



Conservation and Peacebuilding in Sierra Leone

Oli Brown, Alec Crawford
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Head Office

161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba, Canada R3B 0Y4 Tel: +1 (204) 958-7700 | Fax: +1 (204) 958-7710 | Website: www.iisd.org

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Authors

Oli Brown is the Environmental Affairs Officer for the UN in Sierra Leone where he coordinates UNEP's program of work. Before joining the UN, Oli was a Senior Researcher and Programme Manager for the International Institute for Sustainable Development (IISD). This paper is written in his personal capacity and does not necessarily reflect the position of the United Nations.

Alec Crawford is a Project Manager at IISD where he coordinates the Environment, Conflict and Peacebuilding program.

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Cover: Sierra Leone is part of the Upper Guinean Forest ecosystem, which is eighth in the world in terms of plant species diversity and fifteenth in terms of plant species endemism. (Photo, chimpanzee: Alec Crawford; Photo, Tiwai Island Wildlife Sanctuary: David Zeller/RSPB.)



The Loma Mountains Non-Hunting Forest Reserve, home to sub-Saharan West Africa's highest mountain, Mount Bintumani, may soon be designated a national park. (Photo: Tacugama Chimpanzee Sanctuary)

Acronyms

CSSL	Conservation Society of Sierra Leone
EFA	Environmental Foundation for Africa
EJF	Environmental Justice Foundation
EPA-SL	Environment Protection Agency–Sierra Leone
GEF	Global Environment Facility
GFP	Gola Forest Programme
GoSL	Government of Sierra Leone
GRNP	Gola Rainforest National Park
IUU	illegal, unregulated and unreported (fishing)
MAFFS	Ministry of Agriculture, Forestry and Food Security
MFMR	Ministry of Fisheries and Marine Resources
MMMR	Ministry of Mines and Mineral Resources
MPA	marine protected area
OKNP	Outamba Kilimi National Park
REDD	Reduced Emissions from Deforestation and Forest Degradation
RSPB	Royal Society for the Protection of Birds
RUF	Revolutionary United Front
STEWARD	Sustainable and Thriving Environment for West African Regional Development
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
WAPFoR	Western Area Peninsula Forest Reserve
WHH	Welt Hunger Hilfe
WWF	World Wildlife Fund

PART 1:

Introduction

The West African nation of Sierra Leone is small—roughly the size of Ireland—but hosts an impressive variety of biodiversity and landscapes. Rich offshore currents support productive fisheries, the coast is fringed by lush mangroves and pristine beaches, and the interior rises up to Mount Bintumani, which, at 1,945 metres, is sub-Saharan West Africa’s highest mountain.

Sierra Leone lies at the western edge of the Upper Guinean Forest ecosystem. The ecosystem is listed on the World Wildlife Fund’s (WWF’s) Global 200 list of critical regions for conservation and is designated as one of Conservation International’s 34 global biodiversity hotspots: it is eighth in the world in terms of plant species diversity and fifteenth in terms of plant species endemism (STEWART, 2011). Sierra Leone itself hosts a significant population of West African chimpanzees, populations of the extremely rare pygmy hippopotamus, and a large variety of rare native and migratory birds.

Yet the country has struggled with a tragic and violent history. Between 1991 and 2002 an estimated 100,000 people were killed and two million displaced by a brutal civil war fuelled by the trade in so-called “blood diamonds” and notorious for mass amputations and the use of child soldiers (UNEP, 2010). The war precipitated a nearly complete breakdown of government, and almost all forms of environmental management ceased. In response to the conflict, the United Nations deployed one of its largest-ever peacekeeping missions in 1999.

There has been much progress since the end of the war: two peaceful transitions of power, steady economic growth, increases in foreign investment and a renewed sense of stability and progress. The peacekeeping mission has evolved into a civilian (and much smaller) peacebuilding office which hopes to wind up operations if the 2012 elections go smoothly.

Still, the country remains near the very bottom of the Human Development Index. It faces endemic poverty, low life expectancy and among the highest rates of infant and maternal mortality in the world. Moreover, Sierra Leone is still confronting the legacies of a decade of violent conflict, particularly in the area of environmental and natural resource management. In fact, the country placed last among 163 countries in an index of environmental performance produced in 2010 by Yale University. The study noted some indicators that had even deteriorated since the end of the war, particularly those related to environmental health (Yale University, 2010).



Sierra Leone's beautiful beaches and impressive landscape could be a major draw for tourists. Discussions are underway for the establishment of the country's first four marine protected areas: Yawri Bay, the Sherbro River Estuary, the Sierra Leone River Estuary and the Scarcies River Estuary. (Photo: Oli Brown)

Worryingly, a 2010 assessment by the United Nations Environment Programme (UNEP) concluded that many of the conditions for conflict that existed before 1991 persist today, including youth unemployment and rural marginalization. In some cases they have been aggravated by concerns about opaque bureaucracy, corruption and the unfair distribution of the benefits from natural resource extraction (UNEP, 2010).

With little in the way of a manufacturing or service sector, the vast majority of people depend on agriculture, fishing, mining or logging for their livelihoods (UNEP, 2010). There is also a growing industrial mining sector: besides diamonds, the country has significant reserves of gold, iron ore, bauxite and rutile, and has recently discovered offshore oil. Meanwhile, agribusiness companies are drawn by the country's warm temperatures and relatively plentiful fresh water: an estimated 10 per cent (some 500,000 hectares) of the available arable land is under negotiation or contract for industrial agriculture (Brown et al., 2011).

The government of the current President, Ernest Koroma, identified the management of Sierra Leone's environment and natural resources as a key peace and development priority in its 2007 Poverty Reduction Strategy Paper (PRSP II, known locally as the "Agenda for Change"). But the country's environment is under growing pressure from a rising population, mining operations, charcoal production, slash and burn agriculture, illegal fishing and poor waste management.

Meanwhile, Sierra Leone has only 4 per cent of its territory (and none of its seas) under any sort of conservation protection. This compares to a global average of about 6.2 per cent and a sub-Saharan African average of 5.9 per cent.¹ This may change: Sierra Leone is planning a significant upgrade of its system of protected areas, which may include the designation of two new national parks, increasing the protection of a number of current forest reserves, moving communities currently encroaching on protected areas, and creating four new marine protected areas (MPAs).

¹ For Protected Areas, IUCN categories I-V, 2006. Source: World Resources Institute (2006). EarthTrends: The Environmental Information Portal. Available at: http://earthtrends.wri.org/searchable_db/index.php?action=select_countries&theme=7&variable_ID=918

While the plans would still leave the country with a comparatively small network of protected areas, this is a very encouraging development. Sierra Leone has landscapes of stunning beauty and biodiversity of universal value which desperately need protection if they are to survive for future generations. In addition to the environmental arguments for better conservation, an effectively managed network of protected areas could bring numerous important economic and social benefits: providing ecosystem services such as clean water, non-timber forest products and fish nurseries; supporting the country's nascent ecotourism industry; and preserving leisure spaces for Sierra Leoneans themselves.

Environmentalists like to think of themselves as apolitical and "above the fray." However, conservation is an intensely political exercise and can be heavily contested. It inherently involves limiting or controlling the access to natural resources that communities and outsiders may depend on for their livelihoods. If managed effectively, conservation can play a role in peacebuilding and development in Sierra Leone by strengthening natural resource governance; developing sustainable livelihoods; creating employment opportunities; generating tourist revenue; and promoting dialogue, trust-building and cooperation. However, if poorly managed, conservation can inadvertently cause and exacerbate disputes over natural resources and introduce new or additional economic burdens or risks on local communities.

The aim of this paper is to assess the status of conservation in Sierra Leone, to outline some of the key threats to protected area management in the country and try to understand how conservation can be done in a way that is "conflict-sensitive"—or, to put it another way, how to manage protected areas in a way that does not create or exacerbate tensions and conflicts.

The following section will investigate the status and management of conservation in Sierra Leone in more depth. Part Three outlines the main threats that protected areas are facing, while Part Four looks at the ways that conservation could support, or, if managed poorly, undermine, peacebuilding in the country. Part Five concludes with recommendations for more effective land and marine management.

BOX 1: Key Facts on Sierra Leone

- Area: 71,740 km²
- Population, 2010: 5.8 million
- Population growth per annum, 2010/2015: 2.1 per cent
- Estimated population, 2050: 12.4 million
- Urban population, 2010: 38.4 per cent
- Adult literacy, 2011: 40.9 per cent
- Life expectancy at birth, 2011: 47.8 years
- Gross Domestic Product, per capita, 2009 (purchasing power parity): US\$808
- Major exports: diamonds, rutile, bauxite, coffee, cocoa and fish
- UNDP Human Development Index rank, 2011: 180 of 187
- Protected areas, as a percentage of total land, 2010: 4 per cent

Source: U.S. Dept. of State (2011); UNFPA (2010);
UNDP (2010); UNDP (2011); UNEP (2010)

PART 2:

Conservation in Sierra Leone

CONSERVATION HISTORY

The origins of Sierra Leone's conservation history stretch back nearly 100 years. The Western Area Peninsula Forest Reserve (WAPFoR) lies just outside of Freetown, the capital. The reserve houses 50 species of mammal, including seven primate species and 374 bird species, and helps to purify the capital's water supply. Its importance to Freetown meant that it was the first area to be protected in Sierra Leone, declared a forest reserve in 1916 by the British colonial administration. Similar declarations followed from 1926–1930, as four ecosystems were gazetted:

- **Gola Rainforest:** The largest tract of closed-canopy lowland rainforest in Sierra Leone and a significant remnant of the Upper Guinea Forest region, with a large number of bird and mammal species, including the very rare pygmy hippopotamus.
- **Loma Mountains:** Site of West Africa's highest mountain, Bintumani, and largest tract of montane forest in the country.
- **Tingi Hills:** The eastern-most mountain range in the country, home to threatened bird and mammal species.
- **Kangari Hills:** Mainly moist rainforest, steep hills, and valley swamps, with primate, large mammal and bird populations.

The next significant expansion in protected areas happened after independence (achieved in 1961) in 1973–1974, with existing forest reserves (Loma, Tingi, Kangari and WAPFoR) designated non-hunting forestry reserves and initial protection for the Outamba Kilimi landscape, a collection of grassland, closed woodland and gallery forest ecosystem along the country's border with Guinea. In 1987, there was a small addition to the network of protected areas when Tiwai Island Wildlife Sanctuary was established in collaboration with civil society and academia as a community conservation project focusing on research and tourism. The island, lying in the Moa river, is home to a number of bird, mammal, primate and turtle species.



Tingi Hills Non-Hunting Forest Reserve lies in the east of Sierra Leone, and is home to a number of threatened bird and mammal species. (Photo: Caroline Thomas)

Conservation activities slowed down during the country's civil war, but did not cease entirely. In 1995, the government declared Outamba Kilimi the country's first national park (OKNP). Also in 1995, Tacugama Chimpanzee Sanctuary opened within the boundaries of the WAPFoR. Mandated to protect and rehabilitate chimpanzees rescued from the pet and bushmeat trade, the sanctuary became—and remains—a focus of Sierra Leone's small ecotourism industry. In 1999, the Sierra Leone River Estuary was designated as the country's first—and still only—"Wetland of International Importance" under the Ramsar Convention.

The Gola Forest Programme (GFP) was established in the 1990s as a partnership between the Royal Society for the Protection of Birds (RSPB), the Conservation Society of Sierra Leone (CSSL) and the Department of Forestry of the Ministry of Agriculture, Forests and Food Security (MAFFS). Its mandate is to work with the surrounding communities to protect and manage the biodiversity of the Gola Forest Reserve. In 2009, the governments of Liberia and Sierra Leone agreed to the creation of a transboundary peace park across their shared border, between Gola and the contiguous Lofa and Foya forest reserves in Liberia. Once plans are fully implemented, the park will protect a forested landscape of approximately 300,000 square hectares. The Gola Rainforest National Park (GRNP) was officially opened by the President in December 2011.



Diamond mining helped to prolong and fuel the civil war, which in turn contributed to the breakdown of government management of the natural resource sector. (Photo:Oli Brown)

BOX 2:

The Impacts of Civil War on Conservation in Sierra Leone (1991–2002)

Sierra Leone's bloody civil war had a number of direct, indirect and institutional impacts on conservation in the country:

DIRECT IMPACTS:

- The Revolutionary United Front (RUF) rebel group established camps inside protected forests, notably in the northern section of the Gola rainforest and the Kangari Hills.
- The civil war led to the abduction and displacement of a large number of Sierra Leoneans. Some hostages were held in protected areas, while many of the displaced settled in and around these same areas.
- Park facilities in OKNP and Gola were attacked and damaged by rebel forces (Squire, 2001). Access to Tiwai Island Wildlife Sanctuary was blocked, interrupting scientific research from the start of the civil war to 2004. Tacugama Sanctuary was attacked by the rebels on three separate occasions.
- Military offensives against the RUF in the protected areas led to increased poaching by soldiers (Squire, 2001).
- General lawlessness facilitated an increase in cross-border poaching between Sierra Leone and Guinea and Liberia.

INDIRECT IMPACTS:

- The conflict halted the country's tourism industry (i.e., by discouraging tourists, destroying tourism infrastructure).
- Displaced populations conducted extensive farming, logging and artisanal mining operations in the country's reserves (UNEP, 2010).

- The collapse of law and order led to widespread illegal artisanal mining, often in or near protected areas.
- The destruction of records during the conflict led to a significant amount of land grabbing and confusion regarding property ownership during and immediately after the conflict.
- In the post-conflict phase, demobilized rebels often turned to the natural resources sector for income, such as to artisanal mining in protected areas (i.e., Kangari Hills, Kambui Hills, OKNP).

INSTITUTIONAL IMPACTS:

- There was a general collapse in environmental management and institutions in the country, which weakened protected area governance: conservation organizations were forced to withdraw from several protected areas (for example, WWF from OKNP).
- Humanitarian and development concerns and financial needs (understandably) took precedence over conservation during and immediately after the war (Squire, 2001).
- Low levels of transparency and accountability, combined with weak governance and corruption, opened a window for corrupt officials to grant unofficial and illegal logging concessions for the Kilimi and Kuru Hills protected areas (UNEP, 2010).

While some of these impacts dissipated with the cessation of hostilities, many persist, and the legacy of the war continues to hinder conservation efforts in Sierra Leone.

CURRENT PROTECTION

There are currently 48 forest reserves and conservation areas in Sierra Leone, covering 284,591 hectares (Government of Sierra Leone, 2011a). Protected areas in Sierra Leone are categorized in three ways, as per the 1972 Wildlife Conservation Act: national parks or game reserves, wildlife sanctuaries, and strict nature reserves (including forest reserves). There are two national parks in the country (OKNP and GRNP), a wildlife sanctuary (Tiwai Island), and a collection of forest reserves (typically non-hunting) (see Table 1). Altogether, protected areas cover approximately 4 per cent of the country but none of its marine territory. Protected areas are established only with community support, which is a prerequisite to applying for parliamentary approval.

Terrestrial protected areas fall under the mandate of the Conservation and Wildlife branch of the Division of Forestry, within the MAFFS². Other relevant government stakeholders include: the Environment Protection Agency of Sierra Leone (EPA–SL, whose mandate is to coordinate and monitor environmental policies, programs and projects in the country); the Ministry of Fisheries and Marine Resources (MFMR, a key stakeholder in the proposed MPAs); the Ministry of Tourism; the Ministry of Mines and Mineral Resources (MMMR, which allocates mining license agreements); and the Ministry of Lands, Country Planning and the Environment (which is in charge of general land use planning). The relatively decentralized nature of governance in Sierra Leone means that traditional authorities (including, among others, paramount chiefs, village chiefs and women’s leaders), Local Councils and District Forestry Officers also play an important role in protected area management.

Capacities for monitoring and patrolling protected areas and enforcing legislation remain weak: the Conservation and Wildlife Branch of MAFFS has a staff of less than 25 and the EPA–SL has a staff of around a dozen. Meanwhile, the government budget for conservation is tiny, and most activities rely on external funding, making planning and the sustainability of operations inherently very challenging.

A clutch of national and international non-governmental conservation organizations are also active. The Conservation Society of Sierra Leone (CSSL) is particularly involved in the WAPFoR, Gola Forest, the Sierra Leone Estuary and Turtle Islands. The Environmental Foundation for Africa (EFA) manages Tiwai Island and is one of a number of partners in the WAPFoR project. The U.K.-based Royal Society for the Protection of Birds (RSPB) has a long-term commitment to the GRNP, with the current support of the European Union and a number of other donors. The German non-governmental organization (NGO)

Welt Hunger Hilfe (WHH) is managing an EU funded project to demarcate and project the WAPFoR. A USAID-funded project called the STEWARD initiative (Sustainable and Thriving Environments for West African Regional Development) is working in OKNP and a new Global Environment Facility (GEF) project, the Biodiversity Conservation Project, is working the OKNP, the Kangari Hills and the Loma Mountains.



The proposed marine protected area of Yawri Bay. Only 4 per cent of Sierra Leone’s territory (and none of its seas) is under any sort of conservation protection, compared to a global average of about 6.2 per cent and a sub-Saharan African average of 5.9 per cent. (Photo: Paige McClanahan)

² The Division of Forestry also has branches covering commercial forestry and community forestry.

TABLE 1: SIERRA LEONE'S MAIN PROTECTED AREAS

Protected area	Status	Size (ha) ³	District	Description
Outamba Kilimi	National Park	110,900	Bombali	Part of the transboundary Fouta Jallon Highlands where six of West Africa's major rivers rise.
Gola Rainforest	National Park	71,070	Kailahun, Kenema, Pujehun	The last significant patch of closed canopy rainforest in Sierra Leone.
Western Area Peninsula Forest	Non-Hunting Forest Reserve	17,688	Western Area	Forest on the hills outside of Freetown which provide much of the capital's freshwater supply.
Loma Mountains	Non-Hunting Forest Reserve	33,201	Koinadugu	Site of the country's highest mountain, Mount Bintumani (1,948 metres).
Kangari Hills	Non-Hunting Forest Reserve	8,573	Bo, Tonkolili	Steep-sided range of hills in the centre of the country that provide an important habitat for wildlife and could be a release site for reintroduced chimpanzees.
Tingi Hills	Non-Hunting Forest Reserve	10,519	Koinadugu, Kono	Remote area of north-eastern Sierra Leone renowned for its batholiths.
Tiwai Island	Wildlife Sanctuary and Community Conservancy	1,200	Pujehun, Kenema	This small island in the Moa river is an important habitat for primates, birds and the very rare pygmy hippo.
Kambui Hills	Forest Reserve	21,228	Kenema	Forest on low-lying range of hills west of Kenema which is threatened by logging and mining.
Sierra Leone River Estuary	Ramsar site	295,000	Port Loko, Western Area	The country's only Ramsar site, and as such the only marine area afforded any level of protection.

3 Source: World Bank (2006)

PLANS FOR EXTENDING THE NETWORK OF PROTECTED AREAS

National and international organizations have proposed a variety of additions to the network of protected areas as well as ways to strengthen existing protection:

- The 2011 draft Forestry Policy notes that an additional 36,360 hectares of land are proposed for conservation. Without including marine areas, this would represent an increase of roughly 12 per cent over the current area, taking the total area under protection to 4.5 per cent of the country's land area (Government of Sierra Leone, 2011a). Though still less than the global (6.2 per cent) and sub-Saharan averages (5.9 per cent), this is nonetheless a significant improvement.⁴
- The Conservation and Wildlife branch has proposed that the Loma Mountains and WAPFOR, both currently categorized as non-hunting forest reserves, be upgraded to national park status, bringing the national total to four.⁵ The branch has also proposed Lake Mape, Lake Mabesi, Lake Sonfon and the Mamunta-Mayosso wetland be legally protected as game sanctuaries.
- There have been discussions about establishing four marine protected areas (Yawri Bay, the Sherbro River Estuary, the Sierra Leone River Estuary and the Scarcies River Estuary). The EU is funding a British NGO, the Environmental Justice Foundation (EJF), to help with this process.

4 For Protected Areas, IUCN categories I-V, 2006. Source: World Resources Institute (2006). EarthTrends: The Environmental Information Portal. Available at: http://earthtrends.wri.org/searchable_db/index.php?action=select_countries&theme=7&variable_ID=918

5 The promotion of Loma Mountains to a national park is being partially supported by funding from the Bumbuna Hydroelectric Project, and has the support of the surrounding communities; the proposal is now working its way through parliament.

BOX 3:

Key Conservation Legislation in Sierra Leone

Wildlife Conservation Act, 1972: The primary piece of legislation governing the protection of wildlife in Sierra Leone, the Act established three categories of land to be set aside for wildlife protection: strict nature reserves, national parks or game reserves, and game sanctuaries (Squire, 2001).

Forestry Act, 1988: The principal legislation governing the management and regulation of forestry and Forest Reserves in Sierra Leone, it enacted significant provisions for the efficient management and rational use of the country's forest resources in order to achieve a combination of benefits through forest production, forest protection and non-forest uses.

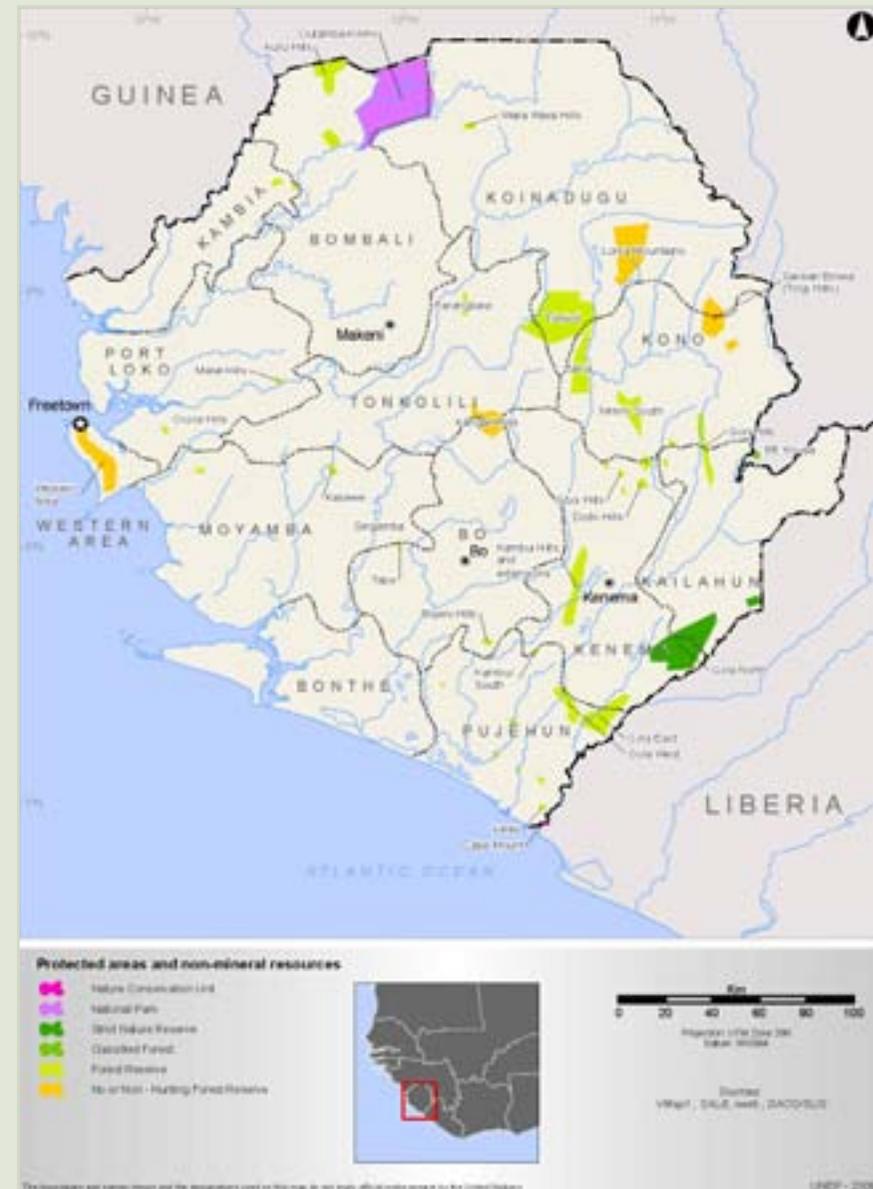
National Biodiversity Strategy and Action Plan, 2003: This document, prepared as part of Sierra Leone's obligations to the UN Convention on Biological Diversity (ratified 1996), summarized the status of the country's terrestrial and aquatic biodiversity and presented both a strategy and action plan for improved protection.

Draft Conservation and Wildlife Policy and Act, 2011: The draft Conservation and Wildlife Policy sets out five principles for wildlife management (sustainable management, rights-based governance, economic and social benefits, integrated wildlife conservation and culturally-sensitive, knowledge-based conservation) and recommends action in five areas (species management, conservation areas, research and monitoring, education and awareness, and capacity building). The new Conservation and Wildlife Act will replace the 1972 Wildlife Conservation Act and will increase protection for endangered species.

Draft Forestry Policy and Act, 2011: The Forestry policy is set out according to similar guiding principles as the draft Conservation and Wildlife Policy and establishes a set of policy objectives around forestry land management, forest-based industry and practices, ecosystem conservation, education and awareness, research and monitoring, and capacity building. The new Forestry Act will replace the 1988 Act. It acknowledges the environmental role of forest areas and places emphasis on the preservation of the forest environment.

- The Biodiversity Conservation Project, funded by the GEF and implemented by the World Bank and Österreichische Bundesforste in collaboration with MAFFS, was launched in 2011 to strengthen the protection of OKNP, Kangari Hills and Loma Mountains through improved site planning and implementation, expanded awareness-raising and community engagement, and capacity building within the national forestry department.
- WAPFoR management are suggesting a no-expansion adjustment to the reserve's boundary by adding forests further down the peninsula to accommodate Freetown's growth.⁶
- The GFP could become a major recipient of funding from the Tropical Forest Conservation Trust Fund, an RSPB initiative aimed at providing financing for tropical conservation initiatives around the world. The Fund has to date raised roughly US\$3.5 million of its US\$20 million goal. The RSPB is also developing a project for GRNP which would sustainably finance the core operations of the national park for the next 20 years through payments from the UN Reduced Emissions from Deforestation and Forest Degradation (REDD+) mechanism.
- A group of conservation stakeholders is exploring the possibility of applying for UNESCO World Heritage Site designation for selected areas of the country: tentatively Bunce Island, the Western Area forest and beaches, and GRNP.

MAP 1: CURRENT CONSERVATION AREAS IN SIERRA LEONE



Source: UNEP (2010)

⁶ The new boundaries have been established on the basis of extensive community consultations, and were approved by the cabinet in the summer of 2011. The proposal is being considered by Parliament.

PART 3:

Challenges for Conservation in Sierra Leone



Sierra Leone's rapid population growth is concentrated in its urban centres, particularly in Freetown. Encroachment for timber and expanding urban settlements now affects approximately 20 per cent of the Western Area Peninsula Forest Reserve. (Photo: Tommy Trenchard)

Conservationists face daunting challenges to even sustain the current levels of protection, let alone extend the network of terrestrial areas and creating new marine protected areas. Those challenges are not uniform across the country, but can still be divided into three main categories, presented below: demographic pressures; pressures for alternate resource uses; and institutional challenges.⁷

1. DEMOGRAPHIC PRESSURE

Sierra Leone's population is expected to grow from 5.8 million people to 12.4 million by 2050 (UNFPA, 2010). Currently, 66 per cent of the population lives below the national poverty line (UNDP, 2011). Of those in the workforce, 52.5 per cent work in the agricultural sector and 30.6 per cent in industry—the remaining 16.9 per cent work in the service sector (U.S. Dept. of State, 2011). High levels of poverty, coupled with the fact that the majority of people's livelihoods rely on natural resources

such as farming, mining and logging, means that demographic pressure on natural resources is significant and is likely to increase.

- Population growth is expected to be concentrated in urban centres, particularly in Freetown. The expansion of Freetown has already affected the WAPFoR heavily: encroachment for timber, charcoal and housing now affects approximately 20 per cent of the protected area. This has forced conservation authorities to propose new boundaries for the reserve, ceding encroached-upon lands to the urban sprawl.

⁷ These points were raised through consultations and meetings with representatives from local and national government and civil society which helped to identify a range of challenges.

- Conflicts between human and wildlife populations may increase. Chimpanzees are reported to be raiding cocoa fields near the GRNP, impacting the livelihoods of farmers around the park. Communities, disarmed in the aftermath of the civil war, now see themselves as having fewer means for defending their crops from animal raids, and the absence of compensation schemes for crop losses could generate tensions between the communities and the protected areas.

2. PRESSURES FOR ALTERNATIVE RESOURCE USES

Many of the challenges to conservation in Sierra Leone are strongly linked to the need for economic development. With the country's high levels of poverty and unemployment, the Government urgently needs to create jobs and generate revenue. The decision to protect natural resources through conservation is a decision on who can access and control natural resources—often valuable ones.

At the local level, these decisions can be contentious in areas of high poverty, where the local population depends on natural resources for their livelihoods. At the national level, particularly in countries recovering from conflict, the “long-game” of conservation can also be a tough sell; natural resources are often central to kick-starting economic development, creating jobs and supporting livelihoods, and raising government revenues, whether through mining, agriculture, logging, fisheries or other natural resources.

Conservation tourism, at present, is unlikely to match the economic weight of agriculture, mining and forestry resources. Tourism infrastructure remains minimal, and tourist numbers are very low: for example, GRNP has hosted just 176 foreign visitors and 119 nationals between September 2008 and June 2011, each paying an average entry fee of about \$7.⁸ Meanwhile, it is unlikely that carbon payments through the UN REDD+ mechanism will be of a speed and scale to independently fund conservation for the country as a whole (options are currently being explored for park/reserve-specific REDD+ funding arrangements).

MINING

Significant mineral deposits—including gold, diamond, rutile, bauxite and iron ore—lie within the country's borders, often in or near protected areas. International investors are interested in the country's mineral wealth, particularly given its increasingly stable political context, and the sector is expanding rapidly (Brown et al., 2011). Mineral concessions—both exploration and exploitation licenses—cover 82 per cent of the

country, and over 100 mining companies are operating in Sierra Leone (Brown, et al., 2011).

This is already having considerable impacts on the environment in general (and protected areas in particular) where there have been several attempts to de-gazette parks to open them up for mining:

- In 2005 and 2007 the Government issued mining licenses to two companies (Sierra Leone Minerals and Target Resources) for operations in areas overlapping with what is now GRNP without consulting the reserve's management. Neither license led to mining in the park and they have since been revoked, but the issuance of the licenses points to serious weaknesses in governance and coordination; support for the forest from the President's office saved the reserve (Global Witness, 2010). This issue surfaced again in 2011 when a Paramount Chief near the Gola Forest reportedly sold concessions to the Bagra Hills inside the northern section of the GRNP (Fayia, F., 2011). Artisanal gold and diamond mining is also being carried out in the park, often with the involvement of Liberians; 12 people have been arrested to date.
- U.K.-based mining company Cluff Gold is disputing the park boundaries of the gold-rich Kangari Hills reserve (see Box 4).
- The presence of industrial mining operations also tends to attract artisanal miners. In Kangari Hills, for example, Cluff Gold's operations have led to encroachment into the park by artisanal miners.
- The high price of gold is triggered a gold rush in OKNP, where there are reports of up to 28 communities springing up within the park in the past two years. A lack of environmental standards means that artisanal miners (there are estimated to be 200,000–400,000 of them in Sierra Leone) are the cause of considerable land degradation in protected areas throughout the country (Brown et al., 2011).
- The recent discovery of commercially viable offshore oil and gas reserves could have implications for future marine protection.

AGRICULTURE

With the population expected to double by 2050 and food security a real concern, there is considerable pressure to expand the area of land under agricultural production to feed the country and provide crops for export markets (UNEP, 2010). Current subsistence agricultural practices are highly inefficient: slash-and-burn agriculture remains prevalent

8 Foreign visitors pay on average US\$10; nationals pay US\$2. Personal communication with the GFP.



Sierra Leone contains significant mineral deposits. Over 100 mining companies, like this Sierra Rutile mine, are operating in Sierra Leone, and mineral concessions, including both exploration and exploitation licenses, cover 82 per cent of the country. (Photo: Caroline Thomas)

and contributes to extensive deforestation, bushfires and erosion. Meanwhile, the expansion of industrial agriculture is increasing demand for arable land: it is estimated that up to 10 per cent of the country's arable land is under negotiation or contract for commercial use by agribusiness companies (Brown et al., 2011).

- The expansion of agricultural activities has led to increased encroachment into protected areas. OKNP and Kangari Hills are both experiencing encroachment from farmers and continue to have agricultural communities settled inside their boundaries that have yet to be resettled outside of the protected areas. In OKNP alone, 28 hamlets have sprung up whose inhabitants intend to farm and pan for gold within the park.

FISHERIES

Sierra Leone's fisheries are crucially important to the population's livelihoods and food security: 300,000 to 400,000 people are estimated to be employed in the sector, and fish is responsible for 75 per cent of the animal protein in the population's diet (compared to a global average of 15 per cent) (Seto, K., 2011). These marine ecosystems already face considerable pressures: fish stocks are declining, a result of overfishing and unsustainable fishing practices (UNEP, 2010). Erosion and the loss of mangrove forests continue to impact coastal fisheries. Meanwhile, rampant illegal, unreported and unregulated (IUU) fishing in Sierra Leone's waters amounts to estimated losses of US\$29 million per year, representing 25–50 per cent of the country's total reported catch (MRAG, cited in Seto, 2011).

- Sierra Leone does not currently have any marine areas under protection. A series of well-managed marine protected areas (MPAs) could help to secure key spawning grounds and increase the overall productivity of the fisheries. However each MPA will have to achieve a balance between resource use and conservation, and the vested interests of industrial and artisanal fishing industry could undermine current plans to establish four marine protected areas (Yawri Bay, the Scarcies River Estuary, the Sherbro River Estuary and Turtle Islands and the Sierra Leone River Estuary).
- Populations displaced by the civil war took up fishing as a coping mechanism, with many remaining in those areas where Marine Protected Areas are planned. Also, the Fisheries Agency building was destroyed during the conflict, resulting in a complete loss of records which is now impeding efforts to establish MPAs (Thorpe et al., 2009).

LOGGING

Sierra Leone was once heavily forested (estimates put the country's original forest cover at between 70 to 90 per cent). However, during the colonial era clear-cutting for agricultural land and to meet demand in the British timber market significantly reduced the country's forest resources; a study in 1924 found that only 3.5 per cent of the country's original forest cover remained (Richards, P., cited in UNEP, 2010).

The vast majority of the population rely on charcoal and fuelwood to meet their energy needs. This places significant pressures on forest resources, pressures which are augmented by the high demands of a growing population for construction materials and cleared land for settlement and agriculture. Deforestation has led to a host of problems across the country, including erosion, landslides, and degraded soil fertility.

BOX 4:

Kangari Hills and Cluff Gold

The high market price for gold and other commodities has increased international attention on Sierra Leone's valuable mineral deposits. One area of particular interest for gold mining is the region surrounding the Kangari Hills Forest Reserve, in the centre of the country.

Cluff Gold, a U.K.-based mining company, has been granted both mining and exploration licenses for the Kangari area. They estimate that there are up to 2.1 million ounces in the land covered by their mining license and potentially significantly more in their exploration area to the northwest of their mine site in Baomahun. That area, however, is the source of a significant dispute between the company and the government.

The Kangari reserve was originally demarcated in colonial times, and the 1926 boundary was paced out on compass bearings and marked with piles of boundary stones. Intervening time and the chaos of the civil war mean that the physical boundary markers have been lost. While the footprint (i.e., the size and shape) of the reserve is largely clear from the compass bearings, its precise location is still unclear, as it depends on where the footprint is "anchored" on mutually agreed physical markers.

In 2006, Cluff Gold alerted the government to the issue of the unresolved boundary of the reserve. Lacking the financial resources to demarcate the boundary, the Ministry of Lands, Country Planning and the Environment asked Cluff Gold to pay for a demarcation team. The resulting map placed the reserve largely to the north and east of Cluff Gold's area of interest.

A subsequent mapping exercise carried out in 2011 by the MAFFS argued that the footprint was some 5 kilometres to the west and overlapped a much larger section of Cluff Gold's exploration concession. As a consequence, in August 2011, the government required Cluff Gold to cease all exploration activities within the new boundaries. A third, independently-financed, boundary survey and arbitration will be carried out in early 2012 and hopes to reach an agreement between all stakeholders on the boundaries of the Kangari Hills Forest Reserve.



The coastal town of Tombo is home to 800 producers of smoked fish, who in the past have drawn heavily on the WAPFoR for charcoal, leading to deforestation. (Photo: Tommy Trenchard)

- The 800 producers of smoked fish in the coastal town of Tombo in Western Area used to draw heavily on the WAPFoR for their preferred type of charcoal to smoke and preserve locally caught fish. When the managers of the reserve tried to reduce deforestation by blocking their access to the reserve, the local fish smoking industry turned to the surrounding mangrove forests—outside of the reserve, but still crucial to the health of the local ecosystem—to meet their fuelwood needs.

3. INSTITUTIONAL CHALLENGES

Responsibility for protected areas falls under the remit of the Conservation and Wildlife division of the Department of Forestry in the Ministry of Agriculture, Forestry and Food Security. But the management of protected areas in Sierra Leone continues to be faced with a number of institutional challenges.

First, there are overlapping jurisdictions between (and within) the central government and its environmental ministries, departments and agencies, and with traditional and elected authorities, which result in competing mandates and priorities, and poor coordination. It is unclear, for example, whether the proposed marine protected areas will fall under the control of the Ministry of Fisheries and Marine Resources or the Division of Forestry.

Second, the capacity of responsible organizations to protect ecosystems is limited by a low staff head count (the Conservation and Wildlife branch, for example, has less than 25 staff for the country, excluding forestry officers); low capacities for scientific analysis and monitoring; low operating budgets; low political capital; and low capacities for demarcation, patrolling and enforcement.

Third, management frameworks for natural resources are disjointed, fragmented and often donor-driven (Seto, 2011). The legislation upon which conservation policies are based is often old (much conservation work is still governed by the Wildlife Act of 1972, currently being updated) and, unlike many other countries, there is no Parks and Wildlife Authority to coordinate conservation activities in Sierra Leone.

Fourth, communities are often not involved in park management decisions, leading, in some areas, to distrust of conservation authorities and perceptions of unfulfilled obligations. In addition, there is a lack of clarity as to the roles and responsibilities of local and traditional authorities with regards to conservation following the 2004 decentralization. These unresolved issues can block progress on conservation measures, as has been the case with the establishment of the MPAs.

Finally, in a country with many competing priorities and a dwindling pool of international donors, funding is increasingly difficult to secure, making it difficult to support continued operations, community-based conservation programs and integrated conservation and development projects. Donor coordination itself can also be limited and can result in competing donor projects that overlap and contradict each other.

PART 4:

The Links Between Conservation and Peacebuilding

Sierra Leone's environment and its natural resources have been identified as key peacebuilding priorities by the national government. The international community agrees; in a conflict and peacebuilding assessment carried out in 2010, UNEP identified several environmental sectors as being central to successful peacebuilding efforts, including forests, fisheries, freshwater, and biodiversity (UNEP, 2010). In fact, in its report UNEP goes on to argue that "there can be no durable peace if the natural resources that sustain people's livelihoods are damaged, degraded or destroyed" (UNEP, 2010). The WAPFoR, for example, is treated as an area important to national security, as it provides water to Freetown and its surrounding communities. Conservation, as a means of reversing and preventing the damage, degradation and destruction of the environment, can play a vital role in the country's peacebuilding and development efforts.

Conservation can, however, contribute to tensions and conflict if not managed carefully. Poverty, rapid population growth and a dependence on natural resources for livelihoods mean that decisions to conserve ecosystems and control communities' access to and use of natural resources could create tensions by limiting local access to natural resources, inequitably distributing the benefits of conservation among stakeholders, and introducing additional economic burdens on surrounding communities (Hammill et al., 2009).

A. THE IMPACTS OF CONSERVATION ON PEACEBUILDING IN SIERRA LEONE

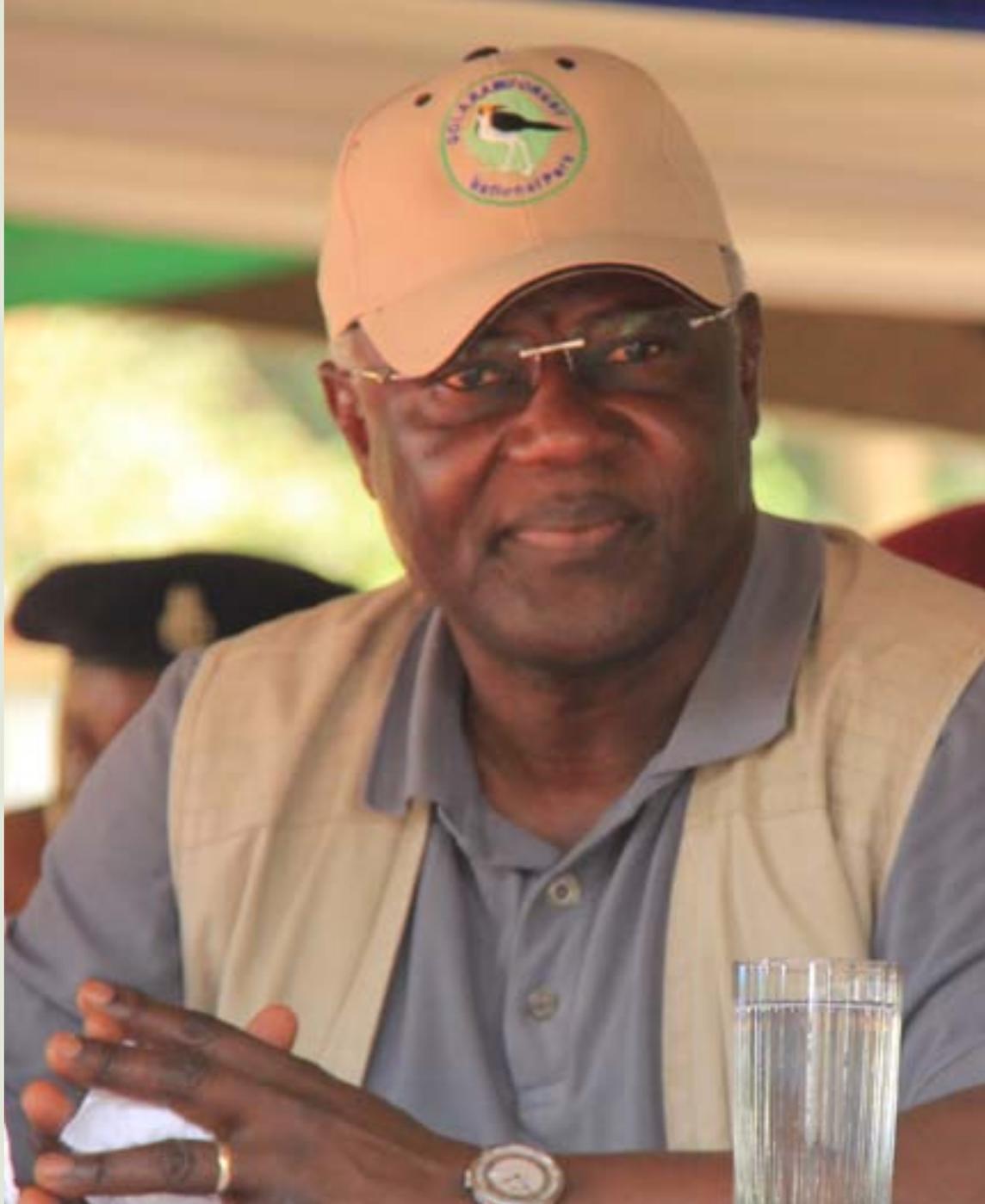
The conservation of natural resources and the environment, if managed effectively, can play a vital role in peacebuilding and development in Sierra Leone (UNEP, 2010). It can do so in three ways: by addressing the root causes of conflict, by addressing the impacts of conflict, and by supporting an enabling environment for peacebuilding (Hammill et al., 2009).

ADDRESSING THE ROOT CAUSES OF CONFLICT

Conservation could address the natural resource-related dimensions of conflict in a number of ways. First, it creates jobs—including park rangers, park guards and district forestry officers—addressing unemployment in communities close to the park. Second, it can address corruption by promoting accountability and transparency in the natural resource sector. Third, park enforcement, particularly along international borders, can help to stem illegal activities such as smuggling and poaching, and promote the rule of law. Fourth, conservationists can increase household incomes by supporting sustainable livelihoods in surrounding communities (by working to reduce human–wildlife conflicts, for example, or by creating buffer zones between communities and parks for growing crops that support biodiversity). Finally, conservation can promote international cooperation over shared resources and common environmental challenges.

The inequitable sharing of conservation benefits can be a source of conflict. Equitably sharing the benefits of natural resources with and among communities is another key way in which the conservation sector can promote peacebuilding. Extensive community consultations were carried out by the GFP in 2003–2005 to agree on how to share material and financial benefits from the conservation program and tourism revenues among the seven chiefdoms surrounding Gola Rainforest. These consultations promoted transparency and resulted in a Community Benefit Sharing Agreement which provides an annual community development fund in return for co-management responsibilities to protect the park and engage with the GFP. Since 2005, the program has disbursed over US\$500,000 in development benefits to the communities through the Chiefdom Forest Management Committees.⁹

⁹ Interview with the GFP, 2011.



On December 3, 2011, President Koroma officially established Gola Rainforest National Park, Sierra Leone's second national park and one half of a transboundary peace park with Liberia. Benefit-sharing programs have disbursed over US\$500,000 in development benefits to the communities surrounding Gola Rainforest since 2005. (Photo: Oli Brown)

ADDRESSING THE IMPACTS OF CONFLICT

Conservation can be seen as one strand of the country's reconstruction and rehabilitation. Sierra Leone's civil war destroyed lives and livelihoods, weakened governance systems and reversed development. Conservation activities can address the impacts of conflict to help strengthen the peacebuilding process and reduce the risk of a relapse into conflict (Hammill et al., 2009). They can do this by strengthening the capacity for natural resource management within the government; this is a central component of the current World Bank/GEF project on protected areas management. It can also attract funding from donors back into the country; create jobs to restore ecosystems damaged during the conflict (e.g., illegal mines); secure borders to stem illegal transboundary activities; and share the benefits of conservation activities with local communities to help them address war damage.

SUPPORTING AN ENABLING ENVIRONMENT FOR PEACEBUILDING

Conservation can help establish a platform for dialogue and confidence-building among stakeholder groups (Hammill et al., 2009). This can be the case at the international level, as with the newly-established Across the River Transboundary Programme attempting to improve ties and conservation coordination across the Liberia–Sierra Leone border near GRNP. It can also happen at the national level, by promoting dialogue and cooperation among the central government, district councillors, paramount chiefs, local chiefs and other stakeholders.

At the local level, conservation can promote peacebuilding by encouraging co-management and community management, involving local stakeholders in the decision-making process as a way of preventing disagreement and ensuring equitable benefit-sharing. Plans for the establishment of four marine protected areas include a strong co-management component, as community buy-in and cooperation are seen as keys to the effective protection and restoration of the country's coastal resources.

BOX 5: Demarcation Disputes

Park boundaries themselves are the cause of conservation-related conflicts: old, obscured and poorly maintained boundaries are easily ignored, contested or moved to accommodate farming, mining and logging activities.

GRNP: The re-demarcation of the national park is the cause of a number of community disputes. Upon surveying the park boundary with GPS equipment to clarify the demarcation line, many coffee and cocoa farmers found that they were (perhaps unwittingly) inside the park boundary and now face resettlement. Depending on the age and size of the plantation, some may receive compensation, while in other minor areas the boundary may be adjusted to accommodate the disputed area.

Kangari Hills: There is an ongoing disagreement over the boundary of Kangari Hills Forest Reserve between the government and a U.K.-based gold mining company (see Box 4).

OKNP: Communities located within the Kilimi portion of the park were resettled when it was established in 1995. However, the civil war disrupted plans to extend the program to the communities in the Outamba section and the funding has since dried up. The communities have since expanded and are reported to be farming and mining extensively within the park.

B. THE IMPACTS OF CONSERVATION ON CONFLICT IN SIERRA LEONE

According to UNEP's 2010 assessment, many of the conflict risks that existed in Sierra Leone in the run-up to the civil war have not been adequately addressed—with the environment and natural resources among the most prominent (UNEP, 2010). These include tensions over ownership of and access to natural resources, limited benefit-sharing, the politicization of resources, weak governance, corruption, an alienated and underemployed youth population, and poverty. All of these issues are aggravated by a declining resource base and the common perception that the benefits derived from the country's natural resource base accrue to national elites and foreign investors (UNEP, 2010). Within this context, conservation activities can create or exacerbate grievances that can in turn lead to conflict with, between and within local communities. This can happen in four ways (Hammill et al., 2009):

LIMITING LOCAL ACCESS TO RESOURCES

The establishment of a protected area can limit or block community access to valuable resources like timber, non-timber forest products and arable land, and restrict activities like artisanal mining, hunting and fishing. Without access to alternative livelihoods or adequate compensation, the associated loss of assets and income can lead to tensions between communities and conservationists.

For Sierra Leone, many of these types of conflicts tend to arise around protected area boundaries: unmaintained and obscured park boundaries are inadvertently or purposefully moved or ignored for farming, mining, charcoal and hunting activities (for examples, see Box 5). Meanwhile, communities often equate economic development with natural resource exploitation; if development benefits do not follow the decision to protect biodiversity, tensions could arise. Involving these communities in the management of protected areas is one way of reducing the risk of tensions emerging.

INTRODUCING NEW OR ADDITIONAL ECONOMIC BURDENS OR RISKS

Communities living alongside protected areas can experience economic losses and personal risk if those areas include migratory or destructive wildlife (Hammill et al., 2009). For example, in Sierra Leone chimpanzees have been reported to have destroyed cocoa crops in farms adjacent to GRNP, and manatees are said to have inadvertently torn apart fishing nets in the country's mangrove areas. The opportunity costs of protecting

assets against wildlife damage can be considerable—particularly if children are taken out of school to protect crops from animal incursions. There is no funding mechanism in place in Sierra Leone to compensate for these losses, which has created tensions between the park and the local communities.

UNEQUAL BENEFIT-SHARING AMONG STAKEHOLDERS

Conservation programs often include community development programs designed to support communities adjacent to protected areas with small-scale development projects (Hammill et al., 2009). These projects are used to offset the costs of conservation (as above), as well as generate support for protecting ecosystems. However, conflicts can arise among community members, and between communities and conservation organizations if these benefits are seen as being distributed inequitably among stakeholders (Hammill et al., 2009).

- For GRNP, conservation benefits are equally divided across seven chiefdoms. However, the chiefdoms vary in size and population, and some stakeholders have called for a new benefit-sharing agreement to address this perceived inequality, believing that those chiefdoms with a greater share of protected forests on their land should receive a higher share of the conservation benefits (Crawford et al., 2011).
- Tiwai Island is on the border between two chiefdoms and its ownership has been contested (some community members argue that funds are flowing into the sanctuary and the conservation management team but not reaching communities).¹⁰
- In the Loma Mountains, the planned construction of an access road to the forest reserve has led to competition and tensions between different communities, with each believing that the road would pass through their community, when in reality it could only pass through one.

UNMET COMMUNITY EXPECTATIONS

In a poor country with few channels for economic growth, Sierra Leoneans tend to have very high expectations of the potential revenues from the natural resource sector. However, despite the country's considerable mineral, timber, fishery and agricultural resources, the benefits of these resources have rarely reached the broader population (UNEP, 2010). Mining companies tend to make lavish promises to build schools, roads and clinics, but once the deal is signed and work is underway, deliver much less than they promised. In the mining sector, the failure to meet community expectations has led to violent clashes in the past.

¹⁰ Personal communication, August 2011.

In somewhat parallel fashion, conservation activities can trigger high and unrealistic community expectations of the benefits that will flow from the protected area. Communities adjacent to protected areas often desperately need access to infrastructure, public services and market access. At times, the promise of benefits from conservation can even lead to communities pushing harder on ecosystem services and biodiversity as a strategy for obtaining or increasing the benefits flowing to their communities.

Conservationists can also be prone to “overselling” the direct monetary benefits of a protected area, so it is important that conservation organizations work to set and meet realistic expectations. As one respondent put it, conservation projects often “pour honey in the ears and not on the lips.”¹¹ If more benefits are promised than delivered, unmet expectations can lead to a withdrawal of community support for conservation.

11 Personal communication in Makeni, August 2011.



Outamba Kilimi National Park] Outamba Kilimi National Park protects an important part of the Fouta Djallon highlands, where six of West Africa’s major rivers rise. (Photo: Oli Brown)

BOX 6: Biodiversity Conservation Action Project

In the summer of 2011, the World Bank and the GEF launched a 3 1/2-year project aimed at improving the management of three conservation sites in Sierra Leone: OKNP, Kangari Hills, and Loma Mountains. Originally conceived of in 2005, the Biodiversity Conservation Action project—with a budget of US\$5 million—has a number of objectives, which include: strengthening the national forestry department; strengthening the national framework for biodiversity conservation; achieving a sustainable financing model for conservation; establishing a national conservation database; site planning and implementation; raising awareness of conservation issues; and integrating conservation plans into district planning processes. Sustaining the capacity built during the project beyond its 2014 deadline will be a central challenge.

PART 5:

Recommendations

If managed effectively, conservation can contribute to Sierra Leone's continued development and can help to cement the country's impressive progress in peacebuilding. To succeed, the government, civil society and the international community will need to address the challenges outlined above, minimize conflict risks and enhance peacebuilding opportunities. In particular:

1. Strengthen the legislative framework for conservation:

- a. Strengthen national laws governing protected areas, consider creating a National Parks Authority, and update the Forestry (1988), Fisheries (1988) and Wildlife (1972) Acts;
- b. Consider identifying flagship species for each of the country's protected areas (picathartes, Western chimpanzees, pygmy hippopotamus, manatees, and so on), and declare national biodiversity symbols, such as a national animal and national bird, to increase awareness and support for conservation;
- c. Strengthen environmental protection laws to acknowledge the greater sensitivity and vulnerability of protected areas, surrounding buffer zones and migratory corridors to the impacts of large-scale development projects such as mining and commercial plantations;
- d. Better implement those Multilateral Environmental Agreements that support conservation, such as the Convention on Biological Diversity and the Ramsar Convention; and
- e. Work to develop and enforce domestic legislation in other areas (such as land, tourism and marine issues) that support conservation.

2. Facilitate coordination among stakeholders:

- a. Establish a Conservation Working Group to share ideas and information and improve coordination among government, donors and conservation NGOs;
- b. Clarify mandates among government Ministries, Divisions and Agencies; and
- c. Strengthen transboundary coordination on conservation with Liberia and Guinea.

3. Improve management of protected areas:

- a. Develop transparent and accountable management plans for conservation areas;
- b. Build the capacity of government and NGO conservation stakeholders, including site managers, forest guards, park rangers and District Forestry Officers;
- c. Work to obtain international recognition for selected protected areas (e.g., Gola Rainforest National Park and Western Area Peninsula Forest and Beaches) through the UNESCO World Heritage Site program;
- d. Declare appropriate protected areas—such as Tiwai Island, Tacugama, WAPFoR and Gola—as National Tourism Assets; and
- e. Be realistic about conservation benefits when communicating with stakeholders.

4. Involve local communities:

- a. Involve local communities—and in particular local women—in the development of bylaws, park enforcement, park management and decision-making. Be frank about the consequences of activities and consistent in approach;
- b. Formally define the roles of elected local authorities and traditional authorities in forest, wildlife and marine conservation;
- c. Promote national parks as a tool to build dialogue, confidence and cooperation between the central government, paramount chiefs and communities;
- d. Support community-based organizations and NGOs to monitor the implementation of laws and policies governing natural resource management and biodiversity conservation;
- e. Design and implement conflict-sensitive conservation strategies to prevent local-level, conservation-related conflicts; and
- f. Raise awareness of conservation and protected area laws and legislation through radio programming and community meetings.

5. Secure long-term funding for conservation:

- a. Explore potential options for sustainable financing of conservation activities, including the establishment of a trust fund for funding protected areas management; a resource windfall tax for conservation; and funding through REDD and REDD+ schemes; and
- b. Develop a long-term national tourism vision.



Gola Rainforest National Park is one of the only remaining habitats of the charismatic picathartes. The bird serves as an emblem for the park, and could represent a significant draw for bird watching tourism. (Photo: Guy Shorrock, RSPB)

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