 2007a; USG 2008a; IFAD 2006).

In 2003, women law graduates in Fianarantsoa opened Madagascar's first legal clinic that primarily counsels women. The clinic educates women about their rights, including inheritance rights (Morse 2008).

## 2. FRESHWATER (LAKES, RIVERS, GROUNDWATER)

### RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Madagascar has hundreds of medium and small lakes and rivers, and an estimated 2000–3000 square kilometers of floodplains and swamps. Four major rivers, the Betsiboka, Tsiribihinn, Manjoky, and Onilahy, rise in the eastern uplands and flow west across the island to the Mozambique Channel. Located in the northern part of the central highlands, the country's largest lake, Lake Alaotra, covers an area of 22,000 hectares and has another 20,000 hectares of marshland (FAO 1991; USAID 2008a; FAO 2005).

The country has benefit of an estimated 337 cubic kilometers of renewable water resources per year. Ninety-six percent of the country's water is used for agriculture, 3% for domestic consumption, and the balance for industry. Water resources are unevenly distributed. Rainfall varies from a high of 4000 millimeters per year in the northeast to 400 millimeters per year in the south. As a result, access to sufficient water in the south is a problem, and wells must be dug increasingly deeper to access groundwater. An estimated 1.5 million hectares of land is suitable for irrigation in Madagascar, 70% of which is already under irrigation, although much of the system requires repair and rehabilitation (Minten et al. 2002; FAO 2005; FAO 1991).

The country's lakes, rivers, streams and wetlands support a wealth of wildlife diversity. In addition to their importance for biodiversity, these water resources are important for drinking water, agriculture, energy production, and fishing. Deforestation, erosion and sedimentation, overuse, and encroachment threaten water resources (USAID 2008a).

An estimated 46% of the population has access to improved water sources, while 32% has access to improved sanitation facilities. There are marked urban/rural differentials in total coverage, as well as the type of drinking water service and sanitation facilities available. Only 35% of the rural population has access to improved drinking water. In terms of sanitation coverage, 48% of urban households in Madagascar have access to an improved sanitation facility, while there is only 26% coverage in rural areas (World Bank 2009a; WHO and UNICEF 2006).

## **LEGAL FRAMEWORK**

Madagascar enacted its Water Code, Law No. 98-029, in 1999. The Code provides that water is the heritage of the nation, exists in the public domain, and must be effectively managed. A key goal of the law is to improve access to safe water throughout the country. The law provides that the government will manage domestic water resources in urban settings with cost recovery in mind. Private entities are permitted to supply domestic water (Minten et al. 2002; USAID 2008a; FAO 2005).

In 2003, several decrees were passed to better protect water sources from contamination and regulate water use: (1) *Décret N° 2003/793 du 15 juillet 2003*, which set standards for tapping water sources); (2) *Décret N° 2003-940 du 09 septembre 2003*, which set stricter protection zones around water sources); (3) *Décret N° 2003-943 du 09 septembre 2003*, which established guidelines for water diversion); and (4) *Décret N° 2003-941 du 09 septembre 2003*, which addressed water access and monitoring of water for human consumption (USAID 2008a).

The National Program for Safe Water Supply and Sanitation (PNAEPA) was adopted in 2005, with the objective of meeting the Millennium Development Goal (MDGs) targets by 2015. A Sanitation Policy was developed in 2006 (USAID n.d.a).

The 1996 Community-Based Management of Natural Resources (GELOSE) Law applies to wetland areas and allows for community management of some water resources (USAID 2008a).

## **TENURE ISSUES**

Lakes, rivers, and their banks are within the public domain and considered open-access resources, although subject to local government and community control. Access to water for drinking, irrigation, industry, and hydropower is subject to regulation (USAID 2008a; FAO 2005; USAID n.d.a).

In urban areas, the parastatal JIRAMA supplies most water, although private companies are also permitted to do so. In rural areas, water service is governed by *commune*-based service providers (*collectives décentralisées*) and user groups. Water for irrigation is provided through channels or wells, and access managed by local user groups. Disputes over access to water are handled by the local agent of the Ministry of Water and Forests (Leisz 1998; Minten et al. 2002; USAID n.d.a).

## **GOVERNMENT ADMINISTRATION AND INSTITUTIONS**

The water sector is overseen by the recently reorganized Ministry of Environment, Water, Forests, and Tourism (MEEFT). The Ministry of Agriculture oversees irrigation and rural investments in water development (Leisz 1998; FAO 2005; USAID 2008a).

## **GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS**

The government's National Irrigation and Watershed Management Program has the objective of improving rural livelihoods through support of irrigation projects and improved management of watersheds (World Bank 2008).

## DONOR INTERVENTIONS AND INVESTMENTS

Under the Water, Sanitation and Hygiene (WASH) program, USAID/Madagascar works in rural and some urban/peri-urban locations on the three components of the Hygiene Improvement Framework: “soft”, “hard”, and “enabling environment.” The “soft” component consists of information, education and communication focused on changing drinking water, hygiene and sanitation practices. The “hard” component includes small-scale construction and/or rehabilitation, which use local operation and maintenance technologies to ensure sustainability. The “enabling environment” includes the provision of assistance to develop national WASH norms, standards, and guidance. These activities are currently suspended in line with restrictions stemming from the *coup d'état* (USAID n.d.b; USAID 2009).

Prior to suspending aid to Madagascar in 2009, the World Bank supported the National Irrigation and Watershed Management Program. The African Development Bank (AfDB) provides budget support in water supply and sanitation. The EU, the United Nations Development Programme (UNDP), the Food and Agriculture Organization (FAO), and IFAD have supported a variety of projects focused on water resources and irrigation (World Bank 2008; World Bank 2007a; FAO 2005).

## 3. TREES AND FORESTS

### RESOURCE QUANTITY, QUALITY, USE, AND DISTRIBUTION

Approximately one-quarter of Madagascar is forested. These forests are among the most biologically rich in the world and critical to preservation of diverse species. Between 80% and 90% of Madagascar's plants and animals (including 34 species of lemurs) live nowhere else on earth. Local human populations in Madagascar rely on forests for fuel, shelter, medicine, and food production. Forestry resources are under pressure due to high demand for agricultural and grazing land, illegal logging and timber export, and charcoal production and mining. Population pressure and declining soil fertility on traditional agricultural lands also cause farmers to establish homesteads in the forests and clear forestlands for agriculture (World Bank 2007a; DeCosse 2001; Evers et al. 2006; Raik 2007; Freudenberger and Freudenberger 2002; USAID 2008a).

Thirteen percent of Madagascar's forests are classified as protected areas. As of 2008, there were 47 protected areas composed of 23 special reserves, 16 national parks, and 8 integral nature reserves, all of which are managed by the National Association for Protected Areas Management (ANGAP). The remaining 87% of the country's forest cover is divided into three categories of forest: classified forests; forest reserves; and *forêts domaniales*, which are unclassified forests. The Ministry of Environment, Water, Forests and Tourism (formerly the Ministry of Water and Forests) manages these areas (USAID 2008a).

In recent years, the deforestation rate has declined from 0.82% (between 1990 and 2000) to between 0.3% and 0.55% (between 2000 and 2005), but continues to threaten diversity in Malagasy forests. Major threats to the country's forests include slash-and-burn agriculture, population pressures, household demand for fuel, illegal resource exploitation, increased large and small mining operations, sedimentation from soil erosion, climate change, inefficient agricultural practices, lack of institutional capacity, weak market and infrastructure linkages that discourage the diversification of livelihoods, and lack of tenure security necessary to encourage long-term, intensive agricultural investment (Raik 2007; USAID 2008b; Freudenberger 1995; Schuurman and Lowry 2009).

Madagascar has a long history of conservation interventions. Multiple reserves have been created, and community-based conservation efforts are aggressively supported; however, such communities are often limited in their practical ability to make choices about resource management. Conservation goals have been criticized as trumping local development goals. Recent efforts such as the Madagascar Action Plan attempt to promote the interests of local communities in conjunction with conservation goals (Marie et al. 2009).

## LEGAL FRAMEWORK

Under Madagascar's formal law, all forests except for those on titled land are state property. Villagers do not have the right to access and use the forests without state permission. Formal law is at odds with customary beliefs and practices, which give local communities the right to use the forest and forest products.

Madagascar's community forest management legislative framework and programs have been making efforts to harmonize the competing principles regarding use of forest resources (WCS 2008; Leisz 1998; DeCosse 2001).

Madagascar's 1995 Forestry Policy includes the following objectives: (1) slow forest degradation by working with communities on fire management measures and promoting alternatives to slash-and-burn agriculture; (2) manage forestry resources more efficiently through the creation of management plans, rationalization of forest exploitation, and increased management capacity; (3) increase forest cover by promoting reforestation; and (4) improve the efficiency of the forestry sector's economic performance by better capturing the value of forestry products, facilitating appropriate markets of forest products, and promoting ecotourism (USAID 2008a).

After adoption of the 1995 Forestry Policy, Madagascar's forestry legislation was reformed by Law No. 17 of 1997 and by Decree No. 98-782 of 1998, which defined the terms and conditions for the exploitation of forest resources. While the state is the owner of all forests, co-management between the state and local communities was adopted through the 1996 Community-Based Management of Natural Resources GELOSE Law (Law No. 96-025) (Reynolds and Flores 2009; USAID 2008a; Evers et al. 2006).

In 2000, the GCF (Forest Management Contracts) Decree transferred management of the forests to local communities and provided further details on local management, filling in some of the gaps left by the GELOSE Law. As of 2007, local communities in Madagascar had signed 400 Forest Management Contracts (USAID 2008a; Raik 2007).

The classification of protected areas is governed by the: *Code de Gestion des Aires Protégées* (commonly referred to as COAP); Law No. 2001/05; and by Decree No. 2005-848, *Création de Nouvelles Catégories de AP et Procédures* (USAID 2008a).

Madagascar's forests and protected areas are also governed by the country's broader environmental policy and legislation, such as the National Charter for Environment (Law 90-202), which established the principles for the country's National Environmental Action Plan (USAID 2008a).

## TENURE ISSUES

Under formal law, the state owns nearly all forestland. In some areas, customary law prevails, and communities apply their own rules and regulations in regard to limiting access to forest resources and establishing use norms (Leisz 1998).

Communities participate in comanagement programs under the GELOSE Law. Comanagement includes the sharing of decision-making, responsibilities, and benefits of forest resources. Three parties are usually involved in comanagement: the state (usually represented by the Water and Forests Service); the *commune*; and a local group of resource users who act via a users' association. Forest management contracts (GCFs) usually include details on permitted activities as well as the location and duration of the permitted activities. Clearing of primary, secondary, or degraded forests is not permitted under any comanagement contract (Evers et al. 2006; USAID 2008a; WCS 2008).

As of 2001, the former Ministry of Water and Forests granted forest exploitation permits for commercial operations, cutting permits for non-commercial exploitation, and clear-cutting permits (to convert forest land for agricultural production). The system for issuing cutting permits, which allows issuance by multiple authorities, has been criticized for creating ambiguity over forest rights (DeCosse 2001; World Bank 2007a).

## GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The reorganized Ministry of Environment, Water, Forests, and Tourism (MEEFT) oversees the forestry sector. Technical branches of the ministry work with local government and communities to manage the country's forests. Other institutions in the forestry sector include: (1) the National Council for Nature; (2) the National Environment Office, which coordinates implementation of the National Environmental Program; and (3) the National Protected Areas Management Association (ANGAP), which develops and manages the country's protected areas (DeCosse 2001; Evers et al. 2006; USAID 2008a).

Madagascar's forestry administration does not have sufficient capacity to implement existing legislation or to monitor forest and protected areas adequately. Challenges within the administration include insufficient knowledge of the forest laws and policies, lack of transparency, and an absence of the checks and balances necessary to manage issuance of forestry permits and curtail corruption (USAID 2008b; World Bank 2007a; DeCosse 2001).

## GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Recent government efforts have sought to strengthen forest administration. Initiatives launched in recent years include: the creation of a tripartite Forestry-Justice-BIANCO (Independent Anti-Corruption Bureau) Commission designed to reduce corruption in the forestry sector; the seizure of significant quantities of illegally harvested timber; the simplification of judicial procedures to prosecute those in violation of forestry laws; the development of a system for tracking forestry permits issued; the streamlining of permit allocation responsibilities; the establishment of mobile forestry control units; and the adoption of a competitive permitting process. BIANCO operates under the presidency and has only limited independence. Due partly to this, the commission has made progress in addressing corruption at the local level, but has not succeeded in addressing more politically sensitive issues (Freudenberger 2010; World Bank 2007a).

In 2003, Madagascar's president announced a plan to increase the country's protected area from 1.7 million hectares to 6 million hectares by 2012 (the plan is known as —Durban Vision” because it was announced at the World Parks Congress in Durban, South Africa). The announcement was followed by the creation of the Madagascar Action Plan (MAP), which seeks to connect conservation goals to the economic interests of local communities. Additionally, a comprehensive Protected Areas System (SAPM) was launched. However, observers have noted that, in the rush to create new conservation areas, local development needs have been ignored. Further, there have been reports of land grabs in areas likely to be designated as protected areas and thus subject to compensation payments (Freudenberger 2010; USAID 2008a; USAID 2008b; Marie et al. 2009).

The Government's National Environmental Plan (NEAP) is a three-phase 15-year program coordinated with a wide range of international donors and NGOs. The key purpose of NEAP is to work with local communities to stop (and ultimately reverse) environmental degradation, some of which may result from traditional practices such as slash-and-burn agriculture. Phase Three was conducted from 2003 to 2008. The MAP is designed to replace and build on lessons from NEAP. However, progress in implementing the MAP was hampered by governance issues, culminating in the 2009 *coup d'état* (USAID 2008a; Freudenberger 2010).

## DONOR INTERVENTIONS AND INVESTMENTS

The conservation of Madagascar's diverse resources has attracted extensive support from the donor community. The projects discussed in this section were in place prior to the 2009 coup and subsequent suspension of funding from international donors. Over the course of the 10 years preceding the coup, USAID invested US \$56 million in forestry and biodiversity projects including: Sustainable Approaches to Viable Environmental Management (SAVEM); Knowledge of Effective Policy in Environmental Management (KEPEM); Support to Protected Areas Plan (MIRAY); World Wildlife Fund (WWF)/*Agents de Protection de la Nature*; Landscape Development Interventions (LDI); and Support to Environmental Policy (PAGE) (USAID 2008a).

USAID helped support the Makira Forest Project, which is an “avoided deforestation” project on 401,000 hectares of state forestland in northeastern Madagascar. The forests are threatened by swidden agriculture (*tavy*), collection and exploitation of timber and non-timber products, burning forestland for cattle grazing, and illicit mining of quartz. The project, which is implemented by the Ministry of Environment, Forest and Tourism (MEFT), the Wildlife Conservation Society (WCS) in collaboration with Conservation International, and the local communities surrounding the Makira forests in northeastern Madagascar, engages in a variety of conservation and sustainable-use activities. The project organized the communities into forest management groups based on local traditional uses of the forest, establishing a foundation for local, community-based governance of natural resources. The project sells emission reductions from avoided deforestation on the voluntary carbon market to provide financial incentives for community-led land stewardship (WCS 2008).

Several USAID projects have supported the negotiation and signing of Forest Management Contracts with local communities, including the Landscape Development Interventions (LDI) project, the WWF/*Agents de Protection de la Nature* project, and the MIRAY (Support to Protected Areas Plan) project through Conservation International. In recent years, USAID has given US \$12.6 million to be used to advance efforts to triple Madagascar’s protected areas to 6 million hectares, strengthen the organizational and technical capacity of local environmental and forest management institutions, and develop economically viable production forests (USDOS 2008; USAID 2008a).

USAID also founded the Eco-Regional Alliance as a coordinating structure to align the natural resource interventions of USAID, its implementing partners, national and local government, and other partners. USAID contracts associated with this Alliance include: (1) The Eco-Regional Initiatives (ERI) contract, which aims to improve the economic and social well-being of local residents in conservation corridors by encouraging alternatives to slash-and-burn agriculture, transferring management of several protected areas and corridors to community-based organizations, promoting financial stability for farming communities, and establishing effective rural communications networks; (2) Jariala, which seeks to improve the Malagasy Forestry Service, develop plantations and alternate fuelwood sources, and promote land use planning; (3) Miaro, which focuses on maintaining the biological integrity of existing critical biodiversity habitats; (4) Bamex, which seeks to help rural farmers improve livelihoods by moving from subsistence to commercial agricultural; and (5) United States Forest Service (USFS) interventions to build capacity in the Malagasy Forest Service (USAID 2008b).

The German Agency for Technical Cooperation (GTZ) has been a consistent supporter of Madagascar’s forestry projects and, along with USAID, has been most closely involved in supporting the Ministry of Environment, Water, Forests, and Tourism. In addition, many international and domestic NGOs are involved in forestry and related biological diversity work, including Conservation International, WWF, WCS, SAGE, and Tany Meva (USAID 2008a).

## **4. MINERALS**

### **RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION**

Madagascar has a wealth of mineral resources, including gemstones (emeralds, rubies, and sapphires), gold, titanium, iron, nickel, chromite, bauxite, and coal. Significant onshore and offshore oil reserves have been identified in the western region of the country and exploration is underway. In 2002, 50% of the world’s sapphires came from Madagascar. Small-scale, transient artisanal miners extract most of the country’s gemstones. Smuggling poses a serious problem; an estimated 50 kilograms were smuggled to Thailand every week in 2005 (Yager 2008; World Bank 2007b; Tilghman et al. 2005; EITI 2010).

Mining resources have amounted to less than 4% of GDP in recent years, but the sector is expected to experience significant growth in the years ahead. Commercial mining activities have been growing since 2002, with capital investment for ilmenite, nickel/cobalt, chromite, chrome iron ore, and uranium. The government has increased the number of permits for mineral and petroleum exploration and offered a large number of oil blocks. Madagascar Oil, a Houston-based privately held company, holds the largest amount of

onshore acreage (31,000 square kilometer) in western Madagascar. Madagascar Oil holds a 100% stake in a heavy oil project at Tsimiroro, with estimated oil reserves of 1.7 billion barrels. The French oil producer, Total SA, which bought a 60% share in a 10-billion-barrel resource deposit from Madagascar Oil, plans to begin production in 2018. One of the largest companies operating offshore is Exxon Mobil, which purchased rights to more than 18 million acres in four frontier exploration blocks off Madagascar's northwestern coast and is engaged in exploration (EITI 2010; *Reuters* 2009; *Rigzone* 2009).

The increase in large- and small-scale mining in Madagascar has negatively impacted the country's forests and protected areas, often irreparably damaging forest areas through alteration of vegetation, massive soil erosion, and earthworks. In addition to the impact of the mining operations themselves, miners cut trees for fuel and hunt animals to supplement their diets. Environmental groups are watching the development of Madagascar's oil reserves with concern about potential negative impacts of operations on the environment (USAID 2008a; Tilghman et al. 2005; USAID 2008b; *Reuters* 2009).

## **LEGAL FRAMEWORK**

The government adopted a new mining law in 1999, *Code Minier, Loi 21* of 1999 (amended in 2005) and passed the Large-Scale Mining Investment Law in 2002 (amended 2004) in order to encourage large-scale commercial exploitation. The new legislation requires potential mining operators to prepare environmental impact assessments before mining permits are issued (World Bank 2007b; USAID 2008b; ROM Mining Code 1999).

## **TENURE ISSUES**

There are four types of mining permits: (1) Exclusive Authorization for Reservation of Area (valid for three months and used for exploration); (2) Research Permit (permits research and exploration, valid for renewable 10-year periods); (3) Small-Scale Mining Permit (reserved for Malagasy citizens for exploration and non-mechanized mining, valid for renewable 8-year periods); and (4) Large-Scale Mining Permit (allows mechanized mining and is valid for renewable 40-year periods) Many small-scale miners operate without permits (Tilghman et al. 2005).

Madagascar's mining and related processing operations are largely privately owned. Artisanal miners work gold and gemstone mines. In some areas, there have been reports of disputes among artisanal miners over rights to resources (Yager 2008).

## **GOVERNMENT ADMINISTRATION AND INSTITUTIONS**

The Ministry of Energy administers the petroleum sector, and the Ministry of Mines oversees the mining sector. In the 1990s, the country established a high-quality mining cadastre service (BCMM) to manage mining rights, and decentralized Environmental Mining Cells (CEM) of Mines-Forest committees to manage environmental impacts. The Mineral Resources Governance Data Bank (BPGRM), a unit within the National Geological Survey, is responsible for geologic data (World Bank 2007b).

Other areas of the country's mining administrative structure remain inefficient and often corrupt. As a result, the government collects only a small portion of potential small-scale mining revenues. Administrative units, such as the *Office des Mines Nationales et des Industries Stratégiques* (OMNIS), appear resistant to modernization and change (World Bank 2007a).

## **GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS**

The government has expressed a commitment to further reforms of the mining sector and is partnering with donors to modernize mining management. The government was accepted as an Extractive Industry Transparency Initiative (EITI) candidate country in 2008. EITI supports transparent accounting of mineral resources and revenue and accountable management of natural resource wealth to be used for the benefit of a country's citizens and in the interests of their national development. Madagascar has until 2011 to submit its

final validation report. Accounting reports prepared in the pilot stage are providing a public record of how revenue from the sector is flowing to the government (EITI 2010; World Bank 2007b).

#### **DONOR INTERVENTIONS AND INVESTMENTS**

As a result of political upheaval, US and World Bank non-humanitarian aid was suspended in 2009 and the projects described in this section were halted.

USAID funded the BAMEX project, which focused on promotion of the country's private sector. The project focused on business growth in four areas, including precious stones. Specific activities included providing input into reform of the Mining Code, supporting the decentralization of mining administration, founding a gemstone market, and providing training and micro-credit to support local value-added activities in the gemstone sector (Tilghman et al. 2005).

The World Bank committed US \$8 million in 2007 for the Mineral Resources Governance Project. The objectives of the project are to strengthen accountability and transparency in the mining sector, promote key institutional reforms for the decentralized management of mineral resources, and promote private investments and value-added production in the sector (World Bank 2007b).

The World Bank's Mineral Resource Governance Project is working cooperatively with the Norwegian-funded Oil for Development program, which funds legal and administrative development in the petroleum sector. The multi-donor Integrated Growth Poles Project encourages growth and investment in three high-potential geographic regions, including a project in Fort Dauphin focused on mining and tourism-led growth (World Bank 2007a; World Bank 2007b).

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