



Sierra Leone

Environment, Conflict and
Peacebuilding Assessment

Technical Report



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Since 1999, UNEP has operated in more than 34 crisis-affected countries, published 18 environmental assessment reports and, in many cases, implemented in-country follow-up projects. Based on this expertise, UNEP is providing technical assistance to the UN Peacebuilding Commission (PBC), the European Commission and member states in assessing the role of natural resources and the environment in conflict and peacebuilding.

The Sierra Leone Environment, Conflict and Peacebuilding Assessment was completed as part of UNEP's Environmental Cooperation for Peacebuilding project, which offers technical assistance to Member States and the UN system to sustainably manage natural resources and the environment in ways that contribute to peacebuilding, conflict prevention and transboundary cooperation. Like other UNEP post-conflict assessments, this document is intended to provide practical analysis and recommendations to the Government of Sierra Leone, the UN and international community, and partner organizations regarding natural resources, peace and development.

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Cover photo: © UNEP – As a result of displacement during the conflict and population growth, slash-and-burn techniques have been used in Sierra Leone, risking conflict over land access and ownership

UNEP wishes to acknowledge the photo contributions of authors Richard Matthew and Renard Sexton

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Executive summary

Introduction

In Sierra Leone, the environmental causes and consequences of war have been prominent for the past 20 years. Inequitable benefits-sharing of natural resource wealth was one of the drivers in the civil war that ravaged the country from 1991 to 2002. Diamonds and other minerals were used to fund combatants, and also became the spoils of war. In the post-conflict era, the environmental impacts of the conflict and continued unsustainable natural resource management have presented challenges to development and peace consolidation that persist today.

In recognition of their critical value, the Government of Sierra Leone has included environment and natural resources as key peace and development priorities, most importantly in the government's "Agenda for Change" (Poverty Reduction Strategy Paper II). Accordingly, in 2009 the United Nations Environment Programme (UNEP) was asked to provide technical assistance to the United Nations (UN) Country Team in order to bolster UN assistance to the government on the subject. Specifically, UNEP was requested to contribute to the "UN Joint Vision", which outlines the UN support of the Agenda for Change and activities further to Sierra Leone's status as a Peacebuilding Commission agenda country.

Three UNEP field missions were undertaken in 2009, including a main two-week field mission in May during which the assessment team visited ten of Sierra Leone's 13 districts and conducted over 80 interviews with stakeholders from the national government, local government, civil society, international organizations, UN agencies, local communities and international development partners.

In summary, this assessment found that the civil war had significant impacts on the basic environmental resources of the country, namely water and agricultural land, and did major damage to institutional capacity. In addition, many of the risk factors for conflict that existed in the 1980s and 1990s have not been adequately addressed, most prominently in the environment and natural resources sector.

However, if reformed and managed effectively, natural resources and environment can play a vital peacebuilding and development role in Sierra Leone, building the foundation for sustainable jobs and economic growth.

Ahead of the 2012 presidential election, significant care must be taken to ensure that natural resources and the environment do not lead to renewed instability and conflict. Whether issue-specific and localized or connected to national political issues, it will be vital for the Government of Sierra Leone as well as the international community to take the risks seriously as well as to capitalize on the opportunities.

Key findings

Environmental impacts of the civil war

The official cessation of hostilities in 2002 brought to a close a period of intense damage to the environment and natural resources in Sierra Leone. The war caused or aggravated many acute environmental problems through a combination of direct, indirect and institutional impacts.

1. Direct environmental impacts remain: Though the conflict in Sierra Leone ended nearly a decade ago, many of the direct environmental impacts of the conflict have not been addressed. Still apparent is the damage to water infrastructure and agricultural infrastructure in rural areas, as well as the impacts of maintenance neglect. In many parts of the country, basic services are not available, raising questions about the government's ability to provide public services to a growing population and undermining its credibility with rural communities.

2. Environmental governance in shambles: An even more worrisome trend is that environmental and natural resource governance at the institutional level in Sierra Leone has effectively ground to a halt. Arable land degradation, land grabs, and the widespread and unsustainable use of natural resources have occurred across the country. In the extractives sector, instability brought concessionary

agreements and contracts negotiated in “back-rooms” that provided few benefits to the people and did not consider long-term sustainability.

3. Lack of institutional capacity and conflicting mandates: The Sierra Leone Environmental Protection Agency (SLEPA) and the Division of Forestry (DoF) in the Ministry of Agriculture, as well as district and city councils, are currently not able to administer or plan resource usage, in part because of poor coordination, a lack of data and unclear institutional mandates. The segmented land tenure and resource management system in the provinces has created confusion and encouraged overuse, as paramount chiefs, national ministries, local councils and communities struggle to control ownership and access to resources ranging from forests, water and mining resources to commercial and subsistence agricultural land.

4. Unsustainable coping strategies from displacement have become institutionalized: The civil war also precipitated a large number of indirect impacts, many of which persist to this day. The most visible is a result of the large-scale displacement of up to half the population that took place, both internally within Sierra Leone and over the borders, as refugees flooded into Guinea and Liberia. The coping mechanisms of displaced populations were understandably survival-based and, as such, have resulted in highly unsustainable forest, agriculture and mining practices.

Risks to the peacebuilding process

Despite the many positive signs of a country recovering and rebuilding after a decade of war, Sierra Leone remains a fragile state, with many conditions in the environment and natural resources sector that resemble, or are worse than, the circumstances that led up to the fighting. Compounded by massive unemployment among young men, severe poverty, regional instability and a worrisome proliferation of drug trafficking, the natural resource-linked risks for renewed instability or conflict are significant.

1. Considerable unmet expectations from natural resources: In particular, there is a tremendous gap in the expectations between the population and government as to the productive potential of the agricultural and mineral sectors. Unrealistic expectations risk creating a sense of unease among a

population that expects immediate development payoffs and feed a perception of an underperforming or corrupt system. Climate change and population pressures both threaten to exacerbate this problem, particularly in the agriculture sector.

2. Low transparency and accountability: Sierra Leone continues to lack transparency and accountability in natural resource allocation and land-use decisions. For example, with conflicts of interest endemic in the resource sector and wide discretion available to paramount chiefs and government officials, corruption can become the norm, with no robust systems in place to ensure transparency and accountability. Not only does a lack of transparency and accountability feed perceptions of collusion and corruption, but it also creates opportunities whereby natural resources revenues can be channelled into illegal and illicit activities.

3. Poor benefits-sharing: Across the natural resources sector, poor sharing of the benefits of Sierra Leone’s natural wealth is a major risk for long-term peace and development. With highly unequal distribution of income in the country, particularly with regard to high-value natural resources, significant changes are needed to break the systemic channels of influence and income. This may be further amplified with the recent discovery of oil off the coast.

4. Increasing local-level violence over natural resources: While reforms to the sector have been promised, such as land reform and minerals sector renegotiation, they have been criticized for their perceived insufficiency, lack of equitable benefit-sharing and low transparency. The perception has been aired among some in the mining communities that the only way to publicize their grievances is through public protest and potential acts of violence. This view was bolstered by the December 2007 riots in Kono where the violence quickly drew the attention of the government and international community and resulted in proposed policy change.

Opportunities for cooperation and peacebuilding

Sierra Leone’s economy is almost entirely dependent on its natural resource endowment, with most employment in the country linked to environment and natural resources. If harnessed in a sustainable, transparent and equitable fashion, environment

and natural resources can play a more effective role in confidence-building, job creation and peacebuilding.

1. Making sustainable livelihoods a development priority: Sustainable livelihoods, where individuals and communities are able to develop diversified, environmentally sustainable economic activities, must be the target of development. Otherwise, the younger generation will continue to fall into cycles of temporary employment, internal migration and the draw of “gambler-spirit” mineral extraction. As part of this effort, community-based natural resource management (CBNRM), through targeted capacity-building of city and district councils and the local paramount chiefs, can become the norm.

2. Improving participation and consultation: One of the most pronounced grievances in relation to the environment and natural resources is a lack of genuine participation and consultation with communities. Communities often see decisions made in Freetown and by some local authorities as poorly designed, inequitable and not well planned to meet local needs, in some cases bolstering the impression of collusion and corruption. The consultative process in decision-making for environmental and natural resource management issues is an opportunity to build confidence and trust between authorities and local communities simply by inclusion in the process. Improved trust in public functions is one of the most fundamental parts of the peacebuilding process.

3. Improved environmental governance capacity at the national and local levels: The nascent institutional framework for the environment and natural resources created by the Environmental Protection Agency Act offers unique opportunities to build capacity and institutional knowledge in the new SLEPA. Momentum on forest reforms provides an opening to assist the DoF in the Ministry of Agriculture in building the forestry department’s capacity and designing a new forest policy. At the same time, the reforms that have been ongoing in the minerals sector offer a parallel opportunity for capacity-building and the coordination of institutional roles regarding mines and minerals.

4. Joint management and planning of water, forest and agricultural resources: In the meantime, with the current fragmentation of environmental and

natural resource management in Sierra Leone, there is a unique opportunity for joint management by communities. More specifically, since communities are jointly reliant on resources such as water and forests, they provide an opportunity for communities to come together and cooperate on issues of planning, allocation and development. Joint management also provides opportunities to inform government and others about regional or area-specific situations.

Recommendations to stakeholders

The need to reform and strengthen environmental management is widely understood in the country, and efforts have been made to improve the sector. For example, environment and natural resources have been included in almost every peacebuilding and development document since the end of the civil war. In addition, renegotiations of mining contracts have been undertaken by the President’s office, recent reforms of the national mining law have been made by the Parliament and efforts continue to become compliant with resource certification methods such as the Extractives Industries Transparency Initiative.

However, the reforms thus far have not been able to address the more fundamental problems of the sector such as the chaotic land tenure situation, benefits-sharing from natural resources wealth, low capacity of environmental authorities and poor data quality. This has included insufficient financial resources and capacity to implement what otherwise would be good political support for the sector.

Therefore, for stakeholders inside and outside Sierra Leone, UNEP recommends several priorities to ensure that natural resources contribute in a positive way to the achievement of the Joint Vision and Agenda for Change.

UNEP’s 16 recommendations are organized by their intended outcome into four sections, which roughly correspond with the priorities of the Agenda for Change and the UN Joint Vision: participatory sector reform, improved natural resource management capacity, improved environmental infrastructure and services, and sustainable livelihoods.

In order to implement these recommendations, a joint programme of UNEP, the United Nations Development Programme (UNDP) and the Food and Agriculture Organization of the United Nations (FAO) has been included within the UN Joint Vision for Sierra Leone called Programme 21: Environmental Cooperation for Peacebuilding.

Participatory Sector Reform

1. Respond to institutional failures regarding resource ownership and access: Across the environment and natural resources sector, there is considerable tension regarding land tenure, benefits-sharing and decision-making that needs to be addressed through transparent dialogue and dispute-resolution processes. At the policy level, new rules are needed that put into practice the principles of sustainability and benefits-sharing.

2. Conduct a comprehensive land reform programme: A highly consultative and participatory land tenure reform process is needed, where equity and conflict resolution are carefully addressed.

3. Develop transparent and participatory benefits-sharing mechanisms for all natural resources: A clarified process for benefits-sharing that is consultative and transparent is needed between natural resources sectors, including commercial agriculture, forestry and mining.

4. Continue structural reforms in the extractives sector: Environmental sustainability and rehabilitation, benefits-sharing and robust consultation must be built into the ongoing renegotiations of the mining concessions, the implementation of the new mining law, the emerging oil sector, and the ongoing land tenure reform.

5. Utilize natural resources as platforms for dialogue and confidence-building: A systematic process that includes dialogue and confidence-building between the national government, civil society, local communities and the private sector on issues of natural resource management should be established.

6. Incorporate considerations for equity, gender and community consultation into all programmes and projects: In all programmes, capacity-building and reforms of the environment and natural resources sector, a consultative, collaborative and coordi-

nated approach will be vital to the peace and development process.

Improved natural resource management capacity

7. Develop the capacity of SLEPA to fulfil its responsibilities: Given SLEPA's wide mandate but relatively low capacity, significant capacity-building of the institution is needed. In particular, basic operational modalities must be put in place, regulations and rules enacted to concretize the principles set out in law, and SLEPA must be able to play its coordinating and convening role in the sector.

8. Harmonize environmental regulations between national authorities: The environmental regulations and policies of the many responsible government agencies must be mutually supportive through close coordination – including monitoring and data collection, consultation and review, and the use of comparative advantage to maximize the effectiveness of limited resources and capacity.

9. Undertake a wider climate change vulnerability assessment based on the National Adaptation Plan for Action: Given the projected impacts of climate change on Sierra Leone for food security, the medium- and long-term risks of climate change should play an important role in 10–15-year planning processes, piloted by a comprehensive vulnerability assessment that considers regional variability in resources, capacity and resource reliance.

10. Build capacity for environmental management in rural government: Improved capacity for district ministry offices, district and city councils and other local managers to play an important role in resource allocation and planning will help to build trust between levels of government, and improve rural integration in decision-making.

11. Fill the major information gaps concerning natural resources, including baseline data: A systematic natural resource inventory is needed, with assurances that data collection is transparent and the resulting inventory is made available to all stakeholders.

12. Develop a strategy for integrated water management: Given the very close connection between forest cover, rainfall, groundwater resources and



Women washing clothes in a stream outside Freetown. Insufficient liquid waste infrastructure threatens water security for the people of Sierra Leone

the fact that many of Sierra Leone's urban areas are located in sensitive watersheds, a district-level integrated water resource management plan is needed in most districts of Sierra Leone.

Improved environmental infrastructure and services

13. Provide support for recovery and reconstruction for basic environmental infrastructure and services, including water and agriculture: Many communities suffered extensive damage to roads, water systems, plantations and buildings and have not yet received basic support for reconstruction and rehabilitation, something that must be assessed and addressed at the community level. In particular, in rural areas where returnees have resettled and quickly growing urban areas need immediate attention.

14. Focus on addressing the urgent solid and liquid waste management needs, especially in major cities: Freetown and other major cities such as Makeni,

Koidu, Bo and Kenema have severe, long- running waste management problems, some of which are a result of the conflict, but mostly due to unplanned population growth and urbanization.

Sustainable livelihoods

15. Assist rural populations to scale down unsustainable coping strategies: Coping strategies in the water and forest sectors are the most concerning at present, with increased scarcity expected in both. Rural diversification will be key for both sustainability and enhancing community resilience to environmental and economic change.

16. Break the link between natural resources and illegal activities: Informal natural resource extraction in rural areas is easily co-opted into illegal activities, including drug trafficking, movement of arms and people and other criminal acts, requiring monitoring, early warning and cooperation between environmental managers and the security sector.

Introduction

Background and objectives

The small West-African nation of Sierra Leone has an abundance of natural resources and environmental assets. From tropical forests to impressive coastlines, from mineral resources to fisheries, the environment has long been the backbone of economic development. Unfortunately, many of the benefits from these resources have been poorly distributed throughout the country, with most communities relying on themselves to extract benefits.

In Sierra Leone, the environmental causes and consequences of war have been prominent for the past 20 years. Inequitable benefits-sharing of natural resource wealth played a role in the impetus of the Sierra Leone civil war that ravaged the country from 1991 to 2002. Diamonds and other natural resources were used to fund combatants, and also

became spoils of war. In the post-conflict era, the environmental impacts of the conflict and continued unsustainable natural resource management have presented challenges to development and peace consolidation that persist today.

Sierra Leone's experience reflects global trends regarding the links between natural resources and civil strife. Current research suggests that over since 1945, at least 40 percent of all intrastate conflicts have had a significant link to natural resources.¹ Whether connected to illegal resources for arms exchanges or conflict over ownership and access to high-value and scarce resources, a link to natural resources and environment has been found to double the likelihood for conflict relapse within the first five years of a peace agreement. Instead of conflict resolution, renewed conflict cycles empower spoilers and smugglers, and foster deeper poverty, extremism and regional destabilization.



Sierra Leone has an abundance of natural resources and environmental assets, including these pristine beaches along the Western Area Peninsula, which are an important source of employment in tourism and fishing

In recognition of their critical value, the Government of Sierra Leone has included environment and natural resources as key peace and development priorities, most importantly in the government's "Agenda for Change" (Poverty Reduction Strategy Paper II). Accordingly, in 2009 the United Nations Environment Programme (UNEP) was asked to provide technical assistance to the United Nations (UN) Country Team in order to bolster UN assistance to the government on the subject. Specifically, UNEP was requested to contribute to the "UN Joint Vision", which outlines UN support to the Agenda for Change as well as activities further to Sierra Leone's status as a Peacebuilding Commission agenda country.

This assessment was completed as part of UNEP's Environmental Cooperation for Peacebuilding project, which offers technical assistance to Member States and the UN system to sustainably manage natural resources and the environment in ways that contribute to peacebuilding, conflict prevention and transboundary cooperation. Like other UNEP post-conflict assessments, this document is intended to provide practical analysis and recommendations to the Government of Sierra Leone, the UN and international community, and partner organizations regarding natural resources, peace and development.

Assessment scope

Using the Government of Sierra Leone's Agenda for Change and the 2007 Peacebuilding Cooperation Framework as thematic guides, the main goal of the assessment was to evaluate the current status of natural resource management, environmental impacts of the conflict and possible influences on the peace process – whether positive or negative.

In addition, the assessment aimed to provide strategic advice to the Government of Sierra Leone and the international community on how to address the environmental impacts of the conflict, mitigate the risks to the peace process linked to environment and natural resources and, finally, embrace the opportunities for peacebuilding afforded by the sector.

This assessment was based on over 80 interviews, 16 site visits and informal consultations over the course of four weeks of fieldwork in Sierra Leone in 2009. With a focus on societal, environmental and economic dimensions as well as scientific issues, the assessment was intended to craft a meaningful input to the peacebuilding and development process, in addition to the international knowledge base.



As a result of displacement during the conflict and population growth, slash-and-burn techniques have been used on a larger area of Sierra Leone, risking conflict over land access and ownership



UNEP conducted a total of four field missions to Sierra Leone, with the bulk of the assessment's field work done in February and May 2009

Methodology

The methodology used to conduct the assessment was the UNEP Conflict Analysis Framework, an analytical tool based on the conceptual foundation presented in the UNEP policy report, *From Conflict to Peacebuilding – The Role of Natural Resources and the Environment*.²

The framework was used to first assess the linkages between past conflict, future conflict risks and the country's current array of environment and natural resources. Then, a set of recommendations and outputs were produced that are linked to the ongoing processes of development and peace consolidation at national and international levels.³

While the Conflict Analysis Framework methodology has provided structural guidance to the assessment, the needs and priorities indicated in-country led the process. Consultation with technical experts at all levels of government as well as key stakeholders in the private sector, civil society and the international community was an important part of the assessment strategy.

The bulk of the assessment was conducted during the course of two UNEP missions to Sierra Leone during the first half of 2009. The first, in February, focused on the mining sector and included field visits to several mining sites, along with several dozen stakeholder meetings. The second mission, which took place over two weeks in May, covered a larger geographical area, including interviews in five cities, two medium-sized towns and nine small villages. A subsequent one-week mission for follow-up discussions with government counterparts and UN colleagues was held in July 2009.

Partners and consultation

Within the Government of Sierra Leone, the Sierra Leone Environmental Protection Agency (SLEPA), led by Chairwoman Jatou Jallow and Executive Director Cyril Jusu, was UNEP's main national counterpart.

Throughout the assessment process, the Environmental Foundation for Africa, headed by Tommy Garnett, was the main national non-governmental organization (NGO) partner of UNEP. EFA provided technical expertise, Krio language interpretation in rural areas and practical assistance.



The Environmental Foundation for Africa (EFA) was a key national partner for UNEP's assessment. A great deal of Sierra Leone's natural resource management capacity is held by non-governmental organizations like EFA

The assessment underwent a rigorous peer review process prior to publication. Two members of UNEP's Expert Advisory Group on natural resources and conflict provided extensive critical review, as well as reviews and contributions from eighteen UNEP personnel, eight staff from the Government of Sierra Leone, and experts from UNDP, FAO and the UN Integrated Peacebuilding Office in Sierra Leone (UNIPSIL).

Report structure

The assessment begins with the country context in Chapter 2, which provides an overview of Sierra Leone, the role of natural resources in the country

and the conflict that affected the country from 1991 to 2002. Chapter 3 outlines the environmental management framework that exists today in Sierra Leone, including an examination of capacity issues at multiple levels and the role of natural resources and environment in the peace process.

Chapter 4 discusses the various impacts that the conflict had on environment and natural resources, followed by an evaluation of the risks to peace consolidation in Chapter 5 and a consideration of the opportunities for peacebuilding afforded by natural resources in Chapter 6. Finally, Chapter 7 outlines a set of recommendations that can address the issues raised in the previous chapters.

Country context

Introduction

Sierra Leone, a former British protectorate and colony, became an independent nation in 1961. Since independence, the population has experienced five coups, decades of single-party rule and a ten-year civil war that lasted until 2002.⁴ The authoritarian leadership and subsequent fighting that persisted from the mid-1960s caused dramatic damage to the economic, governance, civil societal and environmental fabric of the country. The economy contracted at an average of 4.5 percent annually from 1990 to 2000, while population growth nearly doubled the number of people living in Sierra Leone to about six million people.⁵

Located on the western coast of Africa, Sierra Leone covers a land area of almost 72,000 km² (similar to Ireland or Panama), of which approximately 120 km² is water.⁶ It is bordered to the southwest by the Atlantic Ocean, with Liberia situated to the south-east and Guinea to the north and northeast (see Figure 1). It is divided into four provinces: Northern,

Southern, Eastern and West (Western Area Peninsula), and 14 administrative districts. The country is also disaggregated into 149 traditional local chiefdoms, each presided over by a paramount chief. The capital is Freetown, which is located adjacent to the one of the largest natural harbours in the world. Other large cities include Makeni, Kenema, Koidu and Bo, which are all inland.

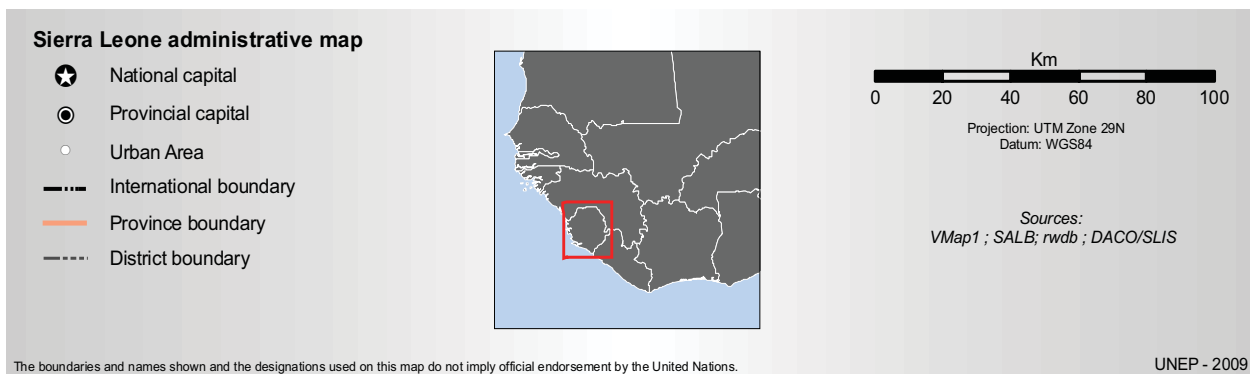
Conflict summary

The Sierra Leone civil war began in 1991 when the Revolutionary United Front (RUF), under the leadership of Foday Sankoh, began its insurrection against the Government of Sierra Leone – launched from Liberia, and moving westward. Many members of the rebel group were disaffected or unemployed young men who were inspired by the rebel takeover of Charles Taylor's National Patriotic Front in neighbouring Liberia. The RUF catalysed many frustrated rural youth by attributing their strife to corruption and mismanagement by the government.



Freetown, Sierra Leone's capital, houses approximately 1.5 million people. It is estimated that 30-40 percent of the country's population lives in cities following major urban migration during the civil war

Figure 1. Administrative map of Sierra Leone



The conflict involved natural resources from the outset, with the diamond mines of eastern Sierra Leone being the first major target of the RUF, which they took and held until 1995. Armed and sustained by the sale of diamonds to Taylor and his regime, the brutal tactics employed by the RUF left war victims with severed limbs, thousands of child soldiers and wrecked communities.

In April 1992, a group of junior officers from the Sierra Leonean military deposed President Joseph Momoh and formed the National Provisional Ruling Council, which ruled Freetown from 1992 to 1996. The coup was in part motivated by back pay, poor equipment and the lack of progress in the war against the RUF. Valentine Strasser, the first leader of the National Provisional Ruling Council, was overthrown by his deputy in 1996, before elections were finally held, bringing Sierra Leone People's Party President Ahmad Kabbah to power.

*"Our people are suffering without means of survival;
All our minerals have gone to foreign lands.
RUF is hungry to know where they are;
RUF is fighting to save Sierra Leone."*

Final verse of the RUF anthem⁷

In addition to the official combatants – the Sierra Leone Army and the RUF rebel group – the civil war included a number of other participants. Pro-government paramilitary, called the Civil Defense Forces, and private military/mercenary forces also fought against the RUF from 1996 onward. Sandline International, a controversial United Kingdom-based firm, trained and armed the Civil Defense Forces on behalf of the government. In addition, the South African group Executive Outcomes, a mercenary fighting group made up of former South African Defence Force soldiers was contracted by the government to drive the RUF from the major eastern diamond fields in 1995.

By 1998, however, the RUF and their ex-Sierra Leone Army allies were able to regain control of the diamond fields, which continued to fund the fighting with exports worth between USD 25 million and USD 125 million per year, largely smuggled through Monrovia, Liberia.⁸ The UN Security Council Resolution 1132 (1997), which authorized a full ban on selling petroleum and arms to Sierra Leone, was passed during the short rule of a second military junta who had forced President Kabbah out of office by a coup in early 1997. Called the Armed Forces Revolutionary Council (AFRC), these former army soldiers allied themselves with the RUF and were deposed in 1998 by Economic Community of West African States (ECOWAS) troops. Led by Nigeria, the ECOWAS troops went on to reinstate democratically elected President Kabbah.



During the periods that RUF and AFRC occupied Freetown, widespread looting took place, the remnants of which are still visible today



© AP PHOTO / ENRIC MARTI

Sierra Leone Army troops loyal to Major John Paul Koroma patrol the streets of Freetown in June 1997. A coup led by Major Koroma overthrew then-President Kabbah earlier that year, and was in power until mid-1998

Several peace processes, most notably the 1996 Abidjan Peace Accord, broke down before a workable agreement was finally put together that would end the violence between the national government and the RUF. The finalized peace accord, strongly supported by the international community and ECOWAS, were at last signed in 1999 in Togo, under the leadership of President Kabbah.

The resulting Lomé Peace Accord, supported by a UN peacekeeping mandate from 1999 to 2005, provided blanket amnesty to the RUF, excluding crimes against humanity. In addition, the RUF was given several ministerial positions, and could participate as a peaceful political party in subsequent elections. Unfortunately, the fighting did not initially cease with the Lomé Peace Accord, as sparse but continuous guerrilla fighting occurred by the RUF and the splinter group the “West Side Boys.”

A UN panel of experts was convened in July 2000 by the UN Security Council, which published a damning retrospective report regarding diamonds, arms and the role of Liberian President Taylor and outside collaborators in Europe and the Middle East.⁸ This document supported continued sanctions banning

the purchase of diamonds exported from Sierra Leone until the end of the war, and catalysed the creation of the Kimberley Process for diamond certification. The July 2000 resolution also banned the import of Sierra Leonean diamonds.⁹

“President Charles Taylor is actively involved in fuelling the violence in Sierra Leone, and many businessmen close to his inner-circle operate on an international scale, sourcing their weaponry mainly in Eastern Europe.

One key individual is a wealthy Lebanese businessman named Talal El-Ndine. El-Ndine is the inner-circle’s paymaster.

Liberians fighting in Sierra Leone alongside the RUF, and those bringing diamonds out of Sierra Leone are paid by him personally. The pilots and crew of the aircraft used for clandestine shipments into or out of Liberia are also paid by El-Ndine.”

Report of the UN Panel of Experts,
December 2000

The process of disarmament, demobilization and reintegration (DDR) began in 2001 and disarmed over 72,000 combatants. The end to hostilities was declared in January 2002 following the completion of the DDR programme.¹⁰ All told, the conflict left over 100,000 dead, and displaced at least two million people, including hundreds of thousands of refugees in neighbouring countries.¹¹

From 1999 to 2005, following the signing of the Lomé Peace Accord, a UN peacekeeping mission (UNAMSIL) in Sierra Leone deployed more than 17,000 peacekeepers to the country. They were gradually drawn down, beginning in November 2002, until full withdrawal was completed on New Year's Day 2006.¹² Sierra Leone became an agenda country of the new PBC in June 2006, culminating in the Peacebuilding Cooperation Framework of December 2007. An integrated peacebuilding office (UNIPSIL) has replaced the previous UN presence since late 2008.

Peace consolidation process

As with any conflict, many different narratives have emerged to explain, describe and reflect on the

war. The role of natural resources as a means to maintain the RUF rebels, through diamond looting and exchange for arms, is clear, but other linkages are not as apparent. Questions of scarcity, tension over ownership of and access to natural resources, lack of benefits-sharing and politicization of resources are all linked to the past conflict and conflict risks in the present. While aiming to look mainly at future risks and opportunities, this report still considers the risk of past events being repeated.

Today, Sierra Leone is in a unique position in the peace consolidation process. While in many post-conflict situations fragile peace agreements between belligerent groups mean that transition governments and the recovery period pose a serious risk for the resumption of hostilities, Sierra Leone is different. The RUF has disbanded, and practically all discussions of the group are discussions of history rather than possible resurgence.

Many different conceptions of the peacebuilding process exist; however, for development and conflict risk reduction purposes, a three-stage progression is useful (see Figure 2).



Rebuilt mud homes stand alongside the abandoned concrete foundations of houses destroyed during the civil war

Figure 2. Peacebuilding stages

- 1 Stabilization phase (short-term):** During this phase, humanitarian relief activities, security and peacebuilding, and initial peace consolidation between conflict parties are negotiated and implemented. The presence of peacekeepers is common.
- 2 Transition phase (medium term):** This phase, which is often characterized as the 1–3 years following stabilization, is when governance and DDR play a large role. Economic development is a focal point, as combatants try to re-enter peaceful civilian life.
- 3 Consolidation phase (long term):** This phase, often characterized as the 4–10 years following stabilization, is when governmental capacity is strengthened, foreign peacekeepers are withdrawn and long-term development intensifies.

Source: Adapted from the Center for Peace and Human Security.¹⁴

In Sierra Leone, peace was stabilized over a period of several years, which began with the 1996 Abidjan Peace Accord. After the breakdown of the accord, however, conditions quickly destabilized, resulting in some of the worst fighting and looting of the war from 1996 to 1999.

Final stabilization came with the Lomé Peace Accord in 1999, enforced by the UN Peacekeeping Mission and solidified by the 2002 elections, which initiated the transition period. Now that DDR has been completed, and following the peaceful transition of power after the 2007 presidential elections, Sierra Leone can be characterized as being in the consolidation phase of the peace process, where strengthening governance capacity and achieving development goals are the major objectives. Therefore, the risks and opportunities that are analysed in Chapters 5 and 6 and the recommendations in Chapter 7 are considered within a context of development as much as a context of peacebuilding.

Social conditions and trends

Extensive human displacement and the lack of reliable census data make projections of Sierra Leone's population difficult. It is estimated that there are about six million people¹³, of which approximately 1.5 million live in Freetown and the surrounding region. The country has been steadily urbanizing since the conflict forced much of the population to seek security in cities. It is estimated that between 30 and 40 percent of the population now lives in urban areas, with the number likely to increase in the coming years.¹⁵ Sierra Leone has a relatively low population density with about 80 inhabitants per km². The average population growth rate was between 1.8 percent and 2.0 percent in 2007, fall-



School children in Kenema district. Approximately 45 percent of Sierra Leone's population is under the age of 15



School house in a rural village in Kenema district

ing from an estimated 3.8 percent in 2005.¹⁶ Age structure is tilted towards the younger generation with about 45 percent of the total population under 15 years of age.¹⁷

Sierra Leone consists of about 20 ethnic groups of which two, the Temne and Mende, make up 60 percent of the total population.¹⁸ The Krio group, which makes up roughly 10 percent of the population, dominates Freetown. Approximately 60 percent of the country is Muslim, 30 percent Christian and 10 percent follows traditional beliefs.¹⁹ English is the official language of Sierra Leone and Krio is

understood by approximately 95 percent of the population although most people in the south and north speak Temne and Mende, respectively.²⁰

Sierra Leone's health care system was essentially destroyed during the conflict, although it was deteriorating due to a lack of funding and capacity beforehand. Currently, infant mortality rates are approximately 160 per 1,000 live births and under-five mortality rates are estimated at 262 per 1,000 live births.²¹

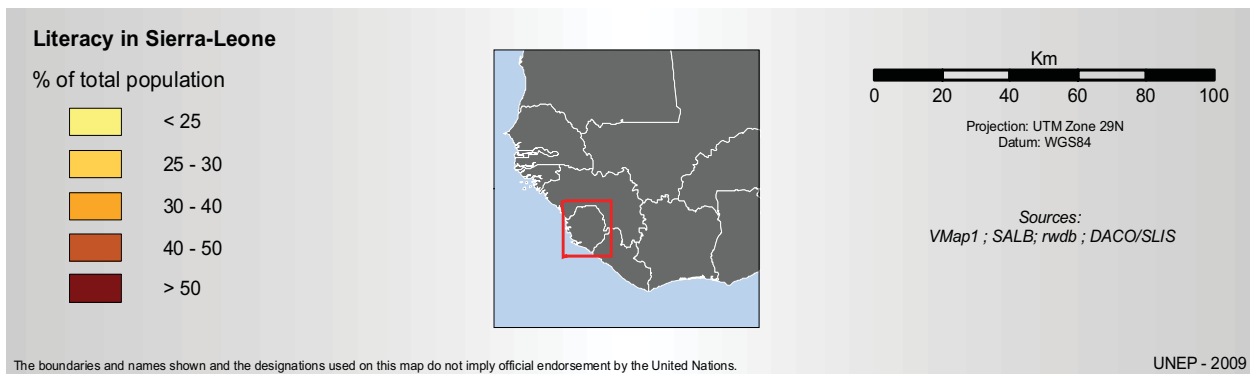
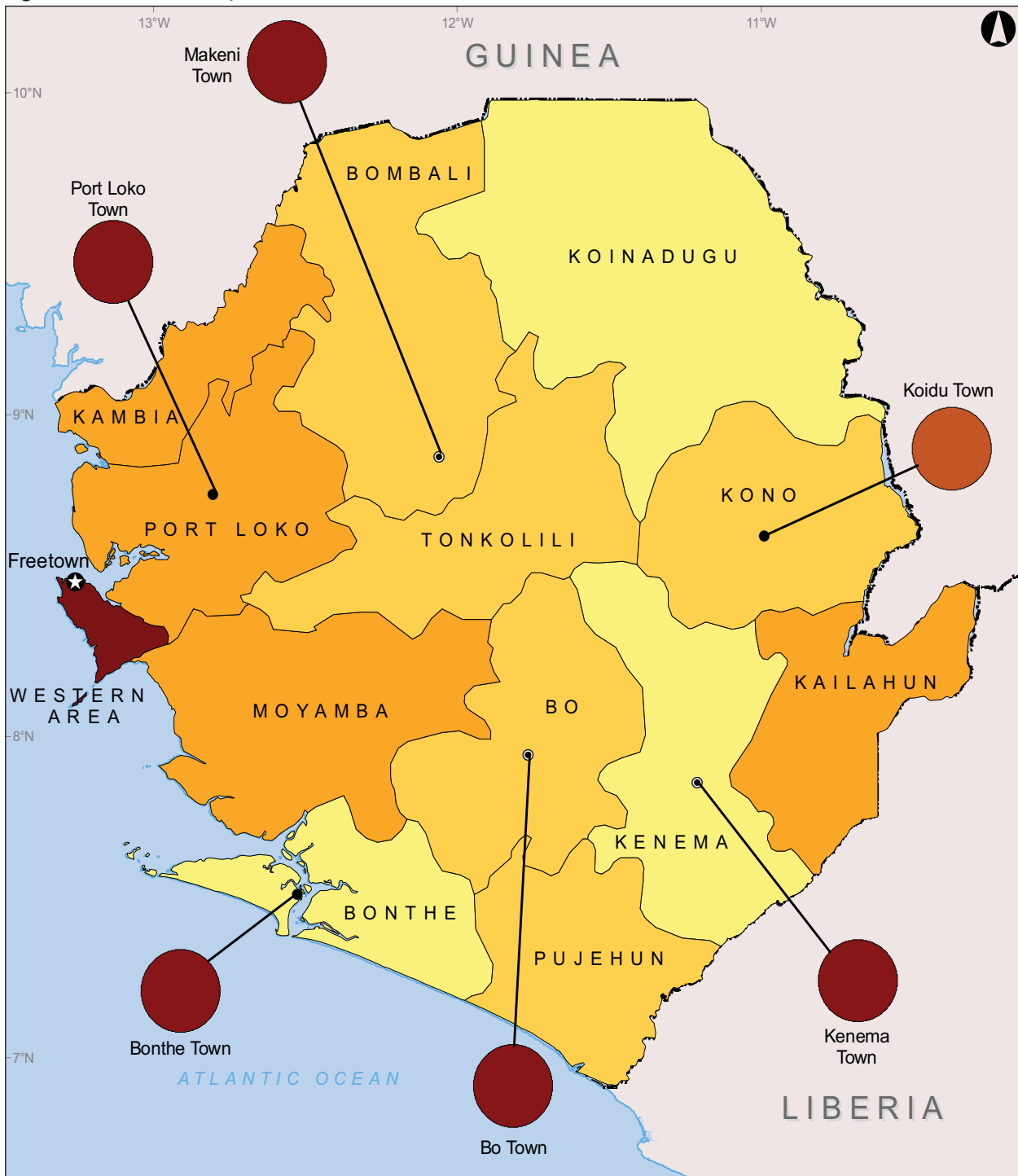
Although statistics show incremental improvement, Sierra Leone still has the highest level of child mortality in the world.²² Average life expectancy is 43 years. Women bear, on average, 6.5 children.²³ HIV is estimated to affect 1.7 percent of the population between 15 and 45 years of age, which is comparatively low for sub-Saharan Africa.²⁵ Foreign donors provide an estimated 60 percent of the Ministry of Health budget.²⁶

The country's education system was already in decline before the war, and it was devastated by the conflict.²⁷ Adult illiteracy rates are high with approximately 65 percent of all people over 15 unable to read and write. Illiteracy rates are even higher among women and illustrate the wide urban-rural divide (see Figure 4). Currently, the government's education allotment is 3.8 percent of total gross domestic product (GDP).²⁸

Figure 3. Development statistics summary²⁴

Sierra Leone vital statistics	
Population	~ 6 million
Urban/rural	30–40 percent/60–70 percent
GNI per capita	USD 666 (PPP)
Acute poverty	> 70 percent
Inequality	Richest 20 percent does > 63 percent of spending
Human Development Index	0.336
Ranked	179/179

Figure 4. Literacy in Sierra Leone



Economic conditions and trends

Sierra Leone remains at the bottom of the Human Development Index, ranking 179th out of 179 countries (see Figure 3).²⁹ With purchasing power parity (PPP)-adjusted gross national income (GNI) per capita of only USD 666,³⁰ more than 70 percent of the population lives in extreme poverty, defined as living on less than USD 1 per day.³¹ Poverty in the country varies from region to region with high concentrations of poverty in rural and urban areas outside Freetown.³² Unemployment is also a problem with an estimated 65 percent of the population without work; this is especially acute in urban areas.³³ Inequality was extremely high before the civil war, with about 63 percent of all spending done by the richest 20 percent of the population, and just 3.1 percent by the bottom 40 percent.³⁴

The post-conflict situation is estimated to be even less equitable, though definitive statistics are not yet available.

Despite endemic poverty, Sierra Leone's economy has been growing since 2000.³⁵ In 2008, real GDP grew by about 5.5 percent.³⁶ PPP-adjusted was estimated at over USD 4 billion in 2008. This is encouraging, considering the global economic crisis, rising food prices and increasing fuel needs. According to the World Bank, growth was fuelled by remittances, foreign aid and investments in mining. However, much of the growth is linked to the informal economy made up of agricultural, fishing, mining and service sectors. Formal activity – large-scale mining, fisheries or timber, construction and retail services, tourism or government employment – makes up a smaller part of the economy than informal subsistence activities.³⁷



Urban areas show the sharp contrast between economic and social groups in Sierra Leone. Freetown has extensive slums as well as magnificent hillside and coastline homes

Figure 5. Employment in natural resources sectors³⁹

Sector ⁴⁰	Share of national employment
Forestry	0.4–2.3 percent
Livestock	0.4 percent
Hunting/fishing	1.7 percent
Crop farming	61.3 percent
Mining and processing	2.6–4.5 percent
Total	66.4–70.6 percent



Collecting firewood for sale in the cities is an important source of rural income

Agricultural production (including livestock, forestry and fisheries) is the dominant economic activity in Sierra Leone, contributing approximately 46 percent of GDP and 70 percent of overall employment. In 2007, the agricultural sector increased by 4 percent. The industrial sector (including mining and quarrying) increased by 13 percent in 2007 as the mining sector started to increase production. However, 2008 saw a drop in mineral production due to social unrest, technical problems and a slow-down in global demand. In fact, though Sierra Leone’s economy (formal and informal) has historically been concentrated on the mineral sector, mining and processing represents less than 5 percent of

employment in the country. This is especially the case with diamonds, which represent an estimated 90 percent of exports earnings, but provide little real income to most people who are employed in the sector (see Figure 5).

In 2008, Sierra Leone’s external debt increased substantially as a result of the global economic crisis. However, foreign assistance and debt relief combined to relieve the budget and debt pressure. Debt relief is provided by Sierra Leone’s participation in the Enhanced Heavily Indebted Poor Countries Initiative and the Multilateral Debt Relief Initiative with total relief of USD 1.6 billion expected to accrue over three decades.³⁸



Subsistence agriculture, particularly rice and cassava production, supports most rural families



Once thick with 90 percent native tropical forests, Sierra Leone now has less than 4 percent forest cover

Geography and climate

Sierra Leone has four geographical zones: interior plateaus, lowland plains, coastlines and mountains. The generally flat interior plateaus that make up approximately 40 percent of the country's surface extend from the northeast to the southeast and are interspersed with mountains located primarily in the north and eastern parts of the country. Mount Bintumani is the highest peak at 1,948 metres. The lowland plains border the plateaus and run down to the coastline, making up 43 percent of the country's area. The coastline is gently sloping, extends over 400 km and is comprised of mangrove swamps, beaches, terraces and ridges. The Western Area Peninsula is bisected by forested hills. The country also contains eight major rivers, including most prominently the Mano, Moa, Rokel, Little Scarcies and Sierra Leone.

Sierra Leone's climate is tropical humid with two distinct seasons – rainy and dry. The rainy season runs from May to October, but precipitation varies with the relatively drier north and northeast region receiving approximately 2,500–3,000 millimetres per year, to the southeast and 5,000 millimetres per year in the Western Area Peninsula. The dry season runs from November to April and is variable across the country with the Harmattan winds bringing

cooler, dusty weather to the north. Average daytime temperatures range from 25 to 34 degrees Celsius, but temperatures drop as low as 16 degrees Celsius during the Harmattan. The country's heavy precipitation and maritime geography result in generally high humidity, which can be over 90 percent during the rainy season, but as low as 20 percent in the northern regions during the dry season. There are two Koppen climate zones in Sierra Leone, with most of the country classified as "tropical monsoon" and a thin belt of "tropical savannah" along the northern border with Guinea.

Natural resources and environment

Sierra Leone's natural resources and environment, while valuable and resilient, are badly degraded. The 2010 Environmental Performance Index places Sierra Leone at the absolute bottom – 163rd out of 163 countries – and registers some significant regressions since the end of the civil war. In particular, the Environmental Performance Index gives extremely low scores to Sierra Leone in the area of "Environmental Health", which describes severe impacts of environmental degradation on the personal health of the Sierra Leonean people.⁴¹

Mineral resources

Sierra Leone has many high-value and exploitable mineral resources. In the 1930s, the nation began producing and exporting sizeable quantities of alluvial diamonds, iron and gold and, industrial operations of rutile and bauxite began in the 1960s. In the diamond sector, a “floating population” of diggers initially performed much of the alluvial mining, however, the inability to control supply and tax revenues forced the government to impose new regulations to bring diamonds into the formal economy. While proceeds of mineral resources were diverted through private networks or smuggled out of the country,⁴² Sierra Leone’s dependence on its mineral wealth increased substantially.

Before the conflict, the mineral sector contributed significantly to the country’s economy by providing on average 20 percent of GDP, 90 percent of exports and 4 percent of revenues (peaking at 8 percent in 1990).⁴³ It was also estimated that the sector contributed, directly or indirectly, over a quarter million jobs and represented 14 percent of the labour market.⁴⁴ Approximately 250,000 were connected to alluvial diamond mining with an additional 3,000 workers employed by the rutile and bauxite industries.⁴⁵

During the conflict, most of the country’s industrial capacity was destroyed.⁴⁶ Rutile and bauxite production continued at the start of the war, but rebels destroyed the facilities in 1995. The GDP share of mining fell throughout the war and revenues from the formal diamond mining decreased significantly. In addition, considerable quantities of diamonds were smuggled out of the country. According to estimates, between USD 70 million and USD 250 million in rough diamonds were exported during the war with only a very small fraction (USD 2.2 million in 1999, for example) exported through formal channels.⁴⁷

It is now well documented how the trade in illicit “conflict” diamonds by Liberia’s Taylor and his confidants fuelled the civil war in Sierra Leone,⁴⁸ and how groups of rebels, government soldiers, diamond companies and government officials all colluded to prolong the war for economic benefits.⁴⁹ Recognizing the links between the illicit diamond trade and the conflict, UN sanctions were passed in 2000 that prohibited the direct or indirect import of rough diamonds from Sierra Leone and required the establishment of a certificate-of-origin scheme (i.e. Kimberly Process) for the trade in diamonds.



Though little of the country’s diamond revenues make it to the diamond diggers themselves, more than 250,000 people are employed in the alluvial diamond sector in Sierra Leone



Koidu Holding kimberlite diamond mining facility in Kono district. Industrial mining requires far more capital and equipment than alluvial mining

Since the end of the conflict, the mineral sector has been viewed as a vital part of economic development for peace by many within Sierra Leone, as proven by its prominence in the peace agreements and poverty reduction strategy. Although reliable data on mineral reserves are lacking (except proprietary studies done by mining companies), there appears to be significant commercial potential for platinum, chromite, lignite, clays and base metals such as copper, nickel, molybdenum, lead and zinc. In the short-term, diamonds, rutile, bauxite, iron ore and gold are likely to remain the focus of the mineral sector in Sierra Leone. Of central importance to development of the mineral sector is the industrial production of rutile, bauxite and diamonds, as well as artisanal production of diamonds (and to a lesser extent gold). Stone quarrying is also done on an artisanal basis.

Artisanal diamond mining remains an important livelihood for large segments of the population, although easily accessible deposits have decreased significantly. While 150,000 to 250,000 people are actually employed by the diamond sector, almost entirely young men, it is estimated that four to eight times that number, an estimated 1–2 million people, rely on the sector for their livelihoods.

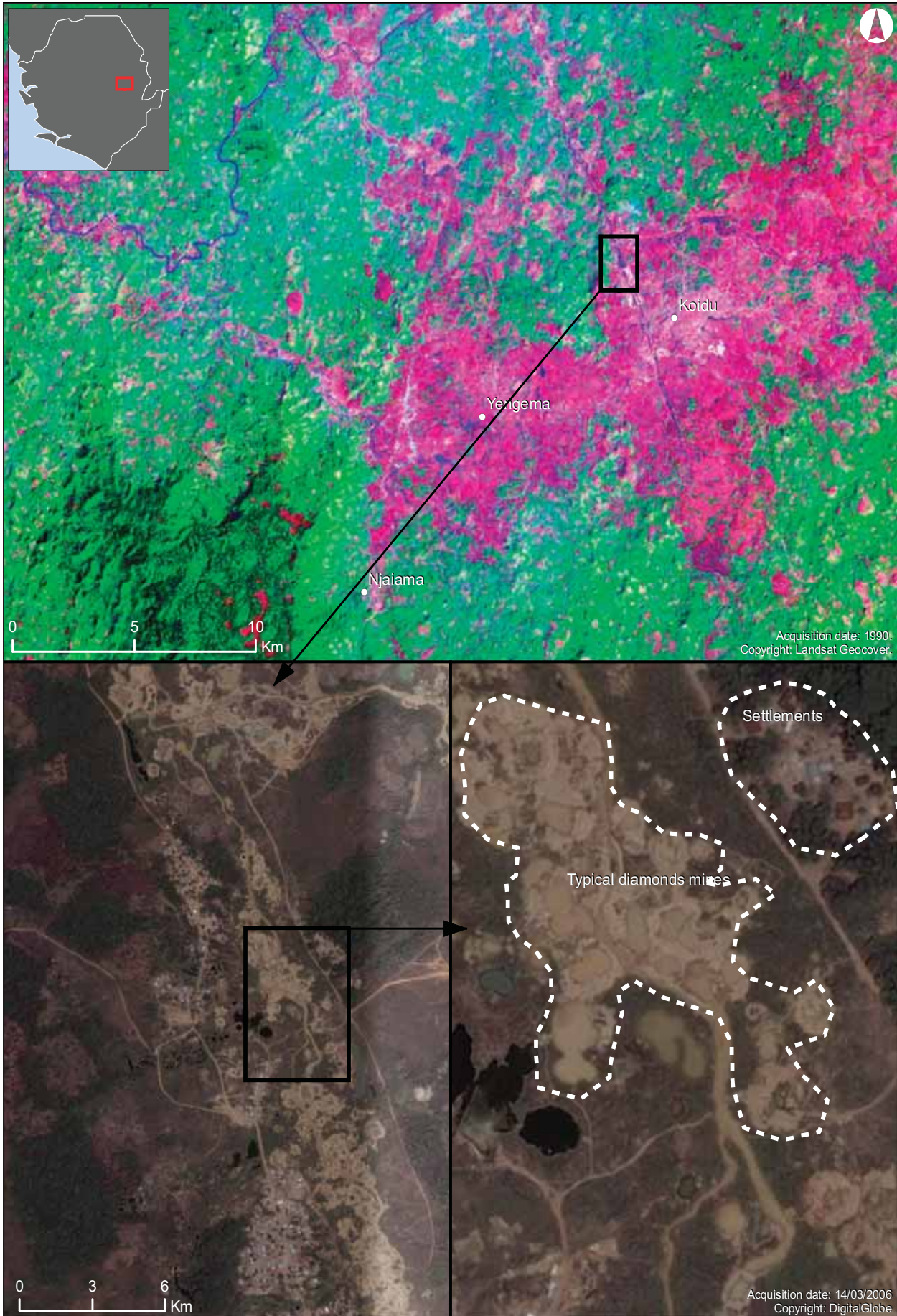
The central needs of the subsector are to ensure that those involved in artisanal mining and adjacent communities receive a fair share of benefits. There is

also the possibility of marginally increasing government revenues from the sector although this most likely depends on streamlining government regulations and outreach, and not disenfranchising miners and communities. Nonetheless, there is concern that the artisanal sector is in irreversible decline.

Artisanal gold mining has traditionally been done by women as a small, part-time addition to family income. Official figures from 2001 put alluvial gold production at just 30 kilograms, but with the large increases in the price of gold in recent years and the lack of other strong alternatives, the sector has grown – including through the addition of more men.

Expanding industrial mining is already recognized as significant for development with World Bank estimates suggesting that the sector could bring in up to USD 370 million in export revenues by 2015.⁵⁰ Moreover, it is estimated that direct employment in industrial mines could exceed 38,000 with an additional 300,000 people deriving livelihoods indirectly if the development of the mining sector continues apace.⁵¹ Currently, the major operations that are ongoing or in the development stages include Sierra Rutile (rutile), Koidu Holdings (kimberlite diamonds), African Minerals (iron ore) and London Mining (iron ore). However, the expansion of the sector will have to be conducted in a fashion that is sustainable and equitable and, even then, may have only quite localized development effects.

Figure 6. Examples of diamond mining sites in eastern Sierra Leone, near Koidu



Forest resources

Sierra Leone is historically a heavily forested area and forests have remained at the centre of its economic, political and cultural life. Estimates vary widely, but original forest cover is thought to have ranged anywhere from 70 percent to over 90 percent of the country.⁵² Forest cover was reduced substantially during the colonial period by efforts to supply commercial timber and other forest products (e.g. ivory and rubber) to Britain and other trading partners. In addition, shifting cultivation expanded into forest areas primarily to support the intensification of large-scale cash crop exports (e.g. nuts, coffee and cocoa), but also to sustain a growing population. While there is a tendency to view Sierra Leone's deforestation as a recent phenomenon, studies conducted in the early twentieth century found forest cover already significantly destroyed or altered.⁵³ For example, a report from 1924 suggested that only 3.5 percent of original forests were intact. The rapid pace of deforestation not only prompted early efforts to conserve forests, but also recognized the impact of such practices on water quantity and soil health.⁵⁴ Pressures on forests continued throughout

the twentieth century although the extent of timber extraction slowed due to a lack of commercially available timber and the emerging importance of mineral exports for the national economy.

Although up-to-date baseline data are unavailable, it is reasonable to assume that the conflict had an impact on forest areas since forests harboured combatants and served as sites for alluvial diamond mining. Forests also sustained a desperate and displaced population which, combined with a lack of forest management and illicit timber harvests, likely led to further losses of forest cover and wildlife.⁵⁵ After the conflict, large segments of the population returned to rural areas to resume livelihoods based on shifting agricultural cultivation and the use of forest products, resulting in further conversion of forest areas. In addition, many people, especially youth, returned to alluvial diamond mining, which led to a loss of forest cover as new pits were opened. The extent to which forests have been altered in the aftermath of war remains uncertain, although anecdotal evidence suggests that forest cover and biodiversity loss has been accelerating.



Rapid urbanization is a significant cause of deforestation in Sierra Leone, as forested areas are cleared to build settlements, which often require timber for construction



Firewood from a slash-and-burn site stacked for pick-up along the main road in Bombali district. Deforestation has reduced total forest cover in Sierra Leone to just 4 percent

Today, remaining forest cover is estimated to be 4 percent, with most located in the 55 forest reserves and conservation areas (see Figure 7).⁵⁶ The primary threat to forests is the demand for agricultural land to sustain a growing population with livelihoods based on farming and to increase the productivity of commercial agricultural exports as dictated by the country's development priorities. There is also an increasing need in both urban and rural areas for firewood and charcoal, which are the primary source of energy for 95 percent of the population. Moreover, mounting pressure on forests comes from major cities, especially Freetown, where people destroy forests areas to build homes and settlements, which at the same time require timber for construction. In addition, forests are under continued threat from illicit mining operations and commercial timber operations. While some relatively small-scale timber concessions are operational and do have impacts, recent reports are that expanded and unsupervised timber harvests by foreign companies ongoing.⁵⁷ To stem the effects of such activities, the government imposed a timber ban in 2007 and 2008.⁵⁸

What is evident even without reliable baseline information is that the rate of forest conversion outpaces

the rate at which forests can naturally regenerate. Beyond the vitality of forest areas and the biodiversity they harbour, the losses are beginning to have consequences for water availability and soil quality. Recently publicized statistics by the Division of Forestry (DoF) in the Ministry of Agriculture indicate that if deforestation continues at its current pace, Sierra Leone's forests could disappear by 2018.

Energy

Sierra Leone is completely reliant on fossil fuels for its electricity production. Total national electricity production increased from 42.6 million kilowatts in 1960 to 250 million kilowatts in 2006. This equals the national consumption as electricity is neither imported nor exported. The country, however, imports all of its needed petroleum, furthering an already large trade imbalance. Apart from fuelwood, lignite is the only natural fuel found in the country, but known deposits are not being economically exploited. Sierra Leone also has other potential energy resources that are not currently exploited, including hydroelectricity and renewable sources such as solar energy.



Charcoal and firewood are the primary source of energy for 95 percent of the population



In September 2009, a US oil exploration company announced that deep water oil reserves had been found off the coast of Sierra Leone



Clearing and cultivation in a peri-urban setting. Sierra Leone's population is about 60-70 percent rural and largely dependent on subsistence crop agriculture

Offshore oil prospecting by several international companies took place in the late 1970s and the 1980s, and resumed after the end of the civil war. After several years of rumours, a U.S. oil exploration company announced in September 2009 that deep water oil reserves had been found off the coast of Sierra Leone. This discovery has set off a scramble to determine the extent of the reserves and the possibilities for concession and extraction.

Land use and agriculture

Sierra Leone's population is 60 percent–70 percent rural and largely engages in subsistence crop agriculture. The conflict severely damaged agricultural production and exports. Before the war started, annual growth in the agricultural sector was 3 percent on average, outpacing population growth at that time. However, by the middle of the war years the sector had contracted due to displacement and instability, causing severe food security problems. The import of foreign rice and other staples increased, particularly in urban areas, making the country more vulnerable to inflation and global commodity shortages.

Over 9 percent of the land use is allocated for cultivated land (arable and permanent crops).⁵⁹ Approximately 70 percent of the population is engaged in agriculture as a primary occupation, with women playing the major labour role in most rural areas. Crop agriculture (not including forestry, fisheries or livestock) accounts for well over 30 percent of GDP, with many crop farming communities augmenting their income with small-scale mining, livestock handling and, more so in the past, commercial agriculture.⁶⁰ Rice is the staple crop and is grown by 80 percent of the farmers (millet is grown in the north), although it is supplemented by cassava, groundnuts and maize. To a large extent, agriculture in Sierra Leone is primarily characterized by shifting cultivation, along with "slash-and-burn" techniques for clearing and timber removal. Increasing population pressures as well as the growing scale of industrial farm operations in the country are creating a need for more agricultural land. While feeding the population is critical, it is causing increased rates of forest conversion and having other adverse environmental effects on water and soil.⁶¹

In the post-war period, recovery of the agriculture sector is seen as paramount to rebuilding and developing the country. The key lies in increasing agricultural productivity to ensure an adequate food supply for the population, and provide commercially viable cash crops for export markets. While production of most crops has increased over the last several years,⁶² it is important to note that subsistence farming and cash crop cultivation can sometimes work at cross-purposes. Industrial farming operations



Agriculture in Sierra Leone is characterized by shifting cultivation, along with “slash-and-burn” techniques for clearing and timber removal

on large swaths of land can deprive local subsistence farmers of land and livelihoods, and reduce locally produced food supplies. Furthermore, urban agriculture, which largely provides vegetables to cities, is being threatened by urban development, therefore creating new risks of disruption in the food supply chain.

Fisheries

Sierra Leone’s extensive coastline provides substantial opportunities for fisheries. The area has been home to vibrant fishing communities for millennia, which have contributed to the country’s sustenance and provided sustainable livelihoods. These important artisanal fishing operations have continued to operate even as the country developed a robust industrial fisheries sector in the 1960s. Official production figures from 1985 to 1990 indicate peak catches of around 230,000 metric tonnes per year, with fisheries contributing an estimated 11 percent to GDP in 1988.⁶³ During the war, most industrial operations came to a halt while artisanal operations continued albeit at a reduced rate and with little, if any, management or enforcement by government. While data are imprecise, catches appear to have been reduced by at least 75 percent during the war⁶⁴ and it is highly likely that foreign vessels trawled the coast illegally.



Sierra Leone’s extensive coastline has been long home to vibrant fishing communities, which have provided sustainable livelihoods for generations



Inland rivers and estuaries are important breeding grounds for fish species, which are threatened by pollution and overexploitation

By 2003, fisheries were on the rebound, yet still far below peak catches before the war. In 2000, it was estimated that nearly 18,000 people were directly employed by the fisheries sector, with many men employed in the harvest and women in the preparation and sale of fresh fish.⁶⁵ Figures suggest that fisheries currently contribute somewhere around 10 percent to GDP.⁶⁶ There is potential in expanding Sierra Leone's industrial fish sector to contribute more substantially to Sierra Leone's economy, on the condition that management and enforcement is greatly improved, since reports of extensive illegal fishing by unregistered international "pirate" vessels are widespread. In addition, if Sierra Leone is to garner the economic benefits, it must improve monitoring of vessels and their catch even on licensed operation to limit the leakage of revenue. One positive step forward in rebuilding fisheries, however, is that it has been announced that the nine-year European Union ban on fish imports from Sierra Leone will be lifted in the near future, opening up potential new markets for the nation's catch.

Thus, any exportation of industrial fisheries must be done in a way that does not negatively affect artisanal fishery operations, which are vital not only for employment, but also as an integral part of the food supply in local markets. Recent reports of a "fish shortage" in Freetown due to reduced supplies⁶⁷ highlights

the potential for food security challenges in the case industrial fishing ramps up too quickly. In addition to over-extraction, the destruction of the coast's extensive mangroves, which are very significant for fish reproduction, by human activities has depleted fish stocks. At the same time, extremely poor waste management has meant that large quantities of pollution, along with sediments from erosion, have entered major waterways.

Freshwater resources

While Sierra Leone possesses vast water resources, water availability and water quality remain significant problems for much of the population. The country has nine major watersheds and a discontinuous aquifer system that underlies most of its territory. Despite the abundant amount of water, it is geographically variable and scarcer during the dry season. Water is mainly used for agriculture, with much lower amounts dedicated to human consumption, industry and power generation. A study conducted in 1993, for example, found that 44 percent of the population obtained their water from rivers, 37 percent from wells and 16 percent from piped sources. Currently, only one-third of Freetown's residents are connected to the city's water supply system, with major limitations in the slums and in areas where returnees and displaced people have settled.⁶⁸



The main municipal water pipe for Freetown carries fresh water from dams in the Western Area catchment, but can only serve a limited portion of the population



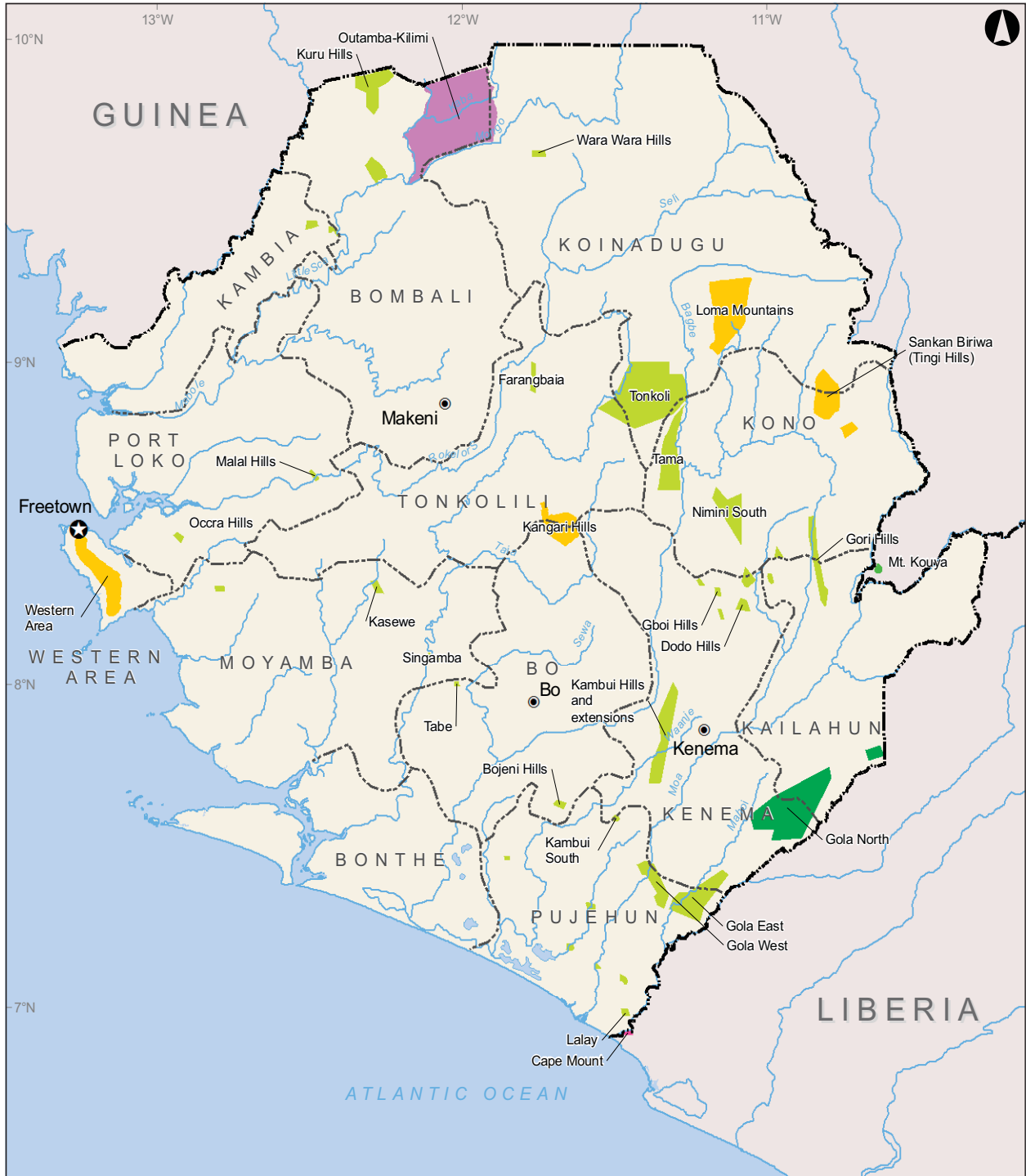
Drinking water well in the process of being completed in the Eastern province. Only half of Sierra Leoneans have access to an improved water source

While drinking water has always been problematic in terms of quantity and quality, the war's devastating consequences on infrastructure, the demands of a growing and urbanizing population and environmental degradation have put considerable pressure on the resource. For example, in urban centres such as Freetown and Kenema, water supplies are poorly distributed and often run dry, creating vulnerabilities for the population. In rural communities, a combination of a lack of groundwater availability and of means of extracting water sources (i.e. wells, pumps) places villages at risk and creates serious challenges for human development. In addition, water quality issues are serious in both urban and rural areas, as people use contaminated water sources for consumption. For example, only a little over half of the population has access to an improved water source and just over one-third has approved sanitation.⁶⁹

Biodiversity and protected areas

Sierra Leone comprises of a range of ecosystems, which have historically contained a wide array of plants and wildlife though this number has been reduced substantially over the last two centuries. The war also had a significant impact on the country's ecosystems given the lack of government management and the increased rebel activity and population displacement that occurred primarily in forested areas.⁷⁰ While current data are incomplete, Sierra Leone contains extensive biodiversity in terms of species richness and endemism, especially in areas covered by rainforest. Although estimates vary widely, the country has some 15,000 species of plants – 74 of which are endemic to Sierra Leone alone.⁷¹ Sierra Leone also contains approximately 761 mammal and bird species, including 15 primate species that are either endangered or vulnerable to extinction. Other mammals such as elephants and hippos have been considerably reduced in number.⁷² Biodiversity in the country remains threatened by agricultural practices, deforestation, mining, infrastructure and urban development.

Figure 7. Sierra Leone's 55 protected areas, reserve forests and classified forests



Protected areas and non-mineral resources

-  Nature Conservation Unit
-  National Park
-  Strict Nature Reserve
-  Classified Forest
-  Forest Reserve
-  No or Non-Hunting Forest Reserve



Km



0 20 40 60 80 100

Projection: UTM Zone 29N
Datum: WGS84

Sources:
VMap1 ; SALB; rwd; DACO/SLIS

The boundaries and names shown and the designations used on this map do not imply official endorsement by the United Nations. UNEP - 2009



Oil palms stand among otherwise deforested areas. While data are incomplete, Sierra Leone contains extensive biodiversity in terms of species richness, but many are threatened by reduced habitat

Currently, there are 55 protected areas including a combination of forest and game reserves, conservation areas and national parks, although only an estimated one-quarter have had an inventory or have management plans.⁷³ The areas are categorized by at least 28 different types of protection mandates. The

protected areas cover approximately 4.5 percent of the country and lack adequate management and enforcement (see Figure 8). In May 2009, Sierra Leone and Liberia created the Gola Transboundary Peace Park to protect at least 2,000 km² of the Upper Guinea Rainforest that straddle the border.

Environment and natural resources governance

Introduction

In a post-conflict setting, improved governance of natural resources and the environment is a key feature of government stability and relevance. In the case of Sierra Leone, the prominent role that natural resources have played in societal unrest and in the civil war shows the importance of improved and effective natural resource governance.

The institutional landscape is an important starting point, along with the legal framework that underpins it. In Sierra Leone, a mixture of traditional law and codified common law is used, based on the different colonial heritages of the Western Area and the three up-country provinces.

In addition, porous borders between Sierra Leone and its neighbours, along with a long tradition of informal internal trading pathways, make it quite difficult for formalized governance to manage the movement of natural resources.

During the field interviews conducted by the UNEP team, considerable concern was expressed that the impacts of the conflict had not been addressed, that compensation from extractive industries was erratic



The UNEP team met many communities that rely on natural resources for their livelihoods. These communities were nearly unanimous in their support for improved local governance of natural resources, including much more consultation with local actors



The UNEP team visits an industrial mining site in Kono District. A growing industry in Sierra Leone, it will require improved environmental impact assessments and increased community consultations

and insufficient and that concessions for natural resources were granted on terms that were opaque and served the particular interests of a few rather than the broad interests of the entire nation.

These concerns are compounded by the fact that most communities know little about what is being done in the natural resources sector or the rationales for the decisions that are being taken. Meaningful consultation is reportedly uncommon and usually focused on economic elites. From both perspectives, current structures and processes of natural resource management are in need of reform. They are generally fragmented, with decision-making power often centred far away from the resources themselves.

Fortunately, reform processes have been ongoing since the end of the civil war, with the goal of better managing the nation's domestically focused natural resources, as well as obtaining a larger portion of the export value of resources on behalf of the people. In particular, natural resources have been mainstreamed into the major peace and development processes in the country, such as the 1999 Lomé Peace Accord and the two poverty reduction strategies. In addition, Sierra Leone has become a party to several extractives transparency efforts, including the Kimberley Process and the Extractives Industries Transparency Initiative.

Institutional framework

Several key institutions make up the structure for environmental governance and natural resource management in Sierra Leone, with the ministerial functions of the national government centered in Freetown, and local-level administration split between paramount chiefs and the district representatives of the central ministries and district and city councils. Throughout, however, the capacity of institutional authorities is poor, with little or no real environmental planning taking place in many areas, both rural and urban. The planning and decision-making that has been done since the end of the conflict has largely been conducted within a small group of stakeholders who operate outside consultative and cooperative process.

Responsible institutions

The Environmental Protection Act of 2000 was the first law relevant to environmental protection and governance in the post-conflict period in Sierra Leone.⁷⁴ It was passed near the end of the civil war, but before the peace agreement and DDR process had put an end major hostilities. The legislation established a Department of Environment that eventually came to sit within the Ministry of Lands,

Country Planning and Environment as the Division of Environment.

The Department of Forests (DOF) sits within the Ministry of Agriculture, and uses the same legal framework for forest management that was developed during the period of British colonial rule, with areas of national park, protected forest and community forest. Unfortunately, only the Gola Forest has received adequate attention regarding how management should be updated. Technical experts in the DoF and civil society have emphasized that similarly rigorous efforts are needed in the Kambui Hills forest, Western Area Forest Reserve and the national parks of Kilimi and Outamba.

In 2005, in response to the disjointed responsibility and authority in the resource management sector, the National Commission for Environment and Forestry (NaCEF) was created under the auspices of the Office of the President to coordinate and facilitate environmental governance. The legal status of the commission was never resolved, however, leading to its dissolution in 2008. It was replaced by the Sierra Leone Environmental Protection Agency (SLEPA), which was established as part of the Environmental Protection Agency Act of 2008, following nearly eight years of uncertainty regarding the mandate of various environmental authorities.



Downtown Freetown government and business district. Most of Sierra Leone's environmental governance is concentrated in the capital, while many major concerns of natural resource management are in rural, up-country locales

This agency, which is slowly being brought together from the various capacities that sit within several ministries, has a clear mandate to coordinate and monitor environmental policies, programmes and projects in Sierra Leone. However, while the framework environmental law from 2008 contains the basic foundations for environmental governance, regulations are needed that are more specifically tailored to the practical needs of Sierra Leone and SLEPA. In addition, the practical considerations for how SLEPA will operate and interact with the rest of the Government of Sierra Leone are not yet in place.

In short, most actors in the country do not observe the mandate of SLEPA because it is currently unable to carry it out.

As a result, clarifying and strengthening SLEPA will be a key factor over the next few years. Budget support from the European Commission, which initially agreed to fund NaCEF, has been a vital first step and will provide key support to capacity-building efforts over the next two years. How the new institution will bring together the issues of the environment, forest, mineral resources and agriculture under its new banner has yet to be seen.

The Ministry of Mines and Mineral Resources is another important actor in resource governance, due to the fact that it has a partial mandate to oversee environmental impact assessments (EIAs) that are undertaken for mining projects, along with SLEPA. In addition to concessions and licenses, the ministry conducts technical certification of the minerals that are exported through formal channels. Efforts are currently being undertaken to separate the technical and secretarial duties of the ministry so that technical competence can be better insulated from political processes and non-transparent movement of revenues.

In addition, the Ministry of Lands, Country Planning and Environment is a key institution in the sector. This ministry will be responsible for land tenure reform, and has a critical hand in urban planning affairs in the Western Area and up-country. The support of the ministry at a political as well as technical level will be vital for SLEPA to succeed.

Finally, the Ministry of Marine Resources is responsible for fisheries management and previously was designated as the first point of responsibility for off-

shore hydrocarbon reserves. Now that Sierra Leone's small but significant reserves have been confirmed, this position has been brought into contention. A key step in the next several years will be the institutional arrangement for the management of forthcoming oil concessions and associated revenues and environmental impacts. Ensuring a central role for SLEPA and the equitable distribution of the oil wealth will be vital, requiring a strong institutional framework, backed up by a strong ministry.

Key laws

The regulatory framework that underpins environmental governance is based on a number of framework laws, regulations, concession contracts and ad hoc policies of the government based in the Office of the President. The Constitution of Sierra Leone (1991) empowers the Parliament to pass laws regulating and managing natural resources on behalf of the country.

Environmental Protection Agency Act: Passed in great haste by the Parliament in 2008, this act established a new institutional framework for environment and natural resource management issues and created SLEPA. There has been considerable criticism of the rapid passage of the act, suggesting that consultation and comment periods were not properly observed. The act also contains provisions related to the EIA process, including empowering SLEPA to undertake monitoring and enforcement activities. Moreover, rules on Montreal Protocol-regulated chlorofluorocarbons are included. This act repealed the Environmental Protection Act of 2000.

Mines and Minerals Act: Originally written in 1994, amended in 2004 and reformed again by the Parliament in 2009, this act lays out the legal framework for extractive mining in Sierra Leone. It discusses the required EIA process and various regulatory and institutional structures. This legislation underwent review for several years, including significant technical inputs by the UK-based Adam Smith Institute. Largely due to the change in government in 2007, and repeated personnel changes in the Ministry of Mines and Mineral Resources, the process has been slow-going, and was accused by civil society groups of not being transparent or consultative enough. However, in late 2009 the Parliament passed the reformed act.



A UNEP expert discusses the redevelopment of an iron mine with the mine's chief geologist. Governance in the mining sector has had several major changes in recent years, particularly the 2009 revisions to the Mines and Mineral Act

The new law mandates a common framework for minerals agreements with the government, rather than ad hoc parliamentary agreements that differ by company, and would increase the percentage of government royalties on official exports. It is suggested that the increased duties may create additional pressure to further increase already significant mineral smuggling into Guinea.

Anti-Corruption Act: Passed in 2008, this act is relevant to a campaign promise by President Koroma to end the so-called "culture of corruption" that is commonly described in Freetown. The natural resources sector is often cited as the sector most affected by poor transparency, so the impact of the implementation of this act will be important, especially in view of resource–conflict linkages and a history of inequitable benefits-sharing.

Local Government Act: This act, passed in 2004, put into law a system of devolved power for district and city councils. Local councils are elected by their constituencies and have powers that are similar to but do not supersede the paramount chiefs, who remain custodians of the land and their communities. The councils are ostensibly financed by the central government and from local taxes and fees, and have the power to undertake development

and management efforts in their districts and cities. However, the division of authority between traditional chiefs and local councils remains unclear.

Challenges to good governance: Land and resource tenure

A key feature of the natural resource management landscape in Sierra Leone is a peculiar but quite influential variability in the way land rights are allocated and administered in the three provinces and the Western Area Peninsula. Very much a vestige of the colonial period, land tenure in the Western Area is quite similar to the standard British procedures of free-held private property, as the Peninsula was indeed a British colony. The provinces (Northern, Eastern and Southern), however, were held as a British protectorate, under which a system of paramount chiefdoms was created. Paramount chiefs are the responsible "custodians of the land," which gives them the authority to allocate land rights to lower chiefs and communities within their charge. This chiefdom system is known as the "traditional" structure, though it was largely enacted and enforced by colonial supervisors from the United Kingdom.

At the same time, the post-war period has seen a rapid ascendance of the government “decentralization” concept, urged by the World Bank, the International Monetary Fund, the free-market Adam Smith Institute, the United Kingdom Department for International Development and other international actors as a way to combat corruption, increase the economic and political viability of rural areas and empower a new generation of leadership. Following the passage of the Local Government Act of 2004, district and city councils have been established in each relevant area, with local elections held at the same time as parliamentary elections. The role of district and city councils relative to the chiefs is still evolving, though sometimes with conflicting interests at play.

While local authorities, both chiefdom-based and elected, theoretically hold the decision-making power regarding the allocation, usage, extraction and planning for land, other natural resources and environmental goods, the national government in Freetown also plays a significant role. In particular, the forestry and minerals sectors play a strong role in the central government regarding the licensing and sale of resources. However, the large scale of the informal sector and lack of capacity to regulate has hindered effective management in the post-war period. Along with non-transparent and politically sensitive processes, the central government has in many cases not played the redistribution and equity assurance role that has been greatly needed.⁷⁵



Local councillors, who are elected to the district and city councils as a result of the Local Government Act of 2004, tend to be younger than other political leaders, are often university-trained in Freetown and many have family links to local chiefs

Paramount chiefs receive “land rent” in areas where concessions for the extraction of natural resources are held such as mining, quarrying, forestry or commercial agriculture. This is done through formal agreements, such as those with large companies, or informal agreements, such as local timber harvesters paying for the right to cut down a few trees. Formalized agreements demand that a portion of the land rent that is paid to the paramount chief is put into a “community development fund,” to which the community can submit project ideas.

This stems from long-standing allegations that the land rents of many resource-rich chiefdoms too often stay mostly with the chiefs and their close families. The amount of the rent that goes into the community development fund differs between sectors and also between specific agreements.

For example, the diamond sector’s fund is centralized in Freetown and receives 0.75 percent of the value of exported diamonds (3 percent is received by the government). Called the Diamond Area Community Development Fund (DACDF), this benefits-sharing arrangement is used to finance development projects in the chiefdoms where mining takes place. From 2001 to 2006, an average of USD 555,000 was dispersed per year, spread between more than 80 jurisdictions.⁷⁶

The Local Government Act of 2004, along with other land reform efforts, was intended to “modernize” Sierra Leone’s governance structure in the realm of natural resources, among other areas. With a new generation of elected leaders who were subject to recall at election time, government, including natural resource management, was supposed to become more collaborative and responsive.

Paramount chiefs, however, have instead seen these reforms as efforts to undermine their authority in a way that could badly destabilize rural areas. As one chief told the UNEP team, “rural, traditional Sierra Leone needs rural, traditional leaders”, who are able to play a culturally relevant role. With the chiefs undertaking coordinating and protective responsibilities, disputes over ownership and access to natural resources and environmental goods can be dealt with before they become destabilizing, they argued. Indeed, a senior UN official interviewed by UNEP strongly contended that “the paramount chiefs are the key to development in the provinces of Sierra Leone”.

In view of the complex and still unresolved issues regarding land tenure and resource allocation, it is clear that effective natural resource management and environmental governance still have significant hurdles in the realm of fragmentation of authority. Resolving a method of authority-sharing and confidence-building between the traditional leadership, new local government institutions and the central government in Freetown will be key to this process.

Challenges to good governance: Regional and transboundary issues

Given the close integration of people, politics and natural resources in the region, multilateral and transboundary issues play an important role in the management and governance of environment and natural resources.

Informal movement of natural resources

Estimates abound regarding the level of informal extraction and movement of natural resources in Sierra Leone, particularly along the porous borders with Guinea and Liberia. In 2004, for example, it is estimated between USD 30 million and USD 170 million worth of diamonds were smuggled out of Sierra Leone.⁷⁷ The responsibility for intercepting the illegal or informal movement of natural resources is

split between multiple agencies within Sierra Leone, and is without clear counterpart relationships in the neighbouring countries. The National Revenue Authority, established in 2003, plays an important role in formalizing the sale of natural resources, particularly in the realm of export customs. The Sierra Leone Police is also meant to play an important function in the formalization process.

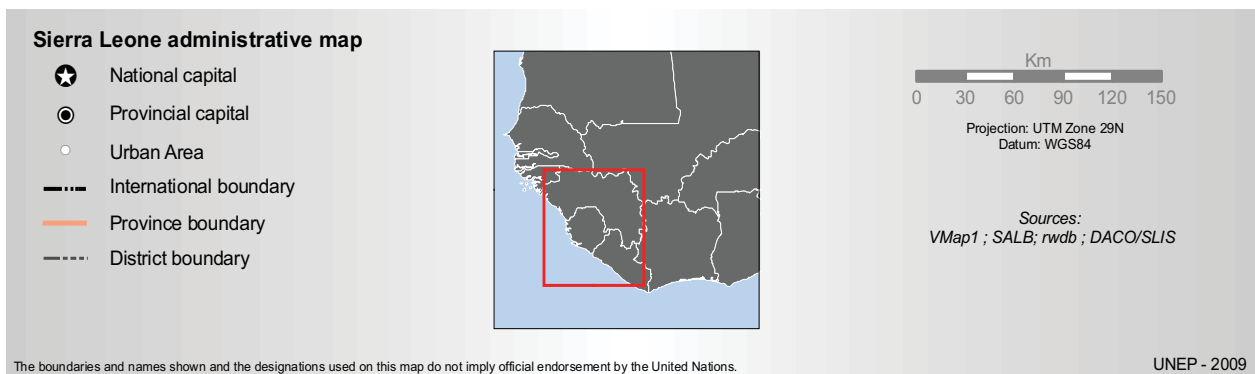
While there has been a rise in official exports of natural resources, particularly diamonds, since the end of the civil war, government institutions and international observers have not been able to make real progress in combating illegal trafficking of resources. None of the resource certification schemes, discussed below, has adequate monitoring capabilities, continuing to allow massive violations to occur. For example, diamond exports from Guinea have ballooned in recent years by nearly 500 percent, ostensibly in large part from smuggled Sierra Leonean stones.⁷⁸

This smuggling is in part due to the legal regulation and export duty disparity between the nations, something that is not unique to Guinea and Sierra Leone. Across the mineral sector, natural resources are being smuggled to locations where export taxes are lowest and other legal restrictions are weakest – a clear case of “the race to the bottom”. Some efforts have been made within the region to harmonize these regulations between countries, but in many cases they are more responsive to domestic political winds than those of regional or international cooperation.



Artisanal gold is often exchanged directly for goods rather than sold; a great deal travels north, through informal channels, into Guinea, along with diamonds

Figure 8. Sub-regional administrative map





Sierra Leone's agriculture remains quite vulnerable to changes in the quantity and timing of rainfall. Current estimates suggest that rural areas up-country could see an annual drop of 30–40 mm of rain over the coming century

Climate change

The management of climate change as an issue that could have severe impacts on Sierra Leone in the medium and long term has so far been extremely fragmented and not well focused. While there is a conceptual interest in the opportunities offered by the Clean Development Mechanism (CDM) and Reducing Emissions from Deforestation and Forest Degradation (REDD) programmes, the governance structures in the region and throughout the country are not yet in place. The responsibility for climate mitigation and adaptation projects are split between the Ministry of Agriculture and the Ministry of Lands, Country Planning and Environment, with a role for SLEPA when capacity is in place.

Led by the Institute of Marine Biology and Oceanography at the University of Sierra Leone and the former NaCEF, a climate change National Adaptation Plan for Action was completed in 2007 through a joint United Nations Development Programme (UNDP)-Global Environment Facility project. The plan surveys the possible impacts of climate change and the country's capacity limitations, before developing a list of priorities for action. It notes, in particular, that additional research

and education and sustainable development activities in fisheries and cultivated agriculture are essential.

Current estimates suggest that Sierra Leone will experience moderate reductions in overall precipitation over the coming century, with possible changes in the timing of the wet season. In particular, the rural areas up-country could see an annual overall drop of 30–40 millimetres of rain, with increased variability.

As a result, crop farming in the region will suffer a number of impacts in twenty-first century, depending on the climate zone type. For example, the African lowland dry savannah climate type, which dominates the sub-Saharan and northern Guinea regions, is expected to experience an overall increase in precipitation and crop productivity that could result in up to 30 percent higher crop revenues. However, most other climate zones will suffer, resulting in an overall drop from 14 percent to 30 percent in crop revenues.

Altogether, Sierra Leone is expected to lose between USD 600 million and USD 1.1 billion annually in crop revenues by the end of the century, representing tens of billions of overall lost value and increased food stress.⁷⁹

Illegal fish catches

Reports by international NGOs⁸⁰, which were supported in-field interviews, suggest that more than USD 20 million in illegal fish catches are being taken by foreign trawlers that encroach on Sierra Leonean waters. Unfortunately, the Sierra Leone military, which has a minimal naval force, has been able to stop only some small-scale direct piracy such as in 2007 when Guinean military personnel undertook an attack on licensed Sierra Leonean fishermen and attempted to steal their catch.⁸¹

Reforms and responses: Resource certification

In large part fuelled by global outcry regarding the status of diamonds as a funding agent for the Sierra Leone civil war, certification schemes for the sale of natural resources have been established, for diamonds as well as other resources.

Kimberley Process Certification Scheme

With the expressed purpose of converting “conflict diamonds” into “prosperity diamonds,” the Kimberley Process is meant to prevent the funding of arms and armies from diamonds through a certification process that verifies the country of origin of a diamond. Negotiated in 2002 and driven by Member States, the European Commission and the diamond industry, the initiative has been criticized for not doing enough to ensure that the benefits of the diamond trade reach local communities, rather than a small number of profiting individuals.⁸² Although Sierra Leone remains a participant in good standing with the certification process, it still is unable to capture a significant amount of the diamond trade. Estimates indicate that diamond smuggling worth between USD 30 million and USD 160 million continues on top of the USD 140 million in legitimate exports, with smuggling therefore representing between 18 percent and 53 percent of the total diamond trade.⁸³



Illegal foreign trawlers in Sierra Leonean waters have been documented by both international NGOs and national authorities

Extractives Industry Transparency Initiative

Concurrently with the development of the Kimberley Process, the Extractives Industry Transparency Initiative (EITI) was launched in June 2003 as a non-governmental association that promotes principles of transparency in two natural resources sectors: minerals and hydrocarbons. Sierra Leone is a candidate country for the initiative, which requires that payments to the government and revenues from the resources must be public audited records in order to receive validation. Sierra Leone is in the process of publishing its first report, which is expected by mid-2010. Several provisions of the 2009 minerals reform act were targeted towards the transparency principles of the initiative, and could be a step towards successful candidacy.

Forest Stewardship Council

The Forest Stewardship Council certifies timber and wood products sources for export as complying with the principles of environmental and social sustainability. Thus, certified sources are those that have reasonable environmental and social standards, and contribute to benefits-sharing. Sierra Leone cur-

rently does not have any Forest Stewardship Council certified sources, though timber extraction and export has been ongoing since the colonial period. However, timber exports were halted in January 2008 following many reports of illegal, corrupt and unsustainable forestry practices by domestic and foreign companies. The ban was lifted in June 2008, after the launch of new rules regarding permitting and transport of timber to ensure legality.

Reforms and responses: Inclusion in peace and development processes

The peace and development process in Sierra Leone has included many components over the years, including elements of peacemaking, economic stabilization and development, peace consolidation and transition, and now a second poverty reduction strategy and development plan. Each step in the peace process has had important links to natural resources, but these have not yet been addressed in a comprehensive and effective manner. Figure 10 summarizes several of the main peace and development strategies that have been used.



Extractive quarrying, mining and logging taking place in a protected forest that is vital to the stressed local freshwater system. Sierra Leone currently does not have any Forest Stewardship Council certified sources, though timber extraction and export has been ongoing since the colonial period

Thus, there is a need for more robust analysis of the detailed risks and opportunities in the environment and natural resources sector. While the issue is well appreciated in the abstract, detailed investigation followed by concrete solutions are required.

This type of analysis and recommendations, intended to be pragmatic and timely, is discussed

below. Beginning with a breakdown of the impacts of the conflict on environment and environmental institutions in Chapter 4, Chapters 5 and 6 first describe the risks to stability and then the opportunities for further peace development from environmental and natural resource management. Then, Chapter 7 draws general and specific conclusions and recommendations for moving forward.

Figure 9. Role of environment in key peace and development documents

Document	Date / effective dates	Details
Abidjan Peace Accord	20 November 1996	Acknowledged the socio-economic and natural resource basis for conflict in Sierra Leone and committed all sides to addressing it. However, the process broke down before specifics were developed.
Lomé Peace Accord	Signed July 1999	Allowed the RUF to become a political party, with positions in government; Article 7 established a committee to manage strategic natural resources, including focusing benefits on development.
Poverty Reduction Strategy Paper	Interim 2001–2004; Final 2005–2007	Focused on security and investment in sectors that were damaged and neglected including, in part, natural resources and environment.
Sierra Leone Vision 2025	Issued August 2003	Goal-setting exercise and scenario analysis; environment and natural resources receive significant attention as a sector and cross-cutting issue of concern. Focuses on sustainable exploitation and stopping “reckless” usage.
A Peace Consolidation Strategy	Issued February 2006	A precursor to the 2007 peacebuilding strategy, natural resources are included as an important issue for the national dialogue for reconciliation.
Sierra Leone Peacebuilding Cooperation Framework	Issued December 2007	Youth employment, energy and reform of the security and justice sectors are the main priorities, though transparency and sustainability in natural resources sector are mentioned.
Agenda for Change (Poverty Reduction Strategy Paper II)	Final 2008–2012	Managing natural resources is a major principle of the Agenda, however, the document discusses the issue in generalities rather than in terms of concrete commitments.
Supporting Sierra Leone: A Joint Vision of the United Nations Family	Final 2009–2012	UN commitments supporting the Agenda for Change, including 21 programmes with one focusing on environment and natural resources.

Impacts of conflict on the environment

Introduction

Though the Sierra Leone civil war officially ended in 2002, remnant impacts are still very present today. The UNEP assessment was designed to identify key environmental impacts that could hinder the continued process of peace consolidation and development, rather than to conduct an exhaustive examination of environmental damage. By flagging the major impacts that remain in the natural resources sector, priority interventions can be designed to begin the mitigation process, and help avoid risks to peace consolidation.

The environmental impacts of the conflict are of three main types: direct, indirect and institutional. Direct impacts are those with highly visible environmental consequences, such as the destruction of ecosystems or water supplies as a result of fighting. Indirect impacts, such as those caused by coping and survival strategies, often occur over a longer period, with the effects manifesting more severely over time. And third, institutional impacts, which are comprised of the governance and management changes that occur during the time of conflict, make

dealing with direct and indirect impacts much more difficult in both the short and long run.

When environmental impacts are not mitigated, crucial livelihoods and human health can be put at great risk, threatening recovery and stabilization. Thus, identifying the enduring environmental impacts of conflict in Sierra Leone is an important contribution to ensuring that the Agenda for Change is successful.

Direct impacts

The direct environmental impacts of conflict in Sierra Leone have in many cases not yet been fully addressed. Although the UNEP assessment took place more than seven years after the end of intense fighting, many direct environmental consequences are still visible. However, it is unclear how much environmental damage has been naturally mitigated or concealed by biological processes since the war. Moreover, further study is required in each of the five impact areas discussed below to tease out additional details, such as which impacts included pre-conflict elements, as well as supporting quantitative and illustrative data.



This concrete silo was one of the few things to survive an RUF attack in rural Kenema District. Most of the other water infrastructure in the region was damaged or destroyed

1. Water systems

While most of Sierra Leone's infrastructure was damaged and neglected during the conflict, the lack of water system recovery has been particularly harmful. RUF fighters repeatedly targeted water holding tanks, wells and other water-related infrastructure in their thorough sacking of local villages across the country. This further set back in already poor water access situation, indeed, today it is still very low. UNEP experts were repeatedly told that water shortages, particularly later in the dry season, inhibited other activities during the recovery process. For example, there is almost no irrigation currently taking place beyond some cultivation of wetland valleys, which does not require additional infrastructure. At the same time, a lack of waste management capacity has caused problems for sanitation, surface water degradation and damage to coastal areas.

2. Agriculture

Subsistence agriculture has long played the most prominent livelihood role in Sierra Leone, particularly in rural areas, making damage to this sector a particularly impactful impact of the conflict. The damage to agricultural operations in rural areas is still apparent, most notably in the loss of cash crop plantations, experimental plots and livestock. The direct damage to agricultural output was a combination of damage caused by rebel fighters as they sacked towns and villages, and the fact that most displaced owners abandoned their plots for several seasons or years.

Although there have been considerable efforts by the donor community, the Ministry of Agriculture and foreign investors to revitalize this sector, the renewed benefits of commercial crop production are yet to materialize. At the same time, beyond relatively small chicken and goat populations, replacing livestock has been possible only for the wealthiest.

As a result of the damage to the commercial agricultural sector, recovery of the rural farm economy has been slow and capital-intensive. In many cases, initial funding for the restart of small local tree crop plantings has been absent or ineffective, with more focus given by the government and donors to large plantations. At the same time, foreign investors have continued to view arable land for commodity cultivation as a growth area for purchase, investment and export.

3. Forests

During the conflict, forests were damaged by the activities of the RUF, the Sierra Leone Army and government-affiliated militias and mercenaries. Impacts on forest were particularly damaging because of the nature of the rebel activities that included the destruction of crops and vegetation, which is best characterized as violence committed in a seemingly senseless and random fashion. However, the extent of impacts of fighting and looting on forests is currently unclear, as little direct evidence is available and the majority of fighting took place more than a decade ago.

"The mine pits are death traps...we lose children every year who fall in."

Elder in Kenema District

4. Mining

During the conflict, the RUF and other related combatants increased the intensity of illicit artisanal diamond mining to support their operations. This illicit mining was part of the well-known and publicized "arms for diamonds" trading that sparked the Kimberley Process, and was the basis for Taylor's prosecution. An estimated annual amount of between USD 25 million and USD 125 million in diamonds left the country each year throughout the war as part of the RUF's diamond trade.⁸⁴ The mining sites that were expanded were not rehabilitated in any way, leaving effluent, degraded sites and lost arable land. The mining also caused a great deal of persistent damage to the sector, in terms of reduced flows of natural capital and a heavily degraded environment.



Artisanal diamond mining site in the heart of the mining region of eastern Sierra Leone. During the conflict, sites like this one were used by RUF rebels to extract diamonds for financing, resulting in pollution of major waterways and degraded land



In Sierra Leone, the most significant indirect impact of the civil war on the environment has been the environmental consequences of large-scale displacement of more than half the population

5. Environmental toxicity

Although Sierra Leone has a very small industrial sector, there is a possibility that some pollution occurred in the Western Area as a result of both direct attacks on light industry and neglect of maintenance during the war. Specifically, environmental impacts may have resulted from damage to Freetown's port from the destruction of two large warehouses⁸⁵ and through possible underwater leakage of hazardous waste and industrial chemicals.⁸⁶ However, as the assessment mission was not able to obtain quantitative samples or data, it is unclear how this may have impacted groundwater or the fisheries sector in the Western Area.

Indirect impacts

The indirect impacts of war on the environment and natural resource base are frequently more significant and longer lasting than acute direct impacts. In Sierra Leone, the most visible indirect impact has been the environmental consequences of large-scale displacement during the conflict. More

than half the population was forced to move, both internally within Sierra Leone and over its borders, as refugees into Guinea and Liberia. In addition, internal conflict-induced migration sped up the process of urbanization, particularly in Freetown, as people came in search of a stable security situation during the 1990s and subsequently decided to settle.

1. Coping strategies during and after the conflict

The coping strategies of displaced populations were temporary and short-term in scope, as they were understandably focused exclusively on survival. Nevertheless, they resulted in unsustainable resource use trends in forests and agriculture, as well as in quarrying and mining practices. For example, uncertainty of access meant that there were significant incentives for rapid and high-impact extraction of natural resources of all types. Disrupted markets and displaced populations forced many farmers and traders to change or abandon traditional livelihoods for short-term or temporary measures.

Over time, many of those coping strategies became standard practice as former livelihoods could not be revived, even after the peace process ushered in an era of recovery and reconstruction. Though a significant period of time has elapsed since most of the displaced have been able to return to their communities, unsustainable resource use continues. For example, a lack of alternatives has forced both rural and urban populations to over-exploit forest resources for firewood and land for farming.

The UNEP team found this to be particularly evident in the water catchments that surround Kenema and Bo, as well as in rural communities near the Gola Forest and those near Kono, Magburaka and Makeni. At the same time, there has been severe overfishing of small rivers and bays, particularly in the coastal areas in and around the Western Area, as a result of the technologically restricted area that artisanal fishermen can reach. Finally, an overreliance on artisanal mining resources during and after the conflict has greatly reduced the prospects of long-term growth from this industry.

2. Inefficiencies in natural resource management

For the most part, major inefficiencies continue to plague all natural resources sectors as a result of or exacerbated by the conflict. Because of a lack of information on resource stocks, reserves and illegal activity, neither local communities nor the government fully realize the true value of natural resource products. For example, the UNEP team was told by paramount chiefs and villagers that extremely valuable hardwood trees had been illegally cleared and discarded or burned for fuel in Kenema District in order to make room for small-scale subsistence agriculture. In addition, landowners have seldom been able to earn market-value rents for their land because of other information asymmetries.

The demand for natural resources, including water, fuelwood and food has also been concentrated in urban areas, in part related to conflict-linked migration. Significant differences in prices between the Western Area, urban provincial centres and rural areas warp resource allocation decisions, with a small cadre of middlemen receiving the profit.



Timber is harvested from a protected watershed forest for firewood and building materials. Over-exploitation of forest resources is one of many wartime legacies

3. Market disruption

The insecurity and instability of the 1990s resulted in wide-reaching damage to natural resource-based economic sectors. For example, the conflict caused the entire tourism sector to collapse precipitously. Since the war, only 4,000–5,000 tourists have arrived in Sierra Leone annually, significantly down from the “tourist boom” of the 1980s. Much of the tourist draw in Sierra Leone is the coastline, which is perfect for chartered fishing and other outdoor activities. Unfortunately, the loss of the tourist trade due to instability has incentivized the quick liquidation of natural capital for small gains, such as beach sand mining for urban buildings, or cutting down forests and mangroves near the water. While these activities have generated short-term benefits, long-term opportunities for profitable and sustainable tourism are at risk.

In particular, sand extraction and soil destabilization have accelerated coastal erosion along the

“We used to take many men out to fish. Not so many now...”

Fishing boat guides looking for work along an empty and eroded Western Peninsula beach



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The loss of the tourist trade due to instability has incentivized the rapid liquidation of natural capital for small gains, such as beach sand mining

Western Area Peninsula, severely damaging the lives and livelihoods of artisanal fishing communities, such as the towns of Lakka and Goderich and in some cases losing up to 50 meters of the coastline.⁸⁷ The loss of important coastal wetland plants, such as mangroves, will only speed up these erosive processes.

4. Demographic trends

As most post-conflict societies,⁸⁸ Sierra Leone experienced rapid population growth after the conflict peaked in the late 1990s.⁸⁹ As of 2005, Sierra Leone’s fertility rate was 6.5 births per woman, leading to almost 2.3 percent population growth annually, with overall estimates ranging around 6.5 million people. This population pressure places additional stress on a resource base that is already stretched thin.

The impact of a rising population has been particularly acute in urban areas, where rapid expansion has meant destruction of forests, overstretching water and food resources and greater demand for fuelwood and timber for building materials. With infrastructure damaged by the war, and population growing, scarcity has been intensified in both directions. These impacts are particularly apparent in Freetown, where incremental population growth before the war was followed by sudden migration during the conflict.



Families often must wait a day or longer for drinking water because of the growing demand on scarce water resources

The disparity of educational opportunities between men and women is an additional important factor, with significant demographic implications, that was exacerbated by the conflict. The 2004 census indicated that nationally, female literacy – a key measure of education – is just 29 percent, trailing male literacy (49 percent) by 20 points. Rural areas trail urban ones throughout the country, with a wide disparity that ranges from relatively high female literacy in the Western Area (57 percent) or the city of Bo (55 percent) to rural Koinadugu District (14 percent) or Kenema District (13 percent). Female education has been widely linked to reduced birth rates and stronger economic recovery and growth.⁹⁰ In addition, because rural agricultural plots in Sierra Leone are managed largely by women, improved women's education will improve local level capacity for sustainable agriculture – a key development and peacebuilding goal.

5. Resource stress and scarcity

Water scarcity is a growing problem in Sierra Leone. Though the country has a tropical climate and receives more than 3,500 millimetres of rain per year,⁹¹ access to drinking water is often an issue, even in the wet season. Part of this is a problem of delivery, as most infrastructure destroyed during the war has not been replaced or repaired, leading returnees and others to rely on fewer sources.

Moreover, the pressure on land cover by coping strategies and urban sprawl noted above is placing many watersheds, most notably in Kenema and Freetown, in great jeopardy.

Institutional impacts

Further environmental impacts are found at the institutional level, as violence and instability undermined formal and informal governance and management structures across Sierra Leone. During the conflict and recovery period, long-term planning was set aside in favour of short-term opportunities for economic gain.

The extraction of natural resources played a very important role in wartime economic activity, as was widely reported. While the focus has traditionally been on the diamond sector -- as it directly fuelled the civil conflict itself – instability forced other types of extraction, such as gold, timber and non-timber forest products, and quarrying, to replace more sustainable income opportunities. Because natural resources can be quickly and easily exploited for sale, without long lag times or much in the way of capital investment, this unsustainable, but rapid, natural capital extraction was prevalent during the conflict years.

Figure 10. Gender gap in literacy in Sierra Leone

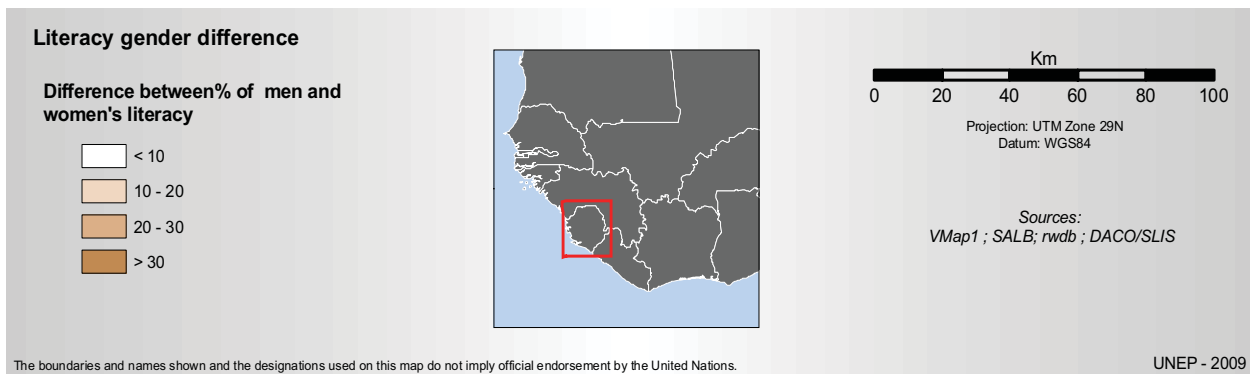
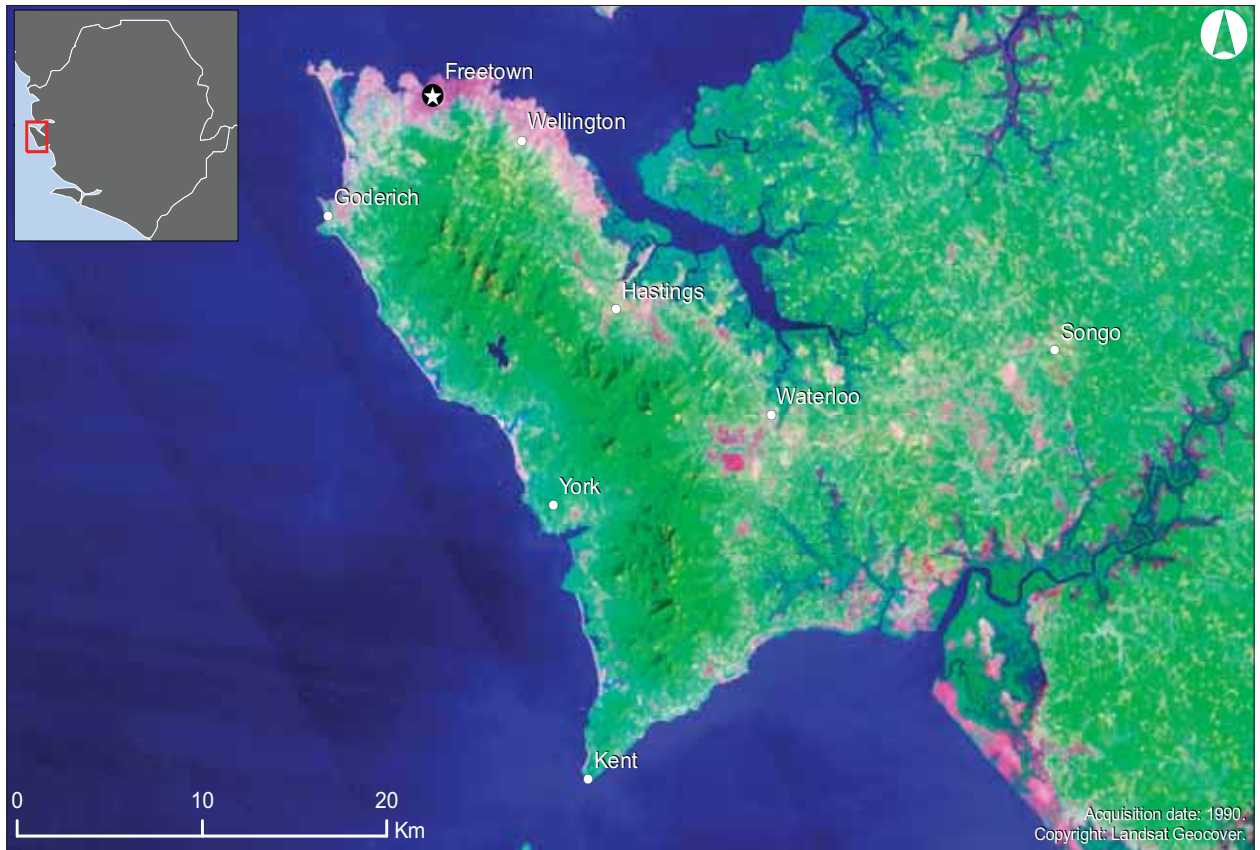


Figure 11. Deforestation in Freetown and the Western Area, 1990

1990

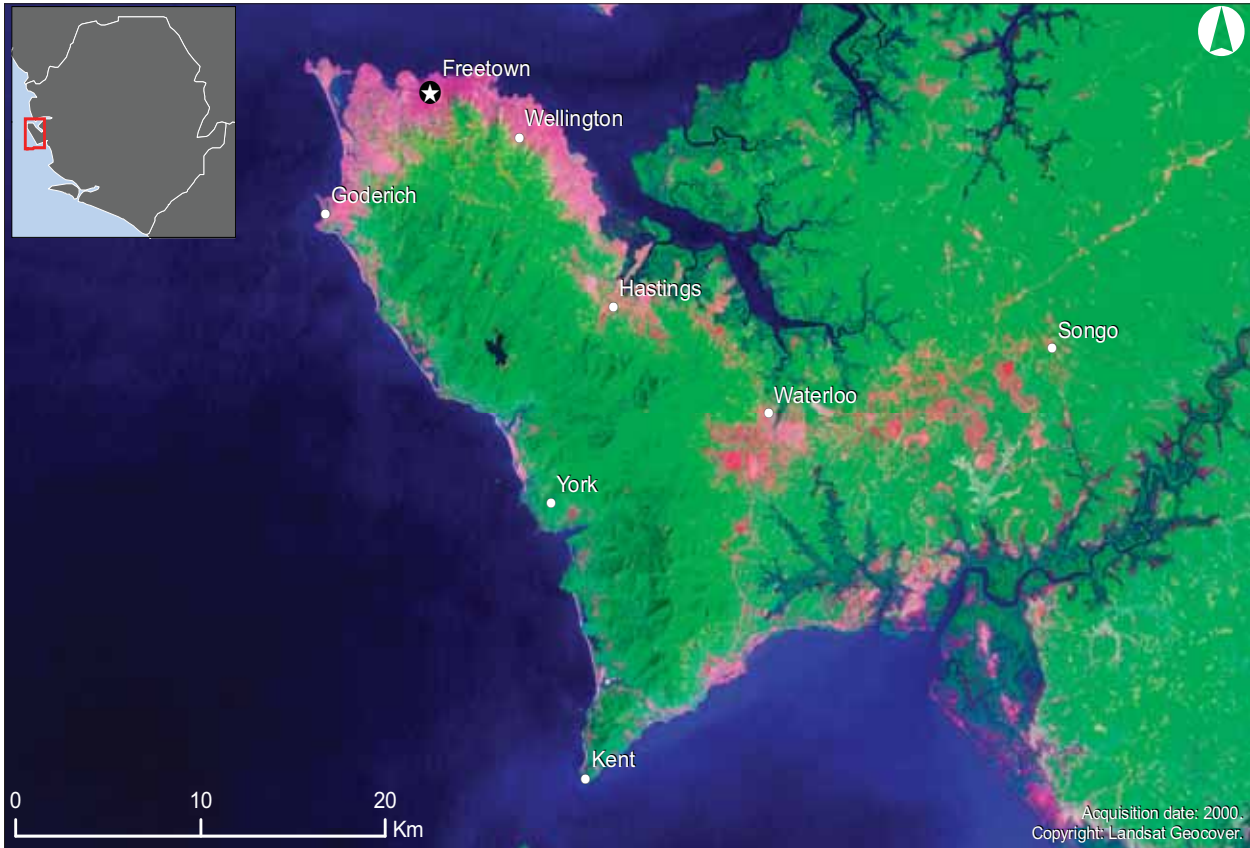


1990



Figure 12. Deforestation in Freetown and the Western Area, 2000

2000



2000

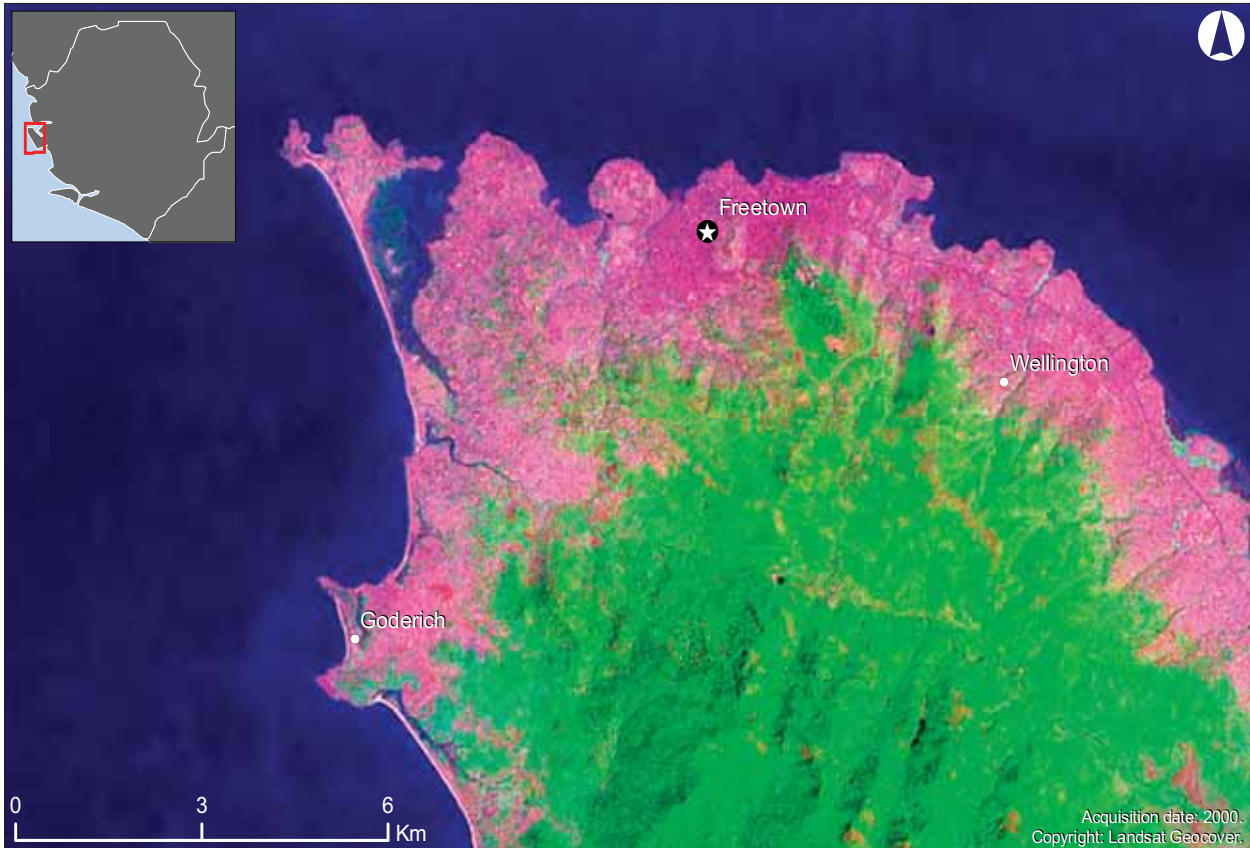
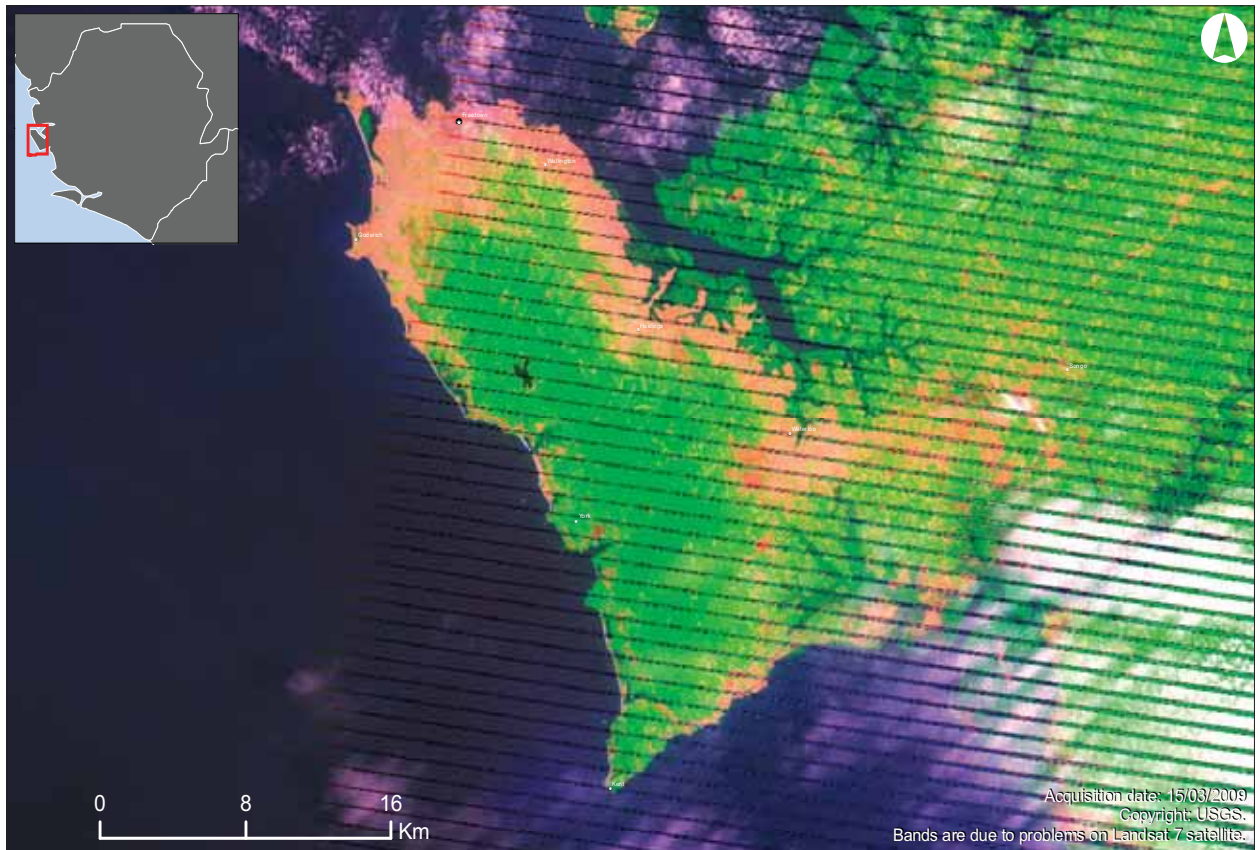
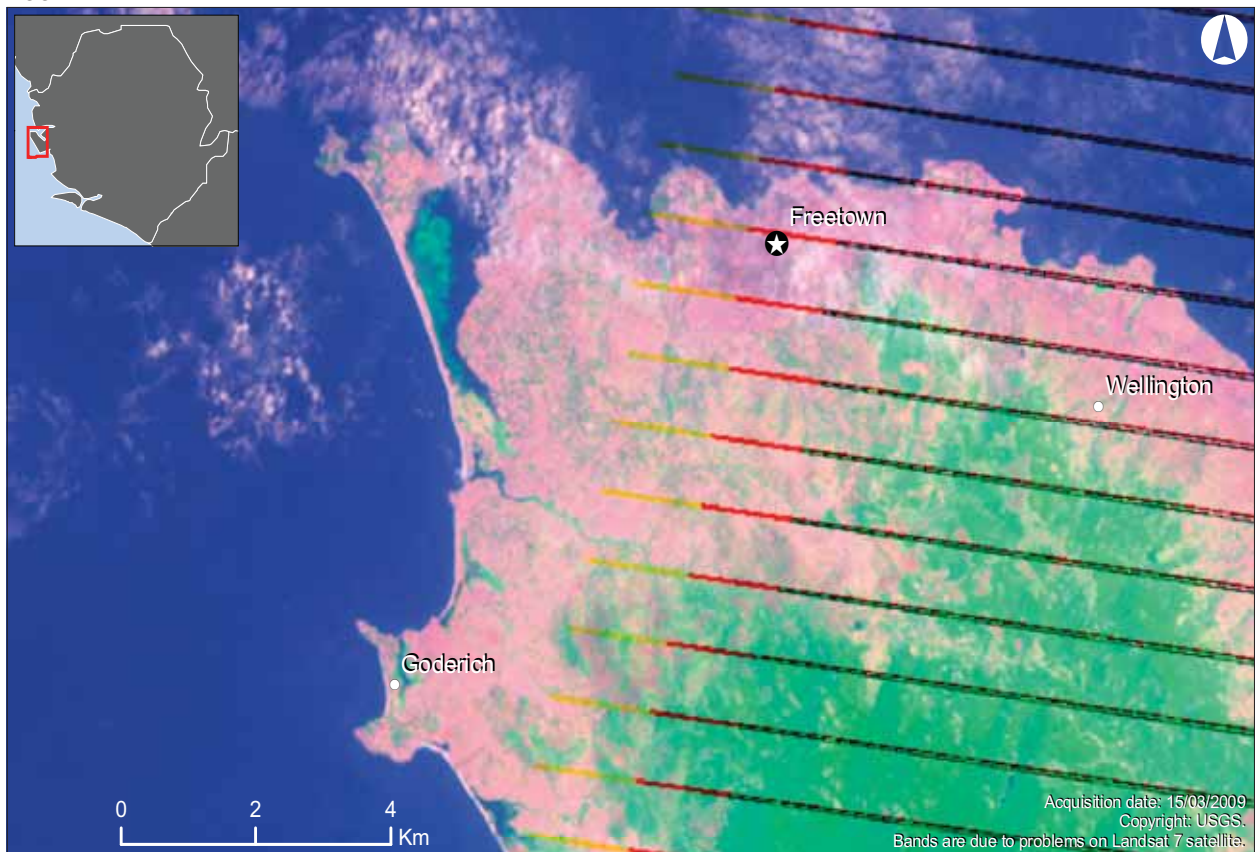


Figure 13. Deforestation in Freetown and the Western Area, 2009

2009



2009



1. Low transparency

Within any extractive sector, it is in times of instability that concessionary agreements and contracts are negotiated in “backrooms,” providing few benefits to the people or considering long-term sustainability. In Sierra Leone, anecdotal evidence of short-term deals for rapid exploitation during and just after the conflict as well as larger agreements that may not have equity and sustainability at heart is widespread.

For example, as described by officials in the forestry division, short-term, informal forest concessions in the Kilimi and Kuru Hills protected areas along the Guinean border were issued, and large swaths of protected forest was extracted for a low price. In addition, the kimberlite diamond concession in Kono⁹² is closely linked with private security operators who were hired to defend the government during the latter part of the conflict.⁹³

Generally speaking, the institutional damage has further encouraged smuggling associated with arms and drug money, such as the movement of gold through Guinea,⁹⁴ and informal arrangements for the purchase and sale of resources.

2. Lack of data

While natural resources make up the backbone of the Sierra Leonean economy, accurate and timely data on the actual extent of resource reserves, movement and long-term prospects are visibly lacking. As is the case for West Africa generally, no definitive public study has been undertaken to assess the current potential value of Sierra Leone’s mineral reserves and their accessibility. Indeed, no comprehensive government mineral survey in Sierra Leone has been undertaken since the early 20th century. Expectations ride high on the minerals sector, and there is a need for data that can identify a realistic economic role for the sector.

For many people, this lack of data represents a huge informational asymmetry, including between the government, investors and companies and exporters that operate in Sierra Leone. Poor data mean that institutions have a difficult time making decisions regarding the allocation and usage of natural resources throughout the post-conflict period, including licensing and planning decisions, with the result that sustainable extraction has been nearly impossible.

The war also destroyed many official records, as a result of displacement and from damage sustained during the fighting. This has led to a trend of land grabbing, particularly in the Western Area, with people building first and second homes on land that is in many cases dubiously claimed. The building has come at enormous cost to the local water and forest systems, as well as the integrity of ecosystems vital for the tourism industry. In many cases, records for this and other sectors are difficult or impossible to locate, exacerbating the problem.

3. Governance capacity

The overall capacity for environmental management and resource planning was mediocre even before the war, but the conflict overwhelmed what effective elements existed. With a split form of land tenure and management between the central government and the Western Area and the paramount chiefs system in the provinces, resource governance has been a complicated process ever since independence. The conflict, however, left the central government and its ministries with little capacity to adequately provide environmental governance, natural resources management and planning.



Non-rehabilitated industrial diamond pit in Sierra Leone. In the post-war period, the government has not been able to address most environmental problems

The conflict also reinforced the traditional concentration of resource management authority in Freetown, by devastating local and provincial capacities. Today, while there is strong public outcry for better environmental administration and willingness among the remaining technical civil servants, the budget, mandate, legal framework, field offices and training are simply not in place to support this aspiration. And, because so little priority was given to natural resource management and planning during the conflict and post-conflict periods, the path towards good governance begins at a very low starting point, in terms of capacity, financial resources and political legitimacy.

4. Politicization

A final institutional impact is that natural resources, especially with regard to the mining sector and other export-oriented extractives, have taken on a highly politicized role in society as a result of the conflict. Built on a history of “easy minerals,” and a “get rich quick” mentality, natural resources have grown to represent wealth, power and prestige. Because of the institutional mythology that has grown around the diamond sector, many parts of

the sector have massive political and vested interests that effectively paralyse good governance.

For most of the public, the conflict and post-conflict periods have been marked by unmet and unrealistic expectations that natural resources, particularly in the mineral and commercial agriculture sectors, could provide rapid poverty reduction. Thus, the sector has easily become a focal point for anger and exasperation as well as a tool for political manoeuvring both within and outside the country.

This has had an impact on the regulatory framework, as the goals of rapid extraction and a move towards large formalized operations has been the focus, rather than a serious evaluation of the long-term social and environmental sustainability of the sector, and the distribution of benefits.

“Everyone is familiar with someone who knows someone that found a big stone and is now driving a big car... but it is worse than gambling.”

Former diamond digger in Kono District



Artisanal diamond mining, which employs between 150,000 and 250,000 people in Sierra Leone, is widely regarded to be in a slow decline

Risks to the peacebuilding process

Introduction

While significant progress towards stability has been achieved in Sierra Leone since the 1999 Lomé Peace Accord, there remain serious risks to peace and development from the societal cleavages and inequalities that have yet to be resolved. Conventional indicators of peace consolidation, such as peaceful elections and transfer of power, along with the disappearance of the RUF as a political or social force, are indicative of the transition phase of peacebuilding, as discussed in Chapter 2. Sierra Leone is in the middle of the consolidation phase of peacebuilding, where development priorities begin to take over from issues of security and disarmament. The risks to the peace process during the consolidation phase are quite different from risks during stabilization or transition, and the types of interventions and projects that are possible to successfully complete are much wider in scope.

Despite the many positive signs of a country recovering and rebuilding after a decade of war, Sierra

Leone remains a fragile state, with many conditions in the environment and natural resources sector that resemble, or are worse than, the circumstances that led to the fighting.

These risks can undermine a fragile peace by directly or indirectly generating conditions that amplify or induce antagonism, tension or conflict, or that undermine or slow down already ongoing peacebuilding efforts. Some of the risks are general, cross-cutting the different environmental sectors, policies and institutions. Other risks are sectoral in that they are largely confined in scope to specific sectors (i.e. land cover such as forest and marsh; land use such as agriculture and settlement; water; mines and minerals; fisheries) or sets of policies or institutions. These general and sectoral risks related to the environment and natural resources are dynamic and subject to change, and should be viewed as so closely connected to social, political or economic factors that they may disrupt, amplify or enable.



Sierra Leone has a massive youth population, with many children still growing up in poverty. If sustainable livelihoods cannot be generated as these children grow into adults, the risks for a relapse of conflict are significant in the medium to long term



Young people sell imported consumer products in Freetown for little profit. Many uneducated and unskilled youth lack sustainable livelihood options and look to declining sectors and unsustainable approaches to make ends meet

General risks to peace consolidation and development

Many of the general risks to the peace process are in line with the type of societal cleavages that provoked the civil war. Volatile regional dynamics, insufficient governance, frequent corruption, alienated and underemployed youth and the daily challenge of meeting basic needs are all aggravated by both a declining resource base and the virtually universal perception that the benefits of the nation's natural resource endowment are almost entirely absorbed by foreign investors and national elites.

Therefore, Sierra Leone remains in a vulnerable situation, though prospects for a sustained peace are better than they once were. As the population continues to move beyond the initial peace dividends, and the expectations for peaceful development have in many cases not yet been met, risks of instability could re-emerge along familiar fault lines. This could be manifested in small-scale insecurity or violence, such as the events of December 2007 in Kono or March 2008 in Freetown, but could also possibly escalate into something larger

and more dangerous if volatile conditions persist. Instability could also manifest in general hostility to the government, development projects, efforts by civil society and NGOs and negative reactions to the political process.

1. Unrealistic expectations

Within the population and government of Sierra Leone, there is a tendency towards unrealistically high expectations among the as to the productive potential of the nation's natural resources, especially with regard to the agricultural and mineral sectors. It is common for post-conflict societies to have this type of expectation for rapid, equitable and visible development progress in the aftermath of war. The rebuilding of government institutions, intervention by the international community and new policy initiatives aimed at economic growth and poverty alleviation tend to encourage a sense of genuine optimism. Expectations can be higher in countries with an exploitable natural resource base that can serve to "jump-start" economic growth, provide employment and bring in much needed government revenue. In Sierra Leone, however, the expectations have been inflated to near mythic proportions, in part because of the role of natural resources in conflict.



The livelihood options of mining communities are particularly volatile, as they are almost entirely based on natural resources

Furthermore, an interrelated set of problems is holding the agricultural sector back.

Crop production using shifting cultivation techniques is currently focused on hillside subsistence production, with some additional sections of inter-valley swamps for rice production. Urban dwellers obtain most of their nutrition from imported rice, along with coastal smoked fish. Societal and government expectation is that the rural agricultural sector can be fairly quickly transformed for high-intensity and commercialized production, including large increases in exportation.

The Japan International Cooperation Agency (JICA), for example, has funded a series of pilot projects based on inexpensive and highly replicable interventions that have generated productivity gains of around 50 percent. They regard a 50 percent increase in output as a realistic goal, but the Government of Sierra Leone regards this as far too modest: it seeks gains in the order of 400 percent.

A similar account is applicable to the mineral sector, where benefits from both artisanal and industrial mines have failed to meet the inflated expectations of adjacent communities and the government. While the sector is responsible for supporting many Sierra Leoneans, it has failed to bring consistent growth in key development areas. In the end, most of the value of mineral resources that are extracted in Sierra Leone is realized by constituents of the production chain that are outside of the communities that ostensibly own and control the resources, including the national and local government.

“Country rice” as domestically grown rice is known, is often difficult to find in the cities of Sierra Leone. Indeed, though rice production has improved significantly since the restoration of peace, only 50 percent–60 percent of the country is fed by local rice.

Increasing production is only one part of the issue. Sierra Leone today exports rice to neighbouring Guinea and Liberia, because of a severe shortage in processing capacity to turn raw rice into commercial rice.

Therefore, with a minimal amount of value-added, the rural farmers who do not have access to processing facilities stand to gain little from increases in productivity.

Artisanal diamond mining, which employs between 150,000 and 250,000 people and has made up the majority of the sector for decades, is widely regarded to be in a slow decline. Large-scale operations are required to reach the depths at which diamonds are now being found. But even here, the sector generates no more than 10 percent of the country’s GDP and the opportunities for employment are quite limited – a reality that mechanization would only extend. The highly mechanized diamond mine at Koidu, for example, employs only 300 people. Unrealistic expectations can quickly create a sense of unease among the population expecting immediate development payoffs, and feed a perception of an underperforming or corrupt political system. As a result, there is a major risk for conflict and instability if these perceptions are not addressed.

2. Fragmented and ineffective governance and management of natural resources

A fragmented system of environmental and natural resource management in Sierra Leone is another important impediment to sustainable development and peacebuilding. As discussed in Chapter 3, the fragmentation is in part due to historically rooted principles regarding responsibility for the control and management of land and natural resources. For example, while the custodian of the land is traditionally the paramount chief, regulatory and policy authority in the environment and natural resources sector originates with the central government. At the same time, land-use decisions in the Western Area are under a completely separate, British-style freehold system.

This ambiguity over channels of authority and control creates confusion and uncertainty when it comes to decisions about land use, environmental protection or the exploitation of natural resources. This also increases the likelihood that a chief or chiefdom's goals run counter to national priorities, producing ineffective, inefficient and contentious environmental and natural resource management outcomes.

This fragmentation is compounded by the introduction in 2004 of local government councils that have been given partial responsibility for addressing environmental and natural resources issues at the local level, but enjoy little, if any, capacity, financial support or consultative role. As one district councillor noted, "I may return to Freetown and find another job. I have no resources and I am losing the trust of the people here. My own people; they do not understand how I can have the responsibility but still not get anything done. I am becoming worried about my own welfare." The result of the fragmentation between these many entities is not only poor coordination and cooperation in the sector, but also tension and distrust that hinders forward progress.

3. Lack of transparency and accountability, including corruption

Sierra Leone continues to suffer from a widespread and uncompromising perception of corruption and collusion in the natural resources sector based on the pace of economic development and the lack of concrete benefits in communities endowed with valuable resources.



Local leaders work to attract the attention of the government and the international community for assistance in restarting the economy, in most cases requesting invest in natural resource sectors like agriculture, sustainable forestry or eco-tourism

This stems in large part from the fact that the benefits from the exploitation of natural resources have been slow in reaching the people. Community development funds that are set aside from land rents, for example, have often been slow to disburse funds and are difficult for local communities to access. In some cases, paramount chiefs and district councillors⁹⁵ have not passed on community development project money to the projects, instead keeping some or all of the funds.⁹⁶

Without experiencing tangible benefits or services, the perception of severe mismanagement and corruption within government remains high. This also reinforces the enduring perception that central government and local authorities, especially the paramount chiefs, collude with business interests in backrooms to exploit natural resources without consultation or consideration of the people's needs. This collusion is widely seen not only as unethical, but also illegal, as government officials and chiefs are simply the custodians of the land that is the property of the communities that inhabit it. These perceptions of injustice foster deep tensions that have the potential to be "flashpoints" for future conflict.

Ironically, communities situated in close proximity to valuable natural resources are often assumed by outsiders to be amply compensated. This leads to another source of tension as these communities feel that because of this assumption they are often excluded from other services and benefits distributed by the central government, NGOs and other members of the international community. As one community representative stated, "people assume because we are in a mining chiefdom that we have good schools, roads and hospitals. That we do not need any help. But look – this is not true. We have more problems because of the mine."

A further risk derives from the fact that Sierra Leone continues to lack transparency and accountability in resource allocation and land-use decisions. Without robust systems in place to ensure transparency and accountability, and with "conflicts of interest" endemic in the resource sector and wide discretion available to paramount chiefs and government officials, corruption can and does become the norm. As a result, the companies that are attracted to do business are those that thrive under conditions of poor transparency, corruption, non-competitive bidding and so on. Companies that attempt to

operate in an "above-board" fashion are quickly driven out. Indeed, interviews with UN, civil society and industry officials indicated that hostility between mining companies has occurred over concession disputes, with the aim of driving out newcomers through threats and intimidation.

Not only does a lack of transparency and accountability feed perceptions of collusion and corruption, it also allows natural resources revenues to be channelled into illegal and illicit activities, such as drugs or smuggling.

4. Lack of sector progress reflects overall stalled development

An important component of post-conflict recovery and reconstruction is building and maintaining state legitimacy, including strengthening the confidence of citizens. Seven years after the departure of peacekeeping forces from Sierra Leone, development progress has been slow or non-existent for most people in Sierra Leone. The lack of tangible progress in the natural resources sector – a visible and vital sector – is representative of the overall situation that has made Sierra Leone's Human Development Index rating the lowest in the world.

Large portions of Sierra Leone's population lack the ability to acquire basic amenities linked to the environment and natural resources such as food, water, shelter and waste management. Not only does this problem create severe hardship for people, it also raises questions about the government's ability to provide public services to a growing population. Because livelihoods are so tenuously balanced on an overstretched resource base, communities remain vulnerable to moderate disturbances such as drought, disease or disaster. Climate change could intensify this vulnerability, creating a cycle of crisis response that is costly, dispiriting and hard to exit. The lack of basic amenities combined with low resource resilience means that much of the population is continuously at risk, which clearly undermines peacebuilding and development.

At the same time, Sierra Leone's growing population has little access to sustainable livelihoods in the natural resources sector. Many uneducated and unskilled youth lack employment and livelihood opportunities, or are engaged in small-scale commerce in larger cities and as "diggers" in alluvial



A large portion of Sierra Leone's human capacity, whether blacksmithing, surveying or other skills, is now held by elders. Many worry about the ability of the next generation, which was affected by conflict



Streets gangs in Freetown often use self-styled names and tags that mimic those in the US and UK. With increased drug and weapons trafficking and illegal trade of natural resources in Sierra Leone, these gangs are a growing risk to the peace

diamond mining areas. As artisanal mining continues to decrease in productivity and cities become crowded with youth selling identical products, alternative livelihoods must become available to avoid the risks posed by large numbers of disenfranchised young people. Economic desperation is generally regarded as an important factor that drove young people towards rebellion in the 1990s.

The lack of livelihood opportunities raises the concern that these young people will increasingly turn to environmentally unsustainable or destructive practices, such as illegal timber harvesting, or more nefarious activities such as drug smuggling.

5. Regional dimensions

Environmental and natural resources issues in Sierra Leone also have significant regional dimensions. As is well known, the conflict in Sierra Leone was part of a larger regional war fuelled by the cross-border trade of diamonds and the export of other natural resources such as timber. Instability continues to plague Guinea and Guinea-Bissau, encouraging the movement of smuggled natural resources and arms.

In times of instability, natural resources can also be exploited across international borders. For example, timber was increasingly exploited in Sierra Leone's border regions after Côte d'Ivoire and Guinea instituted timber bans as companies simply relocated to take advantage of Sierra Leone's unmanaged forest areas.⁹⁷

Regional cooperation is needed to enforce laws and combat the illegal trade of resources. In fact, anecdotal evidence indicates robust diamond and gold smuggling traffic on the border, with money laundering the likely aim. Without a coordinated regional approach, Sierra Leone not only loses revenue to the informal sector, but destabilizing activities also increase along the border such as drugs, money laundering and the movement of arms. Using the lessons learned and positive example of the Gola Trans-boundary Peace Park between Sierra Leone and Liberia, conserving forest reserves and protecting biodiversity is an excellent way to improve coordination and cooperation between countries.

Sectoral risks to peace consolidation and development

1. Forest resources

Forest areas are vital to sustainable livelihoods in Sierra Leone as they provide common materials for construction, are used by 95 percent of the population for firewood and charcoal, and contribute to small-scale commerce in rural and urban areas. Forests also play a role in the cultivation of cash crops such as kola nuts, coffee and cocoa and have significant cultural functions. In addition, forests play an important role in the country's agricultural production since they are burned for cultivation using slash-and-burn practices.

As a major livelihood resource, as well as a source of export income, the poor management of forests and resulting scarcity is a major risk for peace in the medium and long term. At the local level, direct conflict over key natural resources as a result of scarcity is a concern. In a national context, increased resource scarcity will contribute to overall acute poverty, reductions in tax revenue, increased inequality and additional stress of vulnerable populations, such as youth and women.

Water and land resources in Sierra Leone are extremely reliant on forest cover. Trees and shrubs provide erosion control for hillsides and slopes, while tall, primary trees are vital to the water system. With the loss of forest cover, both ground and surface water resources have been depleted in urban areas like the Western Area and in the urban regions of Kenema and Bo.

While accurate baseline data are not available, it appears that as population rises in tandem with increasing demand for agricultural land, deforestation is rapidly increasing. There are also significant reports of illegal logging by localized groups using power saws, as well as by large foreign companies. The loss of livelihoods connected to forests, combined with changes in ecological services, can affect populations and have a negative effect on social stability and peacebuilding.

Forests are also a refuge. During the war, entire communities escaped to the forests, sometimes living there for years. Today, many of these same communities have become dependent on forest resources to survive, including protected forests where people plant, poach, dig rock quarries and cut down timber. As population pressures mount, the lure of protected areas will only grow, putting a range of ecosystem services in jeopardy.



Forest resources are regularly cut for charcoal production, the main energy source for families in Sierra Leone



Fisheries is an important sector of employment for Sierra Leone's young men, who harvest the fish, and women, who prepare them and sell them at market. Scarcity in this sector due to overexploitation could pose a risk to peace and development

2. Agriculture

Sierra Leone's dependence on slash-and-burn practices coupled with rising population density and lack of available land, make traditional methods of agriculture unsustainable in the long term, as within this system, land needs to lie fallow for some seven years.

The pressure to create more arable lands is insurmountable, and will have increasingly negative environmental impacts on forest areas, hillsides and wetlands. Currently, forests constitute only about 4 percent of land cover – in a country that was once almost completely forested. Not only will the increase of slash-and-burn lead to increased deforestation, but it will also impact water availability. At the same time, fisheries are being overexploited, sometimes illegally by foreign vessels as well as by domestic fishing communities. As an important sector of employment for young men, who harvest the fish in boats, and women, who prepare the fish and sell them in markets, scarcity in the sector could have many negative impacts. If efficiency

and sustainability are not better developed in the agricultural and fisheries sector significant risks to peace and development are possible.

As agriculture sustains the majority of Sierra Leone's population, unsustainable practices in the sector will have a dramatic long-term influence on the country. As is the case in other parts of the continent, fertile land is one of the most valuable natural resources, with foreign investors interested in commodity cropping and local communities highly dependent on annual harvest. For the peace process, the concern is that already vulnerable rural communities are especially fragile – disturbances such as poor rainfall or local instability, along with overall increases in population and reduction in groundwater resources, could exacerbate general trends towards instability. Poor agricultural output is an important driver of urban migration and general poverty, especially in post-conflict settings. Particularly vulnerable are youth, who become more prone to recruitment into criminal gangs, radical religious or political groups or rebel organizations.



Garbage dump in Freetown. Extremely poor waste management in urban and rural areas alike have threatened groundwater systems throughout Sierra Leone

3. Water resources

Water quality and quantity remain a genuine concern for Sierra Leone and its population. Damage to water and waste systems during the conflict greatly increased the demand on remaining systems, and continued deforestation of water catchments endangers the recharge of groundwater resources. The provision of clean water to the population is one of the foremost measures of whether a country can provide for its citizens. While there is a possibility that localized shortages may create flashpoints for tension, there is an even greater likelihood that inadequate and large-scale shortages could create a backlash against government and become a flashpoint for instability. Poor or non-existent systems for managing growing quantities of solid and liquid waste have exacerbated the situation, particularly in urban areas.

Two areas seem to be under particular stress – the watersheds serving Freetown and Kenema. In the first case, rapid unplanned urban growth has deforested the hillsides surrounding the capital and put the entire watershed at risk. In addition, inefficient water diversion systems to service upscale neighbourhoods have sprung up, stressing public resources. In Kenema, deforestation linked to shifting cultivation, settlement and illegal logging is also affecting water quality and quantity. Forests provide a range of services such as protecting water from excessive nutrients, filtering

water and protecting soil from erosion. Both Kenema and Freetown have booming populations and suffer from increasing demand and higher pollution and waste loads into water systems.

There is also anecdotal evidence that the onset of the rainy season is less reliable than in the past. At the same time, increased food and water security vulnerability have meant that capacity to adjust to irregular precipitation is lower than previously. With the added factor of increased population pressure, wells are running dry earlier in the year than previously and taking longer to recharge. People are obliged to line up for one to two days to fill pails from ailing wells, pulling children from schools or reducing productivity in other domains. In addition, some schools are not able to provide drinking water to students. Concerns are also mounting that global as well as regional climate change impacts on precipitation may exacerbate the problem, and indeed may already be doing so.

4. Mineral resources

While the mining sector plays the most immediate and visible role in the development of the country, it also remains deeply problematic. While reforms have been promised, the sector has been criticized for its perceived insufficiency, lack of equitable benefit sharing, low transparency and role in fuelling and

sustaining the civil war. Expectations still run high, though there is growing doubt as to how much the mining sector can actually deliver.

For example, small-scale diamond mining is reported to be in irreversible decline with remaining deposits currently being exploited. This unsteadiness has served to only further accentuate the boom and bust gambler spirit that many young men take to their work in the sector, with severe social impacts. This decline in accessible alluvial deposits, combined with a national policy of attracting large industrial operations, has led to more emphasis on large-scale mining. However, as the industrial sector is being emphasized, there is a palpable sense of mistreatment, negligence and corruption in adjacent communities.

One area of concern is that the mining sector, for a variety of reasons including the collapse of a dredge at Sierra Rutile, has actually been shedding jobs since 2008. This further reinforces the sense that the benefits of the minerals sector are being drained away from the communities in which the deposits are located. Community members frequently argue that the gap between the value of the ore or diamonds and the infrastructure and employment received by the community is too great to be supported any longer.

Indeed, the perception has been aired among some in mining communities that the only way to publicize their grievances and trigger a response from the government and the international community is through public protest and violence. This view was bolstered by the December 2007 riots in Kono when, following the violence, community grievances received the attention of the government and international community and resulted in far-reaching proposals for policy change and “white papers” prepared through extensive consultation.

Community members expressed a high level of satisfaction with the content of the reports and recommendations, although considerably less with the promised implementation phase. The idea that violence – because it cannot be ignored – was successful in advancing the interests of the community was expressed in multiple locations, especially by youth, in places far removed from Kono. The likelihood that a small event could trigger a spiral of violence in communities near major mineral resources is difficult to estimate, although it seems disturbingly high.

5. Energy

Limited information is currently available with respect to Sierra Leone’s offshore hydrocarbon reserves, as discussed in Chapter 3. Thus far, the autumn 2009 discovery of the “Venus” deepwater oil reserves has proven only that oil exist in Sierra Leonean waters, with little detail on the quantity represented. In particular, since the Sierra Leonean blocks are suspected to be the western edge of the hydrocarbon basin, it could be that only minor production will be undertaken on Sierra Leonean concessions.

Nonetheless, if these offshore reserves are exploited in the future, they will constitute both opportunities and risks for development as well as peace and security in Sierra Leone. The management of this natural resource by involved stakeholders on all levels will constitute a major challenge for the country and be a key issue of focus.

The principal current risk is that a rapid and non-transparent process may follow the offshore discovery. Much like other high-value resources in the country, processes are not in place to ensure that the benefits from the resource will reach the country and its inhabitants as a whole, rather than a few private interests. As such, a highly consultative process for the issuing of concessions and the distribution of benefits should be undertaken.



Miners in Kono remember the violence of December 2007. The riots were perceived by many as successful in advancing the community’s interests

Opportunities for peacebuilding

Introduction

UNEP's assessment also identified important opportunities for peacebuilding and development linked to the environment and natural resources in Sierra Leone. These opportunities offer concrete pathways and processes by which the environment and natural resources can contribute to the consolidation of peace by reducing risk, supporting equitable economic development, creating sustainable livelihoods and enabling effective and efficient management of the natural resource base.

Environment and natural resources contribute to peacebuilding in three main ways: i. supporting economic recovery, ii. developing sustainable livelihoods, and iii. Contributing to dialogue, confidence-building and cooperation (see Figure 14).

Opportunities, like risks, are closely linked to other social, economic and political factors as part of the overall development and stabilization effort. Indeed, these three pathways of natural resources to peace consolidation are directly connected to the development goals of the Agenda for Change as well as the Peacebuilding Cooperation Framework of 2007, which are the foundational documents for peace and development in Sierra Leone for the coming years.



The role of women, who play a major role in natural resource management in rural areas, will be extremely important in the ongoing peacebuilding process

Figure 14. Peacebuilding opportunities from environment and natural resources

1. Supporting economic recovery: In a post-conflict context, kick-starting the national economy is key for poverty reduction and peacebuilding. In many cases, high-value natural resources are the fuel for the initial period of economic recovery. If well managed, they can improve incomes and help stabilize the economy.
2. Developing sustainable livelihoods: Beyond simply stimulating the growth or recuperation of GDP figures, natural resources can contribute to a sustainable peace through sustainable livelihoods. These livelihoods, which scale down coping mechanisms and provide opportunities for demobilized ex-combatants, must be well planned and help to reduce vulnerability to stressors, whether environmental, economic or political.
3. Contributing to dialogue, confidence-building and cooperation: As part of the reconciliation and recovery process, environment and natural resources can provide opportunities for divided communities to make joint decisions for a common future. In addition, the provision of basic services, such as water and energy, is vital to increasing public confidence in the state's ability to administer and provide, something that is usually lacking in post-conflict settings.

Significant opportunities can be highlighted using the four major pillars of peacebuilding as defined by the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD) to organize the contributions of the environment and natural resources sector. Figure 15 summarizes these connections by mapping the three main types of peacebuilding contributions from natural resources to the four pillars of peace and development (socio-economic development, good governance, reform of justice and security institutions), and culture of justice, truth and reconciliation).

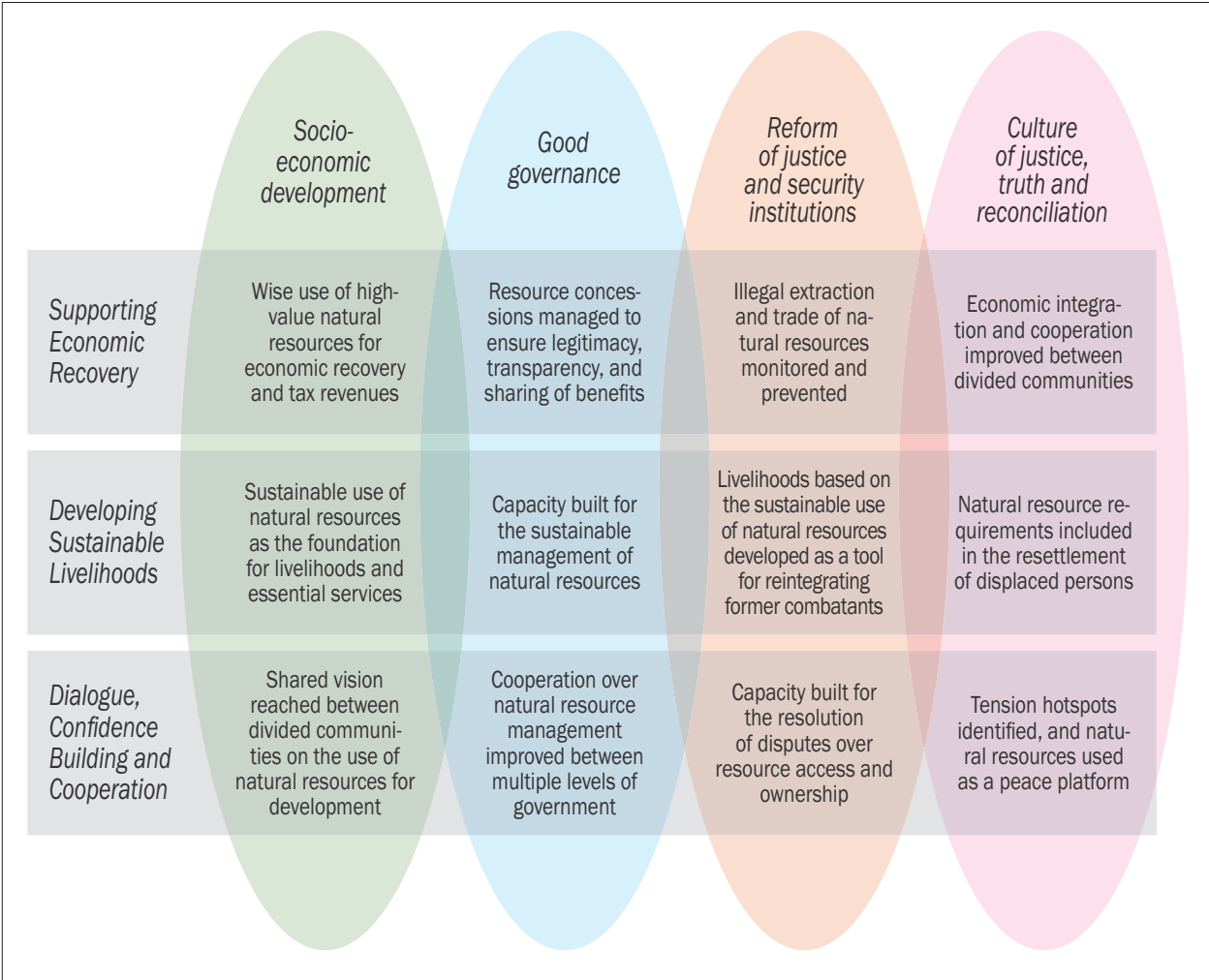
Sustainable, conflict-sensitive natural resource management has to be seen by all sides as fair, transparent and participatory in order to take root in a post-conflict setting. Communities often cannot articulate their best interests in a particular bargaining environment and tend, therefore, to

express priorities in generic terms – for example, roads, water, energy, jobs, schools, clinics – that trigger predictable responses from those who are empowered.

Thus, taking advantage of the opportunities that environment and natural resources provide for peacebuilding means finding ways to explain and level the playing field, and empower and support community development.

As discussed in Chapter 5, Sierra Leone remains in the consolidation phase of the peacebuilding process, where the most immediate risks of conflict relapse have largely disappeared, but real development progress and the mitigation of long term conflict risks is still in the future. The peacebuilding and development opportunities that are discussed in the following chapter are tailored to fit within this period of peace consolidation, first at a general level and then per sector.

Figure 15. Natural resources play a key role in peacebuilding



Source: From conflict to peacebuilding – The role of natural resources and the environment, UNEP, 2009.

General opportunities for peacebuilding and development

1. Capacity-building in key institutions

The new institutional framework for the environment and natural resources created by the Environmental Protection Agency Act of 2008 offers unique opportunities to build capacity and institutional knowledge in the new SLEPA and partner agencies such as the DoF and the Ministry of Mines and Mineral Resources. As discussed in Chapter 5, the risks from a poorly coordinated set of institutions are many, ranging from central to local issues. The transition and restructuring period that the 2008 Act has set in motion is the ideal time for capacity-building and institutional harmonization to be well developed, before common practices regarding institutional turf, cooperation or mandates are solidified.

At the same time, the reforms that have been ongoing in the minerals sector offer a parallel opportunity for capacity-building and the coordination of institutional roles regarding mines and minerals. In particular, the implementation of the forthcoming changes to the Mines and Minerals Act as well as the renegotiations that are ongoing between the Government of Sierra Leone and mining concession holders, provide two entry points for capacity-building and reform. Indeed, improvements to the EIA process and clarity regarding institutional mandates and sustainability clauses as part of the revised mining contracts are both greatly needed, and the timing is right.

“A strong [SL]EPA is the key to improving the environment...which indeed is vital to development and stability in Sierra Leone.”

Senior UN official in Freetown

Finally, momentum on reforms in the forest sector provides an opening to assist the DoF in the Ministry of Agriculture in building the forestry department's capacity and designing a new and updated forest policy.

2. Baseline information and monitoring

An important opportunity is emerging to collect baseline information on the forest, water, mineral, agricultural and fisheries sectors. The current data set is fragmented, out of date and does not inform the policy process in any systematic way. Not only will this information assist the government in managing resources and implementing policy, but it will also start the process of narrowing the gap in expectations that exists within the population and government.

“How am I supposed to manage my forests when I do not know what we have?”

Head of the Division of Forestry,
Ministry of Agriculture

Perhaps the most pressing opportunity for Sierra Leone in this regard is to engage more effectively in the climate change debate that continues to gain momentum around the world. Sierra Leone is foreseen to be a country that will be moderately impacted by climate change, and could play a small but important role in mitigation efforts. Carbon credits for reforestation through improved forest management as part of a strategy to reduce slash-and-burn agriculture are a great opportunity for Sierra Leoneans to revitalize their environment and directly benefit from its value. However, without timely, reliable baseline data as well as the ability to ensure consistent and effective monitoring, this opportunity to be at the forefront will be lost.

When it comes to land-use planning, water resource allocation from urbanization, population growth and other demographic changes, good quality information on water and land resources is and will continue to be urgently needed.

Furthermore, in the mining sector, information asymmetry between private interests – internal and external – and the government has been a feature of almost all negotiations for mining concession deals, tariffs, licenses and so forth. When protected private interests are the sole holder of information regarding the nature, value, size and quality of

mineral resource deposits in the country, it is easy for the benefits to leave Sierra Leone. Transparent and equitable information in this regard is a great opportunity for capacity-building and economic improvement.

In addition to the collection of baseline data and conducting monitoring in the sectors mentioned above, it is equally important that the information be widely distributed and publicly available. A key tool for confidence-building and accountability, good governance demands that stakeholders, whether large or small, be well informed.

3. Community-based natural resource management (CBNRM)

In the current fragmentation of governance of environment and natural resources in Sierra Leone, there is a unique opportunity for community-led management. Building on the momentum of the local government devolution of recent years, CBNRM would allow good management practices and techniques to be put to use even while national governance capacities are being further developed. Commonly, CBNRM techniques include the installation of renewable energy technology, meetings with



Reliable processes for environmental impact assessments for mining facilities are still needed



Monitoring the impacts of environmental change is nearly impossible without strong baseline data

communities to discuss and explain new laws and regulations, and support to water revitalization and reforestation projects.

In addition, since communities are jointly reliant on resources such as water and forests, such resources can bring communities together to cooperate on issues of planning, allocation and development. Joint management also provides opportunities to inform government and others about regional or area-specific settings.

CBNRM is a pragmatic strategy for decentralization, something that has been a priority in Sierra Leone throughout the decade. By equipping communities with best practices and resources to put sustainable techniques to use, this type of management system can help to strengthen rural livelihoods and bridge the gap between traditional paramount chief-led management and governance from SLEPA and other Freetown agencies. As part of the overall process of harmonization and reform, CBNRM is a way to ease in new rules and paradigms such as new regulations on forest or land use, water allocation or benefits-sharing, while protecting the interests of multiple stakeholders.

4. Participation and consultation

One of the most pronounced grievances in communities in relation to the environment and natural

resources is a lack of genuine participation and consultation. Communities often see decisions made in Freetown or by local authorities as poorly designed, inequitable and not well planned to meet local needs, in some cases bolstering the impression of collusion and corruption. Therefore, the consultative process during decision-making for environmental and natural resource management issues is an opportunity to build confidence and trust between authorities and local communities, simply by inclusion in the process. The inclusion of rural women, who are often informally responsible for land management, is particularly important. Overall, improved trust in public functions is one of the most fundamental parts of the peacebuilding process.

While local communities, district leaders, paramount chiefs, city mayors and other interested public parties outside Freetown often do not have specific technical expertise on natural resource extraction or governance, their participation in the consultation process provides an important level of inclusion. It is a way for local issues to be brought to the table, for fears to be allayed and indigenous knowledge integrated into the policy process, as good governance is characterized by policies and laws that are well adapted to the communities they are intended to serve. In addition, the process of consultation automatically includes a level of notification so that rural communities and leaders are well informed about the issues of concern.



Rural communities need assistance and support for sustainable development through community-based natural resource management



Embracing inter-valley swamp agriculture and improving the efficiency of subsistence and commercial farming would provide rural youth with more steady employment, thereby shoring up peace and development in Sierra Leone

At the same time, participation and consultation is an opportunity for local-level capacity-building as well as societal confidence-building, and issues of environment and natural resources are often a natural first easy step. As people are included in the process, they become better informed about the issues, helping to remove barriers to participation. Also, when people feel that their opinions and concerns matter on livelihood issues such as water, land, minerals and forests, it becomes much easier to achieve progress on other issues such as decentralization, tax revenues and elections.

Finally, lack of participation is often used as grounds for criticism of the policies and decisions that come from authorities. This criticism is sometimes levelled to insulate leaders and communities from the impacts of the decisions, for example, blaming the poor state of roads or water systems on the government, international donors, political bosses and so forth. Thus, when local communities play an important part in the decision-making process, they then take a stake in the results that ensue.

5. Higher capacity for local government

Many district and city councils, while mandated to administer a significant portion of local resource management planning, in concert with the local

paramount chief(s), do not have the resources or political support from Freetown to effectively do their jobs. Higher capacity to apply resource management, particularly through consultative planning, is a way that district and city councils can more clearly define their role as a convener of interests, bringing the land custodians, community people and central authorities together to plan a sustainable development future.

Sectoral opportunities for peacebuilding and development

1. Agriculture

Improving rural livelihoods has long been a priority for Sierra Leone's development plans, focusing in particular, on the import, export and processing of staple crops and commercial crops, which have been a major portion of economic decision-making in the country.

Agriculture is noticeably inefficient throughout Sierra Leone because the population is too large for shifting cultivation. Some land is being aggregated into large bio-fuel plantations, the value of which will depend in large measure on how benefits are shared. Agricultural output can be dramatically

increased through intensification processes, but these typically require land consolidation, irrigation systems, using fertilizers and seed selection, which need to be carefully studied. In the short-term, however, the pilot projects mentioned above have demonstrated that substantial gains in productivity are possible under existing conditions with low-cost interventions that are immediately available.

The major opportunity for agriculture regarding peace and development is for a general move away from slash-and-burn, embracing inter-valley swamps instead and improving the efficiency of subsistence and commercial farming, with a focus on providing rural youth with more steady employment.

The fisheries sector in Sierra Leone is in disarray and the establishment of the new SLEPA provides an opportunity for an immediate assessment of the potential of this resource. Perhaps more importantly, it was announced in 2009 that the European Union will lift its nine-year ban on fish imports from the country in the near future, which represents a market that was previously worth more than USD 50 million for Sierra Leonean exports.⁹⁸ The opportunities for tourism in this sector have also been under-utilized so far, given the chartered fishing that is possible, and available even today.

2. Forest resources

The April 2009-initiative by the presidents of Liberia and Sierra Leone to define the transboundary Gola Forest as a peace park provides an opportunity to bring further attention to what one local observer described as “the rape of the last remnants of Sierra Leone’s forest cover.” Similar efforts in the national parks in the north, namely Kilimi and Outamaba Parks, which share an international border with Guinea, could be extremely positive for local and regional confidence-building and sustainability.

“When I was young, the forests were twice the size. Now people are building everywhere, without anyone to say no.”

Advocate from local environmental NGO
in the Western Peninsula



Rapid urbanization, including large new homes for the wealthy and the international community, has led to massive deforestation in the Western Area Peninsula Forest Reserve

However, locals have watched in horror as forest cover around Freetown has been decimated in a building spree that has been described by civil society groups as “part reconstruction and part land grab”. During the 11 years of civil war, many official records were lost and many families were displaced. In this context, many people believe that property claims will be most convincing if a person has built on the land or is able to convince an official to providing a land title; hence the inevitable flurry of post-conflict settlement and reconstruction is thus being amplified by strategies for acquiring choice property. The flurry of building and resettlement in Freetown is only expected to accelerate, there is an important opportunity for collaborative and effective governance to be exerted by the various authorities, by bringing together the mandates of the Ministry of Lands, Country Planning and Environment, the Office of the Mayor of Freetown, the DoF in the Ministry of Agriculture and the holders of records.

Elsewhere in the country, inefficient slash-and-burn agriculture and illegal timbering are providing small but immediate benefits, while putting at risk an ecosystem that, properly managed, could support livelihoods and provide irreplaceable services in water, soil and climate management.

3. Water resources

Water is another area of concern, as described in Chapter 5. The primary opportunity to be embraced is for SLEPA to aggressively engage in the sector to ensure sustainability and equity of water allocation decisions around the country.

In this context, the capacity of SLEPA to assess, monitor and protect the country's fragile water supply should be a priority. In particular, the watersheds serving Freetown and Kenema merit immediate attention. JICA has been rebuilding water systems destroyed during the war, a process that needs to be completed. In addition, there has been some experimentation with introducing tariffs to cover the costs of making drinking water easily accessible to communities.

The goal now is to scale up the pilot projects to determine whether such a system is sustainable in larger communities. Reliable access to drinking water is a highly visible public service that confers numerous peace and development benefits, whereas water scarcity can be a great burden on public health, a focal point for tension and conflict and a daily reinforcement of feelings of distrust and exclusion.

As a tool for peace and confidence-building, water is one of the most effective platforms that have been utilized to date. This approach should be embraced in Sierra Leone as well, using access

to groundwater and surface water resources for shared management between communities, and collaboration between authorities, chiefs, local government and communities themselves.

"Water in the cities is always hard to come by for the last two months of the dry season every year.

But the rains have been late twice in the last three years, which has made it much worse, for farms too."

Farmer in Kenema District



Dry well at a school. Water scarcity is a great burden on public health and reinforces feelings of distrust and exclusion among rural communities



Surface water is not safe to drink in most parts of Sierra Leone. Reliable access to drinking water is a highly visible public service that confers multiple peace and development benefits

4. Mineral resources

The mines and mineral sector has high symbolic value in Sierra Leone, meaning that improvements in transparency, accountability and good governance reverberate widely and positively through the country. Good faith and open efforts to negotiate concessionary contracts with mining companies through the consultation of local communities may go a long way towards bridging potential divides, restoring faith in government and reducing conflict in mining areas. The ongoing work by the government, specifically by the President's Strategy and Policy Unit, with support from UNDP and UNEP, is an important opportunity to put this into practice.

Indeed, as part of the changes that are taking place in the mining sector, it is imperative to seize the opportunity to strengthen environmental

standards for mines, and work more forcefully for equitable benefits-sharing. Both will have important positive impacts on peace and development in the country. At the same time, continuing to manage expectations regarding the future of the sector will be key to long-term stability.

5. Energy

Renewable rural energy is an area of great potential for Sierra Leone, particularly in places where deforestation threatens water and soil conditions. Using solar energy for rural electrification and cooking is a key opportunity that could empower local communities and provide employment to rural youth.

In addition, there is an opportunity to develop community-based fast-growing tree plantations for fuelwood and building materials, though sustainability must be considered throughout.



Artisanal miners at work. As part of the minerals sector reform, it will be important to strengthen environmental standards for miners and work more forcefully for equitable benefits-sharing

Recommendations

Introduction

The analysis of impacts, risks and opportunities related to the environment and natural resources provides a platform for an assessment of Sierra Leone's needs and priorities from a peacebuilding and development perspective.

The Government of Sierra Leone's Agenda for Change has laid the groundwork for peacebuilding and development in Sierra Leone for the medium term, supported by the UN Joint Vision. The issues and needs highlighted in this report support the priorities and principles of the government's plan by emphasizing the importance of sustainable use of natural resources through good governance and improved environmental management. As discussed in Chapter 6, the importance of this issue for continued peace consolidation cannot be understated.

The UN Joint Vision identifies four areas where the UN system can contribute to peacebuilding in Sierra Leone in collaboration with the Government and its partners, namely: (i) rural integration; (ii) youth empowerment; (iii) access to health; and (iv) credible public services. The analysis contained in this UNEP report emphasizes that good environmental governance and sustainable natural resource management play a supporting role in the implementation of each pillar of the Joint Vision, but particularly in rural integration and youth empowerment.

UNEP's 16 recommendations are organized by their intended outcome into four sections, which roughly correspond with the priorities of the Agenda for Change and the UN Joint Vision: participatory sector reform, improved natural resource management capacity, improved environmental infrastructure and services, and sustainable livelihoods.

The recommendations are interdependent, as expected from the environment and natural resources sector, requiring an approach that addresses them in a coherent and coordinated fashion. The recommendations identified here each contribute to mitigating the direct, indirect and institutional impacts of the conflict, addressing



This village in Bonthe district is slated for displacement by industrial mining, even though community leaders do not want to move. Rural integration and youth empowerment will require that decisions and reforms in the natural resource sector include a robust and participatory consultation process

risks that may lead to conflict relapse or undermine the peace, and taking advantage of opportunities to create sustainable livelihoods and manage the environment and natural resources.

Lastly, the importance of proactive and coordinated support to the sector by the international community, including donors and international organizations, cannot be overstated. Political, financial and technical assistance to the government and to implementing agencies on each of the following topics will be vital.

Participatory sector reform

Many of the risks to continued peace and development in Sierra Leone from the environment and natural resource sector largely reflect the conditions that existed before the outbreak of war in 1991. In order to begin to mitigate these risks and embrace environmental and natural resources as a platform for peacebuilding, the following are recommended:



Sector reform and capacity improvements must effectively build on the existing strengths of communities, including traditional sustainable management techniques and power structures

1. Respond to institutional failures regarding resource ownership and access:

Many communities feel that in the early days after the war and to some extent today, the processes of reconstruction, resettlement and reintegration concealed land grabs, secretive negotiations for minerals and other concessions, title changes and a slowdown in compensation payments. These are sources of considerable tension that need to be addressed through transparent dialogue and mediation processes.

2. Conduct a comprehensive land reform programme:

A highly consultative and participatory land tenure reform process is needed, where equity and conflict resolution are carefully addressed. In particular, it will be important to find a solution that harmonizes the two land tenure systems in Sierra Leone, while still allowing for the specific needs and uses of each system to persist. No new system can be enforced simply by making changes in Freetown and dictating them up-country.

As the land reform is completed, key considerations will be how mineral and forest concessions will change, the impacts on land of potential commercial agriculture operations, intensification of farming and how the power

structures of land ownership may change. Resolving the inevitable conflicts during the public process rather than resorting to protests or violence afterwards will promote long term stability.

3. Develop transparent and participatory benefits-sharing mechanisms for all natural resources:

Currently, each natural resources sector has its own process for benefits-sharing, including beneficiaries, methods of disbursement, rates for land rent, length of contract terms and formality of agreements. A clarified process for benefits-sharing that is consultative and transparent is needed between natural resources sectors, including commercial agriculture, forestry and mining.

The reformed Mines and Minerals Act that was passed by Parliament in 2009 is a step in this process, with improved transparency between the licensing and political ends of the Ministry of Mineral Resources. However, it does not yet adequately address the issues of environmental protection, land tenure disputes, effective consultation processes or smuggling. Similarly, any agreement for the extraction of offshore oil must be transparent, participatory and ensure benefits for the nation at large.

4. Continue structural reforms in the extractives sector: The ongoing reform of the mining sector, including the new amendments to the mining law, is extremely important in order for it to contribute to peace consolidation and sustainable development. In particular, integrating environmental protection and EIAs into new mining concession agreements during the ongoing renegotiations is needed at the same time that regulations for SLEPA are being written. Benefits-sharing and closer consultation between the minerals sector, employees, local government and local communities are an additional necessity. As part of the reforms, additional programmes are needed for artisanal and large-scale mining clean-up and rehabilitation. In addition, provisions to ensure the equitable and sustainable distribution of oil sector benefits will be vital.

5. Utilize natural resources as platforms for dialogue and confidence-building: A systematic process that includes dialogue and confidence-building between the national government, civil society, local communities and the private sector on issues of natural resource management should be established. Regular consultation and information sessions can bring communities together to make joint decisions, even when political or ethnic divisions might normally keep them apart. A good example is to establish an economic reliance on one another such as closer coordination

and revenue-sharing between chiefs and district councils. Additionally, duplicating the positive example of the Gola Forest Transboundary Peace Park, an initiative could be launched between Sierra Leone and Guinea in the context of the Kilimi, Kuru Hills and Outamba protected areas.

6. Incorporate considerations for equity, gender and community consultation into all programmes and projects: In all programmes, capacity-building and reforms of the environment and natural resources sector, a consultative, collaborative and coordinated approach will be vital to the peace and development process. Responsiveness to local needs, as well as national priorities, will also be necessary for success. As an integral part of this, the issue of systemic inequality and gender dynamics of post-conflict recovery must be carefully considered.

Improved natural resource management capacity

Given the major institutional impacts of the war and the low level of natural resource management capacity around the country, capacity building is needed at all levels. This will include both technical improvements to capacity, such as having better data, legal clarity and analytic skills, and functional capacity improvements, such as a larger political presence in key sectors.



Capacity-building begins with primary education. Decreasing the gender gap with regard to education and access to new sustainable employment is paramount

- 7. Develop the capacity of SLEPA to fulfil its responsibilities:** Given the wide mandate that is articulated in the Environmental Protection Agency Act of 2008, along with an inherited set of responsibilities from NaCEF, SLEPA will be a vital part of improved governance and management of natural resources as the Agenda for Change is implemented. Strong support at the national and, perhaps more importantly, the district level will be critical.

As part of this, a National Environmental Strategy that builds a clear roadmap for sustainable development is badly needed. SLEPA, as the coordinator of the environmental sector, must be able to communicate the vital role that natural resources play in the development of new, sustainable jobs for youth, for human health and for resilient peace consolidation and conflict prevention. In addition, SLEPA must be able to harness the resources of international institutions like the GEF and MEAs to promote sustainable development in Sierra Leone. An important starting point for capacity building in SLEPA will be the World Bank needs assessment that was conducted in autumn 2009.

- 8. Harmonize environmental regulations between national authorities:** Responsibility for natural resource management and environmental governance is vested within multiple agencies. Therefore, the environmental regulations and policies of SLEPA, Ministry of Lands, Country Planning and Environment, Ministry of Agriculture (including the DoF), Ministry of Marine Resources, Ministry of Mines and Mineral Resources, Ministry of Energy and the Ministry of Local Government must be mutually supportive through close coordination. This includes monitoring and data collection, consultation and review, and the use of comparative advantage to maximize the effectiveness of limited resources and capacity. Examples include a data centre on environment, regular coordinating meetings between key actors, and a better-integrated EIA process, especially for mining and urban development.
- 9. Undertake a wider climate change vulnerability assessment based on the National Adaptation Plan for Action:** Given the projected impacts of climate change on Sierra Leone – namely increased variability in rainfall in the rural region – the medium- and long-term risks of climate

change should play an important role in the 10–15-year planning process of the country. This can be achieved by piloting a vulnerability assessment that considers regional variability in resources, capacity and resource reliance. The current National Adaptation Plan for Action requires significant follow-up work, including harmonization with other policies, connection to larger development priorities and possible engagement with the Clean Development Mechanism, Reducing Emissions from Deforestation and Forest Degradation programmes and other carbon trading schemes.

- 10. Build capacity for environmental management in rural government:** District ministry offices, district and city councils and other local managers will continue to play an important role in resource allocation and planning. A stronger, more formalized role for local government authorities, including the outposted representatives of the central ministries, will encourage the economic and social integration of the rural areas of Sierra Leone with the capital city. This includes close cooperation between SLEPA, DoF, the Ministry of Mines and Mineral Resources and the Ministry of Local Government.

In addition, many people outside of Freetown are not able to participate meaningfully in a consultative manner when invited because of a lack of technical capacity. Thus, it will be important to assist communities in developing this capacity in order to understand technical reports such as EIAs to organize, share information and communicate, and to represent their particular and common interests at all levels of governance.

- 11. Fill the major information gaps concerning natural resources, including baseline data:** A systematic natural resource inventory is needed. It should ensure that data collection methods are transparent and that the data available to all stakeholders so that a common understanding of the real potential of the natural resource sector can emerge and guide future negotiations, policies and programmes. In particular, the Government of Sierra Leone, including SLEPA, DoF, Ministry of Mines and Mineral Resources and other authorities must have access to accurate and neutral resource assessments for planning and decision-making purposes.



Public beach near Freetown. Rebuilding the tourism industry in Sierra Leone will require that basic environmental services be provided in both rural and urban areas, particularly on the coast

12. Develop a strategy for integrated water management:

Given the very close connection between forest cover, rainfall, groundwater resources and the fact that many of Sierra Leone’s urban areas are located in sensitive watersheds, a district-level integrated water resource management plan is needed in most districts of the country. Projects by UNEP and the European Commission have made key first steps in this regard, including starting an integrated water strategy for the government and better mapping of the Western Area Peninsula Forest Reserve.

Improved environmental infrastructure and services

Service provision is one of the most important tests of legitimacy for government in a post-conflict setting. In Sierra Leone, the provision of environmental services will assist both peace and development by strengthening rural and urban communities alike, and will build state relevance in the sector.

13. Provide support for recovery and reconstruction for basic environmental infrastructure and services, including water and agriculture:

Many communities suffered extensive damage to roads, water systems, plantations and buildings and have not yet received basic support for reconstruction and rehabilitation. Priorities need to be assessed at the community level and programmes locally driven to meet them, particularly in places where efficiency gains and employment opportunities can be established.

14. Focus on addressing the urgent solid and liquid waste management needs, especially in major cities:

Freetown and other major cities such as Makeni, Koidu, Bo and Kenema have severe, long-running waste management problems, some of which are a result of the conflict, but most of which are due to unplanned population growth and urbanization. Poor waste management damages human health, and causes additional environmental impacts. In particular, polluted surface water stresses already overstretched groundwater resources in many parts of the country.



Rice sprouts in a community agriculture plot near a protected forest. Improving efficiency and processing capacity of rural rice production is a key opportunity for sustainable livelihoods

Sustainable livelihoods

Finally, as the peacebuilding and development agenda in Sierra Leone has consistently emphasized, it will be crucial to generate alternative and sustainable livelihoods for vulnerable populations. It is widely recognized that Sierra Leone needs a way to efficiently and effectively absorb its growing youth population. Creating alternative livelihoods based on natural resources that youth in Sierra Leone can engage in is vital to the country's future.

15. Assist rural populations to scale down unsustainable coping strategies: The civil war displaced large numbers of people and disrupted nearly every economic sector in the country. Displaced and without viable livelihoods, communities developed survival strategies that in many cases continue to be practiced today.

In order to facilitate sustainable and peace-reinforcing development, livelihoods and practices need to be identified and initiated that can replace those held over from informal

war economies. In particular, diversifying rural economies will build community resilience to environmental and economic changes. Two examples of this strategy include sustainable tourism in the Western Area Peninsula and improved efficiency and processing capacity for rural rice production.

16. Break the link between natural resources and illegal activities: Informal natural resource extraction in rural areas is easily co-opted into illegal activities, including drug trafficking, movement of arms and people and other criminal acts. However, because barriers to formalization are high, at-risk populations continue to participate in the informal economy, sometimes in extremely exploitative circumstances. Breaking the link between natural resources and illegal activities will require monitoring, early warning and cooperation between environmental managers and the security sector, and will help to combat corruption, increase revenues for the state and strengthen confidence in national government.

Annex 1 – Acronyms

CBNRM	community-based natural resource management
DDR	disarmament, demobilization and reintegration
DoF	Division of Forestry
EC	European Commission
ECOWAS	Economic Community of West African States
EIA	environmental impact assessment
FAO	Food and Agriculture Organization of the United Nations
GDP	gross domestic product
GNI	gross national income
HIV	human immunodeficiency virus
JICA	Japan International Cooperation Agency
km	kilometer
km ²	square kilometer
NaCEF	National Commission for Environment and Forestry
NGO	non-governmental organization
PBC	Peacebuilding Commission
PPP	purchasing power parity
RUF	Revolutionary United Front
SLEPA	Sierra Leone Environmental Protection Agency
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIPSIL	United Nations Integrated Peacebuilding Office in Sierra Leone
USD	United States dollar

Annex 2 – Glossary

Concession: A title granted by the government to companies to use a designated portion of land under terms and conditions specified by relevant codes and legal agreements.

Conflict: Conflict is a dispute or incompatibility caused by the actual or perceived opposition of needs, values and interests. In political terms, conflict refers to wars or other struggles that involve the use of force. In this report, the term “conflict” is understood to mean violent conflict.

Conflict resources: Conflict resources are natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from or result in the commission of serious violations of human rights, violations of international humanitarian law or violations amounting to crimes under international law.

Ecosystem services: An ecosystem is a dynamic complex of plant, animal and micro-organism communities and the non-living environment interacting as a functional unit. Ecosystem services are the conditions and processes through which natural ecosystems, and the species that compose them, sustain and fulfil human life. These include “provisioning services” such as food, water, timber and fibre; “regulating services” that affect climate, floods, disease, wastes and water quality; “cultural services” that provide recreational, aesthetic and spiritual benefits; and “supporting services” such as soil formation, photosynthesis and nutrient cycling.

Environment: The environment is the sum of all external conditions affecting the life, development and survival of an organism. In the context of this report, the environment refers to the physical conditions that affect natural resources (climate, geology, hazards) and the ecosystem services that sustain them (e.g. carbon, nutrient and hydrological cycles).

High-value natural resources: Natural resources, usually intended for export to the global marketplace, that command a significant monetary value. In Sierra Leone, the most prominent high-value natural resources are diamonds, gold and other minerals, as well as some timber products and commercial agriculture.

Livelihood: A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. It is considered sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

Natural resources: Natural resources are actual or potential sources of wealth that occur in a natural state such as timber, water, fertile land, wildlife, minerals, metals, stones and hydrocarbons. A natural resource qualifies as a renewable resource if it is replenished by natural processes at a rate comparable to its rate of consumption by humans or other users. A natural resource is considered non-renewable when it exists in a fixed amount, or when it cannot be regenerated on a scale comparative to its consumption.

Non-timber forest products: Non-timber forest products are biological materials, excluding timber, which are produced by forests and extracted for subsistence or commercial purposes. They include fruits and nuts, vegetables, medicinal plants and herbs, fish and wild game, etc.

Peacebuilding: Peacebuilding comprises the identification and support of measures needed for transformation towards more sustainable, peaceful relationships and structures of governance, in order to avoid a relapse into conflict. The four dimensions of peacebuilding are: socio-economic development; good governance; reform of justice and security institutions; and the culture of justice, truth and reconciliation.

Peacekeeping: Peacekeeping is both a political and a military activity involving a presence in the field, with the consent of the parties, to implement or monitor arrangements relating to the control of conflicts (cease fires, separation of forces) and their resolution (partial or comprehensive settlements) as well as to protect the delivery of humanitarian aid.

Peacemaking: Peacemaking is the diplomatic process of brokering an end to conflict, principally through mediation and negotiation, as foreseen under Chapter VI of the UN Charter.

Security: "State or national security" refers to the requirement to maintain the survival of the nation-state through the use of economic, military and political power and the exercise of diplomacy. "Human security" is a paradigm for understanding global vulnerabilities, which argues that the proper referent for security should be the individual rather than the state. Human security holds that a people-centred view of security is necessary for national, regional and global stability. "Environmental security" refers to the area of research and practice that addresses the linkages among the environment, natural resources, conflict and peacebuilding.

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Annex 4 – Further reading

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