

USAID COUNTRY PROFILE

PROPERTY RIGHTS AND RESOURCE GOVERNANCE

LIBERIA

OVERVIEW

Liberia is rich in natural resources, including valuable timber species, significant biodiversity, and mineral resources, including iron ore, gold and diamonds. Agriculture provides a livelihood for the majority of the population, with most farming carried out on small landholdings, but there are also a number of large commercial plantations.

Liberia has an urban-based elite, the descendants of freed slaves from the US and Caribbean. The majority of indigenous Africans live in rural areas. The land-tenure system reflects this division of the population. Throughout coastal Liberia, the urban elites use a Western statutory system of land ownership based on individual fee simple titles. In the Liberian hinterland, indigenous Africans use their own customary systems, which are based on community or collective ownership of discrete territories.

At first, state policy recognized customary ownership as full ownership rights, whether or not formally titled. It now recognizes only usufruct rights of possession and use of undocumented customary claims. This policy has permitted the state to grant concessions for vast tracks of customary lands, as well as to create national parks and reserves. It has also contributed to conflict, as indigenous communities lost their food and livelihood source and an important lynchpin of their cultural heritage. In addition, during the civil war, a new national forestry law was passed, decreeing that forest resources (trees), as distinguished from forest lands, belong to the state. This effectively took away community access to forest resources even when these were on the community's own lands.

The causes of Liberia's recently concluded 14-year civil war were multiple, but central to the war was conflict over land and natural resource rights. While key sector reforms have been introduced in the post-conflict period, there is still more work to be done with respect to land policy reform, land dispute resolution, legal recognition of customary rights and the promotion of community forestry development.

KEY ISSUES AND INTERVENTION CONSTRAINTS

Two land and property rights issues need to be definitively addressed as Liberia proceeds with post-conflict reconstruction. The first is the issue of the legal status of customary land rights, and the second is the issue of ownership of trees and other forest resources on community forest lands. Key reforms undertaken by the Liberian Government put it on the right track to resolving these issues: the cancellation of all existing forest concessions; the review of rubber concessions (2006); the establishment of the Land Commission (2009) to settle the question of customary land rights; and the enactment of the 2009 Community Rights Law, which returns ownership of forest resources to communities.

Obviously, resolution of the issues will take some time. Yet the Government faces huge challenges, including the need to jumpstart the economy. The resource sector – forest, mining and rubber – is seen as the main engine for economic development. The Forest Development Authority is poised to grant forest concessions amid protests from communities and civil society. The grant of concessions without a clear resolution of the issues has the potential for igniting conflict.

USAID is helping shape the solution to the issues. The Land Rights and Community Forestry Program (LRCFP) is working towards building a community forestry framework – both a legal and policy framework – and community capacity-building for sustainable resource management that includes biodiversity conservation and livelihood improvement. A component of the program is assisting the high-level Governance Commission and developing policy proposals for administering community land-rights (USAID 2008). In 2010 USAID began providing additional assistance to the Government of Liberia

to address land tenure and property rights challenges by implementing the Millennium Challenge Corporation's program to strengthen land administration, develop land policy and law, and conduct field-based evaluations of customary tenure institutions and practices to best determine how they might be legalized.

It is critical, however, that the legal and policy framework for community forestry recognize customary ownership of community lands and, secondly, that ownership of the land include ownership of the trees and other natural resources thereon. Otherwise, communities will never be truly empowered, nor will they have the incentive to pursue sustainable resource management. Worse, it may serve as a spark for violent conflict. While the Community Rights Law is a positive development, it should be noted that there are still provisions in the National Forestry Reform Law, the Aborigines Law, and other laws that can undermine customary ownership. USAID is in a unique position through the LRCFP and other land tenure programs to provide technical and legal expertise that can help clarify the issues and their proper resolution for the Liberian Government. Aligning these laws is essential: clarity is achieved through taking all of these laws and facilitating the removal of contradictory sections. Addressing gender divisions of land ownership is also essential to improving rural livelihoods. This would ensure that the LRCFP would make a real difference in the lives of indigenous communities and all other Liberians.

FOR MORE RECENT LITERATURE:

http://usaidlandtenure.net/liberia

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

SUMMARY

Liberia is one of Africa's smaller states in terms of population and land area. It houses the largest remaining remnant of the Upper Guinean tropical forests of West Africa (4.3 million hectares), which contain valuable timber species and significant biodiversity. Liberia is also rich in mineral resources, including iron ore, gold and diamonds. Agriculture plays an important role in the economy. Most farming is carried out on small landholdings, but there are also a number of large commercial plantations, including the largest rubber plantation in the world, operated by Firestone.

Liberia's population is often divided into two main groups: a small urban-based elite who are descendants of freed slaves from the US and Caribbean (5% of the population, known

DOV 4 MACRO INDICATORS		
BOX 1. MACRO INDICATORS	Year	Score
	Tear	Score
Population, total	2008	3,793,400
Population ages 0-14: 15-64: 65+ (% of total)	2008	42.9; 54.0; 3.1
Population growth (annual %)	2008	4.5
Rural population (% of total population)	2008	39.9
Population density (people per sq. km)	2008	39.4
Literacy rate, adult total (% of people ages 15 and above)	2007	55.5
Land area: Surface area (sq. km)	2008	96,320; 111,370
Arable land (% of land area)	2005	4.0
Agricultural land (% of land area)	2005	27.0
Permanent cropland (% of land area)	2005	2.3
Irrigated land (% of cropland)	2003	0.5
Forest area (% of land area)	2005	32.7
Nationally protected areas (% of total land area)	2006	15.8
Renewable internal freshwater resources per capita		
(cubic meters)	2007	55,137.7
Annual freshwater withdrawals, agriculture: domestic:		·
industry (% of total freshwater withdrawal)	2007	54.5; 27.3; 18.2
Crop production index (1999-2001 = 100)	2005	100.3
Livestock production index (1999-2001 = 100)	2005	111.5
GDP (current US\$)	2008	870,100,000
GDP growth (annual %)	2008	7.1
Agriculture: industry: manufacturing: services, value		54.0; 18.6; 13.0;
added (% of GDP)	2007	27.5
Ores and metals exports: imports (% of merchandise		
exports: imports)		 124.3
Aid (% of GNI)	2007	124.3
Source: World Bank 2009a		

as Americo-Liberians), and an overwhelming majority of rural-based indigenous Africans (95% of the population). The land tenure system follows this division. The first Americo-Liberian settlers brought with them the Western statutory system of land ownership based on individual fee simple titles (the most complete form of land ownership in Anglo-American law, often imported with colonialism and referred to in English law as freehold), while the indigenous tribes used their own customary systems, which are based on community or collective ownership of discrete territories.

State policy (established by the Americo-Liberian political elite) evolved from recognizing customary ownership as full ownership rights, whether formally titled or not, to merely recognizing usufruct rights of possession and use of undocumented customary claims. Early state policy and law (which may still apply) recognized a separation of —eivilized" and —uncivilized" people in the application of Liberian laws, including land laws. In law, fee simple ownership was clearly reserved for —ivilized" people. Per the Hinterlands Rules and Public Lands Law, the process for obtaining fee simple ownership required that the tribe be —ivilized," and limited claims of tribal land to 25 acres per family. In practice, however, some indigenous people obtained ownership title stated in terms of fee simple.

All lands not formally titled became public lands owned by the state, paving the way to the grant of concessions of vast tracks of customary lands for logging, mining (iron ore), and rubber plantations, as well as the creation of national parks and reserves. This inevitably generated conflict as indigenous communities lost their food and livelihood source and an important lynchpin of their cultural heritage. In effect, they had to buy back their lands from the government to acquire legal ownership. Some groups did so, acquiring collective titles to their lands.

Liberia entered a long period of instability, marked by descent into a 14-year civil war (1989–2003). The causes of the war were multiple, but central to it (even if not its direct trigger) was conflict over land and natural resource rights. These included issues over customary ownership, ethnic land disputes (Mandingo issue), and issues

stemming from poor land administration systems and capacity. Timber and diamonds were used to finance the war, prompting United Nations sanctions against these resources. The war devastated the economy, public institutions, physical infrastructure and social capital, killed about 270,000 people, and displaced almost 80% of the population. Environmental degradation worsened as people crammed into camps without basic services, and dumped garbage and wastes into rivers and other ecologically sensitive locations. During this time too, a new national forestry law was passed, decreeing that forest resources (trees), as distinguished from forest lands, belonged to the state. This effectively took away community access to the resource even on the community's own lands. Previously, only minerals had been state-owned.

Liberia is now in post-conflict reconstruction after the January 2006 election of Ellen Johnson Sirleaf, Africa's first female president. Key sector reforms were introduced – all forest concessions were cancelled; rubber concessions were renegotiated; a Land Commission was established in 2009 to set policy for customary ownership and tenure security, improved land-administration and development of land resources; Liberia is adhering to the Kimberly Process Certification Scheme for rough diamonds; a committee on ethnic disputes has been created; and forestry laws were revised in an effort to balance commercial exploitation, community forestry and forest conservation.

The 2009 Community Rights Law clearly reiterates the distinction between forest trees and forest lands: —Al forest resources in Liberia, regardless of land proprietorship, shall be regulated by the Authority for the benefit of the people, except forest resources located in community forests and forest resources that have been developed on private or deeded land through artificial regeneration." This repeats in different language the provisions of the 2006 Forestry Reform Law (Ch.2), which declared State ownership of trees and also included exceptions for —communal forests" and privately generated forest. The significant point is not the separation of trees and land, but rather who defines the extent of —community forests" and whether traditional claims will be recognized, and who in the end controls the community forest. The 2009 Community Rights Law explicitly recognizes Tribal Deeds but at the same time limits Community Forest Land to a maximum of 49,999 hectares. Moreover, —The community forest land shall be identified, validated and recommended by the Forest Development Authority" (GOL Community Rights Law with Respect to Forest Lands 2009b, Sec. 2.2, 2.4)

The donor community in Liberia is transitioning from relief aid to development aid. USAID investments include technical assistance for land-policy reforms and for budget management in the mining sector, swampland rehabilitation, and the development of community forestry. Liberian advocates have argued that land-policy reform and community forestry development necessarily require the full recognition of customary ownership of indigenous lands and all natural resources on those lands.

I. LAND

LAND USE

Liberia has a total land area of 111,370 square kilometers, including 96,320 square kilometers of land (9.63 million hectares) and 15,050 square kilometers of water. About 3.43% of the land is arable, and 1.98% is in permanent crops (2005). About 30 square kilometers are irrigated (2003). Liberia's terrain comprises mangrove swamps and beaches along the coast, wooded hills and semi-deciduous shrublands along the immediate interior, and dense tropical forests and plateaus in the interior. The inland grassy plateau and swamplands support agriculture. Forests cover about 45% of the total land area (CIA 2009; USDOS 2009; GOL 2006).

As of 2007, Liberia's total Population was 3.8 million; 59.2% of the population is urban and 40.8% is rural. Indigenous Africans (divided into about 16 ethnic groups) comprise 95% of the population; the remaining 5% is composed of immigrant settlers – Americo-Liberians (descendants of American freed slaves, 2.5% of the population), and Congo People (descendants of Caribbean freed slaves, 2.5% of the population). The unemployment rate was estimated at 85% (2003), and 80% of the population lives below the poverty line (2000) (AfDB 2009;CIA 2009).

Environmental issues include tropical rainforest deforestation, soil erosion, loss of biodiversity, and pollution of coastal waters from oil residue and raw sewage. Dust-laden harmattan winds blow from the Sahara from December to March. The dust blocks the sun and limits visibility (CIA 2009).

Overall, the main causes of environmental degradation include shifting cultivation, uncontrolled logging, fuelwood harvesting, encroachment into forests by human settlement, illicit fishing, and unsustainable mineral and sand-mining activities (Drakenberg and Dahlberg 2008).

LAND DISTRIBUTION

Liberia is administratively divided into 15 counties. About 40% of the country is considered coastal, extending 40–50 kilometers inland. This area is referred to as County Liberia or the Littoral, and is occupied mainly by the immigrant settlers who became the country's political elite. About 10% of the coastal area is held under long-term leases by large, mostly foreign-owned agribusiness interests. Among them is Firestone, whose 1 million-hectare concession is the largest rubber plantation in the world. An undetermined portion of County Liberia remains under the control of the indigenous population (Wily 2007).

BOX 2. LAND TENURE INDICATORS	
	Score
Millennium Challenge Corporation Scorebook, 2009	
 Land Rights and Access (Range 0–1; 1=best) 	0.378
International Property Rights Index, 2009	
 Physical Property Rights Score (Range: 0–10; 0=worst) 	
World Economic Forum's Global Competitiveness Index, 2008-2009	
 Property Rights (Range: 1–7; 1=poorly defined/not protected by law) 	
World Economic Forum's Global Competitiveness Index	
 Ease of Access to Loans (Range: 1–7; 1=impossible) 	
International Fund for Agricultural Development, Rural Poverty Report,	
<u>2001</u>	
 Gini Concentration of Holdings, 1981-1990 (Range: 0–1; 0=equal distribution) 	0.74
International Fund for Agricultural Development, Rural Sector Performance	
Assessment, 2007	
 Access to Land, 2007 (Range: 1-6; 1=unsatisfactory access) 	
Food and Agricultural Organization: Holdings by Tenure of Holdings	
 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 World Bank Group, Doing Business Survey, 2009	
Registering Property-Overall World Ranking (Range: 1–181; 1=Best)	157
World Bank Group, World Development Indicators, 2009	
Registering Property-Number of Procedures	13
Registering Property-Days Required	50
World Bank Group, World Development Indicators, 1998	
Percentage of Population with Secure Tenure	
Monrovia	57.6
	07.0
Heritage Foundation and Wall Street Journal, 2009	25
Index of Economic Freedom-Property Rights (Range 0-100; 0=no	20
private property) <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)	
 Protection of Property Rights (Range 0-10; 0=lowest degree of protection) 	
Regulatory Restrictions of Sale of Real Property (Range 0-	
10;0=highest amount of restrictions)	

The other 60% of the country, referred to as Interior Liberia or the Hinterlands, is divided among the indigenous groups on a tribal basis, in discrete settlements bounded by rivers, streams and other natural boundaries. There is little information on the distribution among and within the different indigenous groups. Portions of the interior have been allocated by the government to immigrant settlers and foreign companies as well, or brought under mining and logging concessions (Wily 2007).

The settler/Americo-Liberian and indigenous/—native" divide, while not directly triggering the 14-year Liberian war, was one of its structural causes and threatens to be a flashpoint of future conflict (Wily 2007; GOL 2007b).

Large-scale displacement during the civil war resulted in the growth of slums and illegal home occupations in urban and peri-urban areas. In 2005, the capital city of Monrovia hosted 40% of internally displaced persons (IDPs) (GOL 2008c; Tefft 2005).

LEGAL FRAMEWORK

The 1986 Constitution (which replaced the 1847 Constitution) sets forth a citizenship requirement for land ownership, and with some exceptions

limits citizenship to persons who are Negroes or of Negro descent. It also lays down the requirements for the expropriation of land (eminent domain), and has a general provision on the treatment of exclusive marital property (GOL Constitution 1986).

The 1904 Public Lands Law (last amended in 1972) lays down the procedures for the purchase, allotment to —aorigines" (indigenous peoples), or lease to foreigners of public lands, and the procedures for claiming back land that has reverted to the government (Wily 2007).

The 1905 Hinterland Law (last amended in 1949) recognized customary ownership, not just usufruct rights, with respect to the Hinterlands. While indigenous communities were allowed to formally register their lands in fee simple collective ownership, lack of formal titles did not diminish or affect their ownership rights (Wily 2007).

Customary land rights are also recognized in the 1956 Aborigines Law, but as usufruct rights, not as ownership rights. These usufruct rights include the use and possession of —a much of the public land in the area inhabited by it as is required for farming and other enterprises essential to tribal necessities" (Sec. 270). Lands that were not occupied, actively cultivated or privately titled were deemed public lands owned by the state (the definition of —tribal" was debatable). The Aborigines Law limited the ability of tribes to sell their land, except by public land sales. At the same time, the right of the tribe to exclude others is laid out clearly in the law. Tribes seem to have more than usufruct but less than fee simple.

Land in the hinterland is owned collectively; it is only *use rights* to that shared property that are customarily owned on an individual basis, mainly by individual families. —The incentive to seek (expensive) formalization of communal land is high; experience compounded by legal uncertainty warns rural communities of the high costs of failing to do everything possible to entrench communal ownership in modern title deeds. Recognition of possession is not enough; it is the ownership of the land that needs to be entrenched." Even in 2007, some towns, clans and chiefdoms set out to secure collective ownership in fee simple by buying their own land back from the government (Wily 2007).

There are two different statutes for tribal land under the Hinterlands Rules and other laws: Tribal Reserves and Communal Holdings. Neither of these is fee simple ownership. The Communal Holding is land that has been surveyed and deeded, but it is explicitly stated that the tribes cannot pass fee simple ownership by sale of the land to another person.

Only a small number of communities have secured their communal areas under fee simple properties (held under Aborigines Deeds or more modern Public Land Sales Deeds), although the areas cover a large proportion of forested lands. In forested areas these include at least 14 Aborigines Deeds and 19 Public Land Sale Deeds which together amount to over 2.5 million hectares; additional entitlements affecting forested areas may exist (Wily 2007).

The 1974 Registered Land Law formalizes the land registration system. It empowers the government to designate areas for adjudication and registration, and requires landholders to register landholdings (Wily 2007).

TENURE TYPES

Under the Aborigines Law, ownership of all lands not otherwise privately titled or deeded became vested with the state. Prior to this law, only lands purchased by the government from indigenous tribes became public lands. There is a dualistic system of land tenure – one based on statutory law and another based on customary law. Statutory law recognizes absolute ownership, while customary law limits tenure to usufruct rights. There are several types of statutory or legal title (Wily 2007):

- 1. Land Deed: covers allocations made to the original immigrant settlers by the colonization societies from 1821 onwards (out of lands purchased from indigenous tribes).
- 2. Aborigines Land Deed: collective title granted to indigenous tribes under the Hinterland Law and later the Aborigines Law.
- 3. Public Land Sale Deed: title acquired through the purchase of public land, either by a settler or —itizen" (meaning —ivilized" Liberian). Public lands may be allocated to tribal peoples who have become civilized, in fee simple, but only in the amount allowed, 25 acres per family. There was a practice of past presidents selling tribes their own land, but these sales seemingly did not follow the letter of the law (technically this would have been a sale to a —itizen"). As a result, indigenous tribe acquired land on a collective basis.
- 4. Warranty Deed: title acquired through the purchase of privately owned land.
- 5. Leasehold: right of possession and use granted by a person or the government, for a specified period and under certain conditions.

The urban residents of County Liberia, immigrant settlers and their descendants, acquire land rights through statutory law, either by allocation or purchase from the government, or through private transactions with landowners. Some have also purchased public lands in the Hinterland. Indigenous elites in County Liberia acquired statutory landholdings through —aorigines" land entitlements granted under the Public Lands Law to —aorigines" who have become civilized (i.e., adopting Western ways and being literate to some degree) and, later on, through purchase of privately owned lands. (Wily 2007)

Indigenous lands are regulated in accordance with customary rules (which do not vary dramatically between the different groups) as administered by tribal authorities. While the land is owned on a collective basis, member families have usufruct rights, dependent upon occupancy or use. The usufruct rights may be short-term (as for food-crop farms) or long-term, even passed down several generations (e.g., houses, tree farms), but never mature into ownership. —Strangers," or those in the community who are not of local descent (such as temporary residents, sharecroppers, or a person marrying into a community), are also granted usufruct rights under certain conditions. There is some evidence of tribal authorities and district commissioners giving out land certificates to individuals. There is no basis in the law for doing this, but it is a good example of more individualized rights being recognized on tribal lands. Other tribal lands, such as forest lands, remain open for members of the tribe (Wily 2007).

Some Hinterland tribes have converted their landholdings into collective title or deed under statutory law, first through the Hinterland Law and then the Aborigines Law. Formal title is vested in the tribal chief and elders as trustees for the community. These titles cannot be sold or transferred, but the tribe may subsequently (upon becoming —stficiently advanced in civilization"), petition the government for subdivision of the land into 25-acre family lots. Perhaps 2 million hectares of customary land has so far been brought under collective title. All rural land that is not under probated or registered entitlement (deeds) can be assumed to be customary land. Research reveals that there are now more indigenous tribes working to get formal collective titles to their lands (Wily 2007).

According to the Constitution, with the exception of benevolent, missionary and educational institutions, as well as diplomatic missions, foreigners may not own land. Foreign landholdings are in the form of long-term leases for agribusiness (rubber) located in County Liberia (GOL Constitution 1986; Wily 2007).

INTRA-HOUSEHOLD RIGHTS TO LAND AND GENDER DIFFERENCES

Evidence shows that women hold land in much lower proportions than men. Today, only 56% of female-headed households own land, compared with 68% of male-headed households, and almost double the number of men (33%) compared to women (16%) owned land in 2006 (WFP data). An agricultural survey has shown that women tend to access land through their husbands, and that they experience higher insecurity of tenure (Abril 2007).

Women have fewer rights to land under customary law than statutory law. Until recently, an indigenous rural woman had no rights over her husband's property (Unruh 2007).

The Equal Rights of the Customary Marriage Law of 1998 (approved 2003) seeks to remove the dichotomy between statutory and customary laws, giving women in customary unions the same legal status with respect to BOX 3. LAND AND GENDER INDICATORS

Score

OECD: Measuring Gender In(Equality)—Ownership Rights, 2006

Women's Access to Land (to acquire and own land) (Range: 0-1; 0=no discrimination)

Women's Access to Property other than Land (Range: 0-1; 0=no discrimination)

Women's Access to Bank Loans (Range: 0-1; 0=no discrimination)

Momen's Access to Bank Loans (Range: 0-1; 0=no discrimination)

FAO: Holders of Land Classified by Sex, 1993

Percentage of Female Holders of Agricultural Land

property and inheritance rights as men. With the passage of this law, a widow will now inherit one-third of her deceased husband's property regardless of the regime under which they were married, and daughters now gain equal rights to inherit land. The law also reiterates the Constitutional provision allowing women to retain land brought into the marriage (GOL Equal Rights of the Customary Marriage Law 2009a; Abril 2007).

The extent to which the law is being enforced is difficult to ascertain. There are grounds for believing that customary norms continue to restrict women's access to land. Community chiefs and elders – who are overwhelmingly male – have a systematic preference for men in allocating community lands (Abril 2007).

LAND ADMINISTRATION AND INSTITUTIONS

Line ministries with land-administration functions include: 1) the Ministry of Lands, Mines and Energy, which administers public and private lands, including aspects such as land tenure, land reform, land registration, land survey, and land-use and planning; 2) the Ministry of Internal Affairs, which oversees local governance, including interaction with traditional authorities over land (the Ministry's Land Commission assists in dispute resolution); 3) the Ministry of Agriculture, which oversees the agricultural lands sector, including agribusiness/rubber concessions; 4) the Ministry of Public Works, which is responsible for land-use zoning; 5) the Ministry of Finance, which implements real property tax; and 6) the Ministry of Foreign Affairs, which holds early deed registers; and 7) the National Archives, which holds more recent deed registers and land registers from pilot systematic land registrations (World Bank 2008).

Key authorities in the customary land administration system include the town chief and community elders. Some of the most important decisions about land access are made at the town level (the smallest traditional unit). Clan and Paramount Chiefs (heads of larger units) are primarily involved in land-dispute mediation (Wily 2007).

LAND MARKETS AND INVESTMENTS

There is high population density on most agricultural land. Communities are shortening fallow periods, expanding into forest areas, and opening up swamplands for farming (Wily 2007).

Disincentives to land investments stem primarily from tenure insecurity resulting from confusion regarding formal and customary tenure systems, and poor land administration systems, particularly the lack of a national land registry (Unruh 2007).

Vast areas of rubber concessions, amounting to hundreds of thousands of acres, remain undeveloped and idle, but cannot be accessed by traditional users (Unruh 2007).

COMPULSORY ACQUISITION OF PRIVATE PROPERTY RIGHTS BY GOVERNMENT

Expropriation of private property by the government is authorized for purposes of national security in the event of armed conflict, when public health and safety are endangered, and for other public purposes. The landowner is entitled to be informed of the reason for the taking, prompt payment of just compensation, and the right of first refusal to reacquire the property, if the property ceases to be used for public purposes. The landowner may also challenge in court the propriety of the taking or the amount of compensation (GOL Constitution 1986).

LAND DISPUTES AND CONFLICTS

The inability of the statutory and customary tenure systems to interact effectively aggravates the longstanding divide between the urban-based settler elites (and their indigenous supporters) and the rural, Hinterland-based indigenous Liberians (Unruh 2007). The statutory system provides the legal basis for land and natural resource concessions (through state claims of ownership of tribal lands), some of which overlap and expand into customary lands. Such actions exclude many indigenous communities from their land base, and their food and livelihood sources (except as ill-paid workers). These issues helped to fuel the civil war and, post-conflict, have been exacerbated by the seizure and control by ex-combatants of two large rubber concessions – Guthrie and Sinoe plantations. Land-grabbing and claims of ownership of plantation land by local communities could also have security implications. By 2010, the government apparently succeeded in taking over control of Guthrie and Sinoe plantations from ex-combatants. Some of the ex-combatants were retrained through an NGO program, and others may have stayed on at the plantation under new management (Blore 2007).

The dual system also breeds resentment by allowing transfers of land from customary tenure to the statutory system through land deeds and titles, without providing for a similar transfer from statutory to customary systems. This has facilitated large transfers of land from indigenous tribes to settler elites, reducing the availability of arable land to local populations in the Hinterlands. Indigenous tribes are allowed to acquire state lands only upon becoming —wilized" (World Bank 2008).

Customary power structures – the control of land resources by tribal elders or —bg men" – has resulted in generational conflict, as rural youth (especially males) with little prospect of accessing land are marginalized and exploited for their labor. Many of these young males who joined militias during the civil war are reluctant to go

back to the same social structures that existed in their communities before the conflict. Some factions have become squatters in mining areas and forest reserves (Richards et.al. 2005; Tefft 2005).

Longstanding ethnic tensions rooted in land claims, particularly between the Mandingo and the Mano and Gio ethnic groups (Nimba County), and the Mandingo and Loma (Lofa County), threaten to become a flashpoint as Mandingo refugees returning from neighboring Guinea find their lands and properties seized by the other ethnic groups. Mandingos, who have been in Liberia since the 1800s, are not considered legitimate landholders by the neighboring groups, rather, they are viewed as mere occupiers who took lands away from these groups' forefathers (Unruh 2007; IRIN 2007; GOL 2007b).

The absence of a national land registry, unclear and outdated land laws, and poor land administration, aggravated by the civil war, have resulted in multiple and fraudulent land transfers. Approximately 90% of civil cases are land disputes, some reported to be socially explosive. IDPs and refugees returning to their communities (including the capital, Monrovia) are finding their lands occupied by others, resulting in confrontational land claims and evictions (Gregory Myers and Timothy Fella, personal communication, 2010; Unruh 2007; GOL 2007b).

Unclear land boundaries, caused by haphazard surveys, government adjustments, population growth and migration, overlapping territorial claims of different groups, and seizure and control of areas by different factions during the civil war, have caused confusion and conflict (Unruh 2007; GOL 2007b; Wily 2007).

KEY LAND ISSUES AND GOVERNMENT INTERVENTIONS

The Governance Commission, established for Liberia's post-conflict reconstruction, is spearheading land policy reform for the country. It was tasked with forming a Land Commission to facilitate reforms in land policy, law and programs. In August 2009, President Ellen Johnson Sirleaf signed into law —An Act to Establish the Land Commission." Strategic objectives include: 1) equitable and productive access to land, especially for marginalized groups; 2) land tenure security, including on customary lands, and the rule of law in land dealings and dispute resolution; 3) effective land administration and management; and 4) promotion of investment in and development of land resources (GOL 2008c). Following the establishment of this Commission, a number of donors, including USAID, have started to support its work in addressing land tenure and property rights challenges. The US Millennium Challenge Corporation will support the Land Commission to gain an increased understanding of customary and women's land tenure and land use practices (to inform the development of policy and law), and to develop a land law reform strategy. The World Bank and UN Habitat are providing technical assistance to the Land Commission to: 1) define in more detail a research agenda; 2) assist in the management and execution of research; and 3) ensure the integration of lessons learned into the policy formulation process.

The Rubber Plantation Task Force (established jointly with the United Nations Mission in Liberia) evaluates rubber concessions, including the size of a concession granted versus the area of a concession developed, and plantation conditions. The Ministry of Agriculture is working to bring back the two plantations controlled by excombatants (Unruh 2007; Blore 2007).

The Ad Hoc Presidential Commission on the Nimba County Inter-Ethnic Land Disputes was established to address ethnic dispute (Mandingo vs. Mano and Gio) in Nimba County, the primary battleground in the civil war (GOL 2008a).

The Ministry of Lands, Mines and Energy has begun to address issues related to artisanal diamond mining under a program supported by USAID. The Property Rights and Alluvial Diamond Development (PRADD) program focuses on clarifying and formalizing the land tenure rights for alluvial diamond miners.

DONOR INTERVENTIONS

USAID is shifting its aid focus from post-conflict relief projects to reconstruction and development. Among other donors, it currently provides some technical assistance to the Governance Commission in developing policy proposals for administering community land rights through its Land Rights and Community Forestry Program. USAID also supports the rehabilitation of smallholder tree-crop farms of rubber, cocoa and palm oil (USAID 2008a).

The World Bank has recently completed a comprehensive assessment of Liberia's land tenure problems (—Isecurity of Land Tenure, Land Law and Land Registration in Liberia"). The assessment is intended to aid the

Governance Commission (and the Land Commission) in formulating options for policy reforms and donor assistance. The World Bank also provides technical assistance for land sector reforms to Liberia's Governance and Economic Management Program (World Bank 2008).

The National Information Management Center of the United Nations Development Programme (UNDP) is working with the government to gather spatial and legal information on rural and urban land boundaries (Unruh 2007).

2. FRESHWATER (LAKES, RIVERS, GROUNDWATER)

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Liberia has six major rivers: the Mano, Lofa, St. Paul, St. John, Cestos and Cavalla Rivers. These rivers flow from mountains in the north and empty into the Atlantic Ocean. Most are navigable up to 20 miles from the coast, except for the Cavalla, which is navigable up to 50 miles. There are also numerous micro-watersheds and subwatersheds. There is a total of 1800 kilometers of river, most of which is shallow, rocky and with cataracts and fallen logs (DAI 2008; FAO 2006).

Liberia's two major lakes are Lake Piso (the country's largest) and Lake Shepard. Freshwater resources support 166 species of fish. There is wide use of pesticides and dynamite in inland fisheries. Residents living near rivers in both urban and rural areas commonly use the riverbanks for both solid and human waste disposal. Untreated sewage is discharged directly into lagoons and rivers (UNDP and EPA 2006; DAI 2008).

There are approximately 600,000 hectares of freshwater swamplands, with about 20,000 hectares (3%) under cultivation to augment upland rice production. Two wetlands have been designated as Ramsar sites: 1) Gbedin Wetlands in the north (25 hectares); and 2) Kpatawee Wetlands within the rainforest zone (835 hectares). Ramsar sites are wetlands of —riternational significance in terms of ecology, botany, zoology, limnology or hydrology" (Ramsar Convention) for the conservation and sustainable utilization of wetlands, recognizing the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value (DAI 2008).

Total renewable water resources are estimated to be 232 cubic kilometers per year, of which 200 cubic kilometers are internally produced and 32 cubic kilometers come from neighboring Guinea and Côte d'Ivoire. Internal groundwater is estimated at 60 cubic kilometers per year. The main water uses are agriculture (57%), followed by the domestic sector (28%) and industry(15%) (2000 estimate) (FAO 2005a).

Although water supply is abundant, clean water has become a scarce resource as a result of pollution and the destruction of water supply systems during the war. About 90% of the population currently relies on groundwater, mostly from shallow, unregulated wells. Only 4% of rural households and 25% of urban households have access to safe drinking water. Waterborne diseases are major problems (UNDP and EPA 2006; DAI 2008).

The main constraints to effective water management are a weak legal framework, destruction of physical infrastructure, lack of institutional capacity for delivery of services and resource monitoring, and severe financial constraints. There is also a lack of recognition or appreciation for the role of freshwater wetlands in providing ecosystem services (DAI 2008).

LEGAL FRAMEWORK

Liberia lacks a comprehensive legal framework to govern water-resources management. There is no effective national water policy to guide resource development, use and conservation. Liberia's water-relevant laws are fragmented across several agencies and there are no effective implementation and enforcement mechanisms (DAI 2008; UNDP and EPA 2006).

The National Rural Water Program was established in the 1980s (successor to the Rural Water Program established in 1974) to provide rural populations with water wells. The 1975 Act Establishing the New Public Health Law of Liberia Chapter 24 was the first law to control water pollution. The 2002 Environmental Protection and Management Law provides some guidance for water resources management, but it is not comprehensive (DAI 2008; UNDP and EPA 2006).

TENURE ISSUES

There are no in-depth studies on freshwater resources or water tenure. As a result, there is little information on water rights in Liberia. Traditionally, some communities claim customary rights over certain water resources, such as a section of a local river or a spring, but these are undocumented and not recognized in statutory law. The 1986 Constitution states that —[e] very person shall have the right to own property alone as well as in association with others; provided that only Liberian citizens shall have the right to own real property within the Republic" (GOL Constitution 1986, Art. 22 [a]).

Inland fisheries are underdeveloped. While most methods of exploitation are traditional, inland fisheries contribute about 25% of the fish consumed by rural dwellers. There are an estimated 8000 boats on the river system but only about 2000 of these are registered. Migrant fisherfolk with large motorized boats and advanced technologies generally out-compete the resident fisherfolk. There is little control over net mesh size and there is widespread use of pesticides and dynamite for fishing (FAO 2006; DAI 2008).

The declaration of Gbedin Wetlands as a Ramsar site has caused conflict between the government and local communities, due to lack of prior information and consultation, and an unclear boundary for the Ramsar site (DAI 2008).

Groundwater, though of relatively high quality, has not been fully developed. Liberia does not have adequate hydrogeological programs. Aquifers have not been fully mapped to determine extent and water quantity. Greater Monrovia had the most sophisticated water system in the country, but it was largely destroyed during the civil war. This water system is now operating at about 11% capacity, serving about 1 million people. In the rural areas, rivers, streams and ponds are the main water sources, but are of poor quality. Pollution of water sources is directly attributed to human action, resulting in outbreaks of diarrhea, cholera, typhoid and malaria (UNDP and EPA 2006).

By tradition, women and children are responsible for fetching water for the family, spending several hours each day on the activity. Women are also involved in small-scale fish-processing, mainly fish-smoking (EC 2008).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

Key line agencies regarding water resources include: 1) the Liberian Hydrological Services (under the Ministry of Land, Mines and Energy) which serves as a research arm, conducts hydrometric measurements, and provides technical support to other agencies on waterworks and hydropower development; 2) the National Bureau of Fisheries under the Ministry of Agriculture, charged with conserving all fish resources and aquatic environments; and 3) the Division of Environmental and Occupational Health under the Ministry of Health and Social welfare, which monitors environmental impacts from water pollution (DAI 2008).

Other relevant agencies include: 1) the Liberia Water and Sewer Corporation, charged with supplying safe drinking water to the public and providing wastewater collection and disposal; and 2) the Environmental Protection Agency (EPA, created in 2006), which manages environmental quality and coordinates all activities relating to environmental protection and the sustainable use of natural resources. Municipalities are responsible for wastewater collection and disposal within their jurisdictions (DAI 2008).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

The government is currently focused on emergency repairs of water systems and infrastructure. It prepared the 2007 National Integrated Water Resources Management Policy. A guiding principle of the policy is that freshwater is a finite and vulnerable resource (DAI 2008).

The Environment Protection and Management Law empowers the EPA to develop and publish national guidelines for solid-waste management in cooperation with relevant institutions and in consultation with other stakeholders. The 2003 National Environment Policy is definitive on waste management and sanitation and proposes several strategic policy measures to address the gaps in this sector, which include: fragmented environmental policies; insufficient political commitment; absence of an institutional framework for non-domestic types of waste; absence of a national integrated waste management system; and inadequate equipment and infrastructure (UNDP and EPA 2006).

DONOR INTERVENTIONS AND INVESTMENTS

USAID supported the Integrated Inland Valley Swamp Rehabilitation and Development Project, which provided employment for ex-combatants in the rehabilitation and development of fish ponds and rice paddies. The Food and Agriculture Organization (FAO) provides support for the rehabilitation of the artisanal fisheries sector in two counties (Cape Mount and Grand Bassa) to improve the livelihoods of fisherfolk (FAO 2006).

The European Commission (EC), World Bank, and African Development Bank (AfDB) are funding the rehabilitation and extension of water and sanitation systems and infrastructure in urban and rural areas. The Japan International Cooperation Agency (JICA) is funding the development of a City Plan for Monrovia, which will include the provision of piped water, sewer and wastewater treatment systems (World Bank 2009b; AfDB 2009; DAI 2008; EC 2007).

The World Bank, UNDP, the International Labor Organization (ILO) and the Liberia Ministry of Labor are supporting the improvement of solid-waste management (DAI 2008).

3. TREES AND FORESTS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Official estimates place forest cover at about 4.3 million hectares, or 45% of total land area. Other estimates, such as that of the FAO, report a lower figure of 3.15 million hectares (2005). Liberia's forests represent the largest remaining remnant of the Upper Guinea forest of West Africa (about 42% of total). Much of it is high, closed-canopy forest with valuable timber species and significant biodiversity – representing nearly half of Africa's mammal species and including the region's largest elephant population. Liberia has two national protected areas: Sapo National Park (180,000 hectares) and East Nimba Nature Reserve (13,500 hectares), which together account for 4% of the country's forest. Three additional national parks are set to be added to the protected area network with a combined area of 176,462 hectares (Methot and Veit 2008; World Bank 2008; DAI 2008; GOL 2006).

Historically, commercial exploitation of Liberia's forests has been a significant part of the country's economy: 5% of GDP in the 1980s, rising to 20% in the late 1990s, and 50% of export earnings in 2000. Commercial logging also largely funded the civil war, prompting the United Nations Security Council to impose sanctions on the export of Liberian timber in 2003. The sanctions were lifted in 2006 after forest sector reforms (Blore 2008; GOL 2006).

Forests play an important direct and indirect role in the daily lives of most Liberians. About one-third of the population lives in rural areas and depends on forests for farmland, animal protein (bushmeat), timber, traditional medicines, energy (wood-derived domestic fuels), and healthy watersheds for fish and clean water. Traditional secret societies (Poro and Sande) use isolated forest areas for ceremonial and training purposes (Lomax 2008; Methot and Veit 2008).

Forests are an integral part of community domains and are collectively owned under customary rules of access and use. Non-members cannot hunt, fell trees, farm or use forest resources without the permission of the owning community. By custom, community members cannot enter deep, intact forests, clear land for farming or fell trees without the permission of traditional elders. In practice, however, rural people are moving into the forest and establishing new farms (Wily 2007).

The biggest threats to Liberia's forests are uncontrolled logging and the expansion of land for agricultural purposes (including shifting cultivation). The rate of deforestation is estimated to be 12,000 hectares annually (0.3%), while the recorded planting of new forests to date (a period of several decades) is only about 11,000 hectares in total (GOL 2006).

LEGAL FRAMEWORK

The 1986 Constitution has a general provision empowering the state to manage the country's natural resources in a manner that ensures maximum participation of citizens and advances the general welfare, and promotes economic development (GOL Constitution 1986).

A series of post-conflict sector reforms were launched in 2006: 1) Executive Order No.1: GOL Forest Sector Reform, which cancelled all forest concessions and timber licenses granted under previous government administrations and mandated forestry legislation reform based on the principles of accountability, transparency and sustainability, as well as community and civil society participation in forest management; 2) the National Forestry Reform Law, which attempts to balance conservation, commercial forestry and community forestry by setting aside a minimum of 30% of forest land as protected area, establishing the basic requirements for commercial exploitation, and granting —usr and management rights" to local communities; and 3) the National Forestry Policy and Implementation Strategy, which describes the main directions for forestry development, taking into account the new forestry law (Methot and Veit 2008; Blore 2008).

The 2005 Public Procurement and Concessions Act provides institutional structures, methods and procedures for concessions, including forest/logging concessions. The 2009 Community Rights Law with Respect to Forest Lands is discussed below (GOL Public Procurement and Concessions Act 2005).

TENURE ISSUES

Under Liberian law, forest land is distinct from forest resources. The National Forestry Reform Law provides that all forest resources belong to the state, except forest resources located in communal forests, and forest resources developed on private or deeded land through artificial regeneration. Through its ownership of nearly all forest resources, the government essentially decides how forest land will be distributed, including forest land used for conservation, commercial logging and community use. This brings a host of tenure issues. Foremost, the National Forestry Reform Law disregards pre-existing customary ownership interests over forests recognized in earlier laws (Hinterland Law and Aborigines Law), some of which have been converted into formal collective titles. Under the new law, communities will have specifically defined and state-proclaimed communal forests which they can use only on a non-commercial basis (Lomax 2008; Wily 2007).

The forestry policy states that community forestry will be of —oughly equal priority" to other uses, but the general legal framework and direction of government efforts clearly favor commercial forestry and conservation. To date, only 0.5 million hectares of forest lands have been earmarked as potential communal forests (at an average of 5000 hectares each) while 1.31 million hectares have been made available for concessions and 1 million hectares for conservation. The overall strategy points to 75% forests being used for commercial forestry, 24% for conservation, and 1% for community use (GOL Community Rights Law with Respect to Forest Lands 2009b; Blore 2008; Lomax 2008; Wily 2007).

The National Forestry Reform Law is unclear with respect to resolving competing land claims. Landowners and occupants are barred under the law from using forest resources except as permitted under the law, and are barred from preventing use of their land by others who have been granted permission by the government (although they are entitled to just compensation). Apart from public notice and opportunity for public comment, the government has no duty per se to consult, investigate or adjudicate existing land claims in establishing nature parks or nature reserves. About 2.5 million hectares of rural land, most of which is forested (accounting for about 44% of the total forest estate) are collectively owned private property under Aborigines Land Deeds and Public Land Sale Deeds (under the Hinterland Law and Aborigines Law). The majority of proposed sites for the resumption of logging and the creation of additional conservation areas are within these various collective deeds (Lomax 2008; Wily 2007).

The National Forestry Reform Law does have benefit-sharing provisions for local communities in the form of a 30% share in the land rental fees paid by concession-holders, and social agreements that specify benefits and access rights to be accorded to affected communities. However, it has been noted that land rental fees are much smaller than stumpage fees (fees for harvesting forest resources), leaving communities with a disproportionately small share compared to their loss and the negative impacts of logging. Likewise, local communities have no parity of bargaining power with concession holders and have no control over fundamental aspects of the social agreements. Experience in other countries has shown that social contracts in general do not provide the benefits expected to local communities (Lomax 2008; Methot and Veit 2008).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The Forest Development Authority is the main forestry institution. It provides forestry planning, develops policy, and administers forestry laws, concession agreements and national parks. It has several departments, and will be assisted by the Forest Management Advisory Committee created under the National Forestry Reform Law.

Other institutions with forestry roles include: 1) the Environmental Protection Agency, the principal agency for the management of the environment; 2) the National Environmental Policy Council, the environmental policymaking body; 3) the Forestry Training Institute in Tubmanburg to provide vocational training; and 4) The College of Agriculture and Forestry at the University of Liberia, which provides degree-level training in forestry.

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

The Community Rights Law with respect to Forest Lands was passed by the Liberian Senate and House of Representatives in September 2008, and subsequently signed by the president and passed into law on 16 October 2009. The Law gives statutory recognition to customary ownership of both forests and forest resources within community lands, provides for the management of community forests by community forest management bodies, and requires prior informed consent of the community for concessions to be made on community lands. The Community Forestry Management Body is appointed by the Community Assembly which is composed of county legislators. The Law amends contradictory provisions of the National Forestry Reform Law and establishes precedence over it. There was considerable national debate on the bill (GOL Community Rights Law with Respect to Forest Lands 2009b; Wily 2008; Methot and Veit 2008).

The Land Commission constituted by the Governance Commission is expected to clarify the legal status of customary forest lands.

DONOR INTERVENTIONS AND INVESTMENTS

USAID's interventions in the sector include: 1) support for the development of a community forestry framework for Liberia through its Land Rights and Community Forestry Program; 2) a conservation initiative, the Civilian Conservation Corps in Sapo National Park; and 3) in cooperation with the US government (USG), policy development support in the areas of forest resource management and commercialization, and biodiversity protection (USAID 2008a; USAID 2008b).

A coalition of donors, non-governmental organizations, and the Liberian government and civil society are involved in the Liberia Forest Initiative, a program supporting long-term sustainable management of Liberia's forest resources. Donors include the World Bank, European Commission, the US Department of State (USDOS), the USDA Forest Service, the International Monetary Fund (IMF), FAO, Environmental Law Institute, Fauna and Flora International, and Conservation International (DAI 2008).

4. MINERALS

RESOURCE QUANTITY, QUALITY, USE AND DISTRIBUTION

Liberia's main mineral resources are iron ore, gold and diamonds. Other minerals include rutile, clay, kyanite and silica sand. There is also exploration for uranium and petroleum. Iron-ore mining is the main activity and has dominated the industry for more than two decades. Liberia was the second-largest producer of iron ore in Africa before 1979, but the industry suffered a setback in the 1980s due to a decline in the world steel market, and completely shut down in 1990 due to the civil war. Iron-ore production has been revived, and exportation is projected to resume in 2010 (GOL 2008c; UNDP and EPA 2006).

Gold and diamond mining are limited to alluvial and small-scale operations with official estimates of over 100,000 artisanal miners in Liberia (International Alert, however, estimates around 250,000 to 500,000 diggers). Cross-border smuggling is rampant. Liberia's first mechanized gold mine is planned to be established after the discovery of substantial deposits in Grand Cape Mount County (GOL 2008c; UNDP and EPA 2006).

The United Nations Security Council imposed sanctions on the export of rough diamonds from Liberia in 2001, after confirming that diamonds (labeled —onflict diamonds") were being used to fund the civil war and were

implicated in destabilizing incursions into Sierra Leone. The sanctions (further discussed below) were lifted in 2007 (Blore 2008).

The mining sector faces major challenges with unrecorded production, poor working conditions, and a variety of environmental and social problems. The government's goal is to rapidly expand mining to jumpstart the economy and development through the formalization of small-scale operations based on cooperative schemes, and by improving the efficiency of recovery methods of alluvial mining and production from medium-to large-scale operations (GOL 2008c).

LEGAL FRAMEWORK

The 1986 Constitution bestows ownership of all mineral resources to the state. The New Mining Law of 2000 (promulgated in 2005) reiterates state ownership of all mineral resources, and provides an exploration and licensing system for mining. An amendment, Chapter 40 of the 2004 New Minerals and Mining Law, added controls on the export, import and transit of rough diamonds. The mining law also provides guidelines for the mitigation of adverse effects of mining or prospecting on the physical environment and the prevention of mining related accidents and health hazards.

The 2005 Public Procurement and Concessions Act requires public tendering of all concessions, including mining exploration concessions with the Public Procurement and Concessions Commission. The Act states that it supersedes the Mining Law. The conflict between this law and the New Mining Law is recognized but has yet to be addressed by the government (GOL Public Procurement and Concessions Act 2005).

The 2002 Environmental Protection Agency Act and the 2002 Environment Protection and Management Law require all public or private projects that may have a significant impact on the environment to secure an environment impact assessment (EIA) permit (USAID 2008).

TENURE ISSUES

Before 1990, the mineral sector contributed more than 65% of export earnings and approximately 25% of GDP, mainly from iron-ore mining. During the civil war, all major mines were closed, and the contribution of the sector to the economy declined to negligible levels for almost 15 years. Proceeds from small-scale diamond mining largely financed the war (GOL 2008d).

Small-scale alluvial diamond mining continued in Liberia under the UN sanctions regime. Diamonds and gold are often found together in Liberia, and miners continued operating under cover of gold mining licenses. The UN sanctions were lifted in 2007 after Liberia's admission to the Kimberly Process Certification Scheme (established by the UN in 2003 and designed to certify the origin of rough diamonds from sources which are free from conflict) (UNDP 2006).

Industrial mining operations for diamonds, gold and iron ore resulted in the clearance, excavation and flooding of tropical rainforest and farmlands, the collapsing of riverbanks, and the damming or diverting of river courses. In most cases, there are no post-extraction plans. Environmental impact assessments have not been conducted at the sites, and potential chemical risks are unknown (USAID 2008; UNDP and EPA 2006).

Small-scale artisanal operations typically involve the digging of pits within alluvial river channels. Individual miners exploit gravel beds that lie on or near the surface. They often have no comparable alternative employment opportunities, and work in sub-standard conditions using low cost, simple tools. Illegal operations take place in nearly all of Liberia's protected areas (USAID 2008; UNDP and EPA 2006).

Environmental effects include siltation of dams and rivers; indiscriminate deforestation; additional degraded lands from miners' settlement patterns; ground- and surface-water pollution, including acidic mine-drainage and heavy-metal pollution from copper, lead, arsenic, mercury or cyanide in highly mineralized zones; dust pollution; oil pollution from vehicle leaks and machinery; habitat fragmentation, decreased habitat effectiveness and increased mortality of wildlife; and displacement of and conflict with surrounding communities (USAID 2008; UNDP and EPA 2006).

Women have very little participation in the mining sector, comprising only 7.6% of the labor force compared to 92.4% for men, or more than nine men hired to every one woman (Kinder and Stanger 2008).

GOVERNMENT ADMINISTRATION AND INSTITUTIONS

The Ministry of Lands, Mines and Energy coordinates and regulates all mining activities and issues mining licenses. The Government Diamond Office assures compliance with the Kimberly Process.

Other key agencies are the Environmental Protection Agency and the Public Procurement and Concessions Commission (GOL Public Procurement and Concessions Act 2005).

GOVERNMENT REFORMS, INTERVENTIONS AND INVESTMENTS

Government efforts to revitalize the mining sector as a key driver for economic growth and poverty reduction has resulted in the following initiatives: 1) creation of the Mining Cadastre Information Management System designed to minimize conflict in awarding mineral titles and improve information on mineral inventories and other crucial mineral development parameters; 2) drafting of a national Mineral Policy which will serve as a framework for the sector (currently undergoing a stakeholders validation process and expected to be completed by April 2009); 3) completion of a Model Mineral Development Agreement; and 4) issuance of 33 new mineral exploration licenses, adding to the 53 existing licenses (GOL 2008d).

DONOR INTERVENTIONS AND INVESTMENTS

There is limited donor intervention in the mining sector. USAID has recently completed the Liberia Improved Budget, Assets and Mining Management Project, which supported the recovery process of key government institutions in the mining sector. USAID has also recently launched an initiative to address artisanal mining which will include a review and documentation of licenses. The PRADD program will implement a land rights formalization methodology to help artisanal diamond miners achieve clear, secure and publicly-acknowledged rights to land and resources. The land rights clarification process is complemented by training and technical support in alternative livelihoods strategies for economic development. The World Bank channeled technical assistance support to the sector through the Liberian Government's Governance and Economic Management Program (World Bank 2009b; USAID 2008).

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