

Stocktaking of security sector roles in climate and environmental security

Report on Sierra Leone



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Acronyms

CCA	Climate change adaptation
CID	Criminal investigations department
DRR	Disaster risk reduction
EPA	Environmental Protection Agency
FGD	Focus group discussion
GDP	Gross domestic product
HR	Human resources
INGO	International non-governmental organisation
MACA	Military Aid to Civil Authorities
MFMR	Ministry of Fisheries and Marine Resources
MMMR	Ministry of Mines and Mineral Resources
MoE	Ministry of the Environment and Climate Change
NAP	National Adaptation Plan
ND-GAIN	Notre Dame Global Adaptation Initiative
NDMA	National Disaster Management Agency
NPAA	National Protected Area Authority
ONS	Office of National Security
RSLAF	Republic of Sierra Leone Armed Forces
SLP	Sierra Leone Police
SOP	Standard operating procedure
SSG/R	Security sector governance and reform

Executive Summary

Sierra Leone is facing a range of climate and environmental risks that directly affect human security. Human activities, including environmental crime, are further undermining protective ecosystem services and destroying carbon sinks, contributing to the cycle of degradation and accelerating the effects of climate change.

From rising sea levels and changing rainfall patterns, which cause both water scarcity and seasonal flooding, to widespread pollution and the destruction of natural resources such as coastal ecosystems and tropical rainforests, the combined effects of climate change and human pressures on the environment are threatening to undo the economic development and peacebuilding gains achieved since the end of the civil war.

While many of these risks require a response that extends well beyond the security sector, security institutions have an important and perhaps underappreciated role to play in this context. It is worth noting that government responses to these risks (or lack thereof) as well as failures to address corrupt practices that directly exacerbate an already critical context clearly affect the population's perceptions of the state. However, there are multiple, affordable opportunities for security institutions to play a role in addressing human security needs and in doing so to make a contribution to social cohesion.

As climate change increases the risk of flooding, mudslides and other disasters, the role of the Sierra Leonean security forces in disaster risk reduction (DRR) and in supporting efforts of the National Disaster Management Agency (NDMA) will be increasingly important and offers a valuable opportunity for institutions to work closely with communities and local government to better analyse and mitigate the risk of both sudden and slow-onset disasters. Likewise, the environmental crime police, in conjunction with specialised agencies operating under the Ministry of the Environment and Climate Change (MoE)¹, including the forest guards, has the potential to play a stronger role in preventing and prosecuting cases of environmental crimes and other forms of harm to the environment. There are important links between these two functions. Illegal logging and land-grabbing, leading to deforestation, significantly increase the risk of mudslides. Unregulated waste disposal and sand and mineral mining not only affect soil and water resources, but also have serious public health consequences and ultimately increase flood risks. This directly affects the health and resilience of available resources for farming and fishing, on which Sierra Leone's rapidly growing population relies.



Photo: DCAF

Overall, this stocktaking study has found significant potential for prevention and stabilisation programming to improve service delivery of security institutions with regard to mitigating the impact of climate and environmental risks on communities and the environment, as well as strengthening social cohesion and contributing to sustainable peace. While international partners in their prevention and stabilisation programming tend not to fully maximise potential in this area, findings place security sector roles in climate and environmental security at the heart of the triple nexus of humanitarian needs, development and security. Moreover, working at this nexus is relevant in the context of the sustaining peace and prevention agenda, commitments to mainstream DRR, as agreed under the Sendai Framework for Disaster Risk Reduction, and the Paris Agreement's Global Goal on Adaptation.

In addition to the more practical recommendations for international partners and the Government of Sierra Leone that are included in the report, several of the conclusions have broader relevance for security sector governance and reform (SSG/R), prevention and stabilisation programming across a range of regional, environmental and security contexts, and will be further explored in the other countries in the stocktaking study.

Findings

- Sierra Leone is among the countries most vulnerable to climate change. It faces a range of multidimensional risks at the intersection of environmental and human security, and across both the Prepare and Protect dimensions of this study. These risks interact in a way that continues to increase the vulnerability of Sierra Leoneans to the human security consequences of the changing climate.
- Environmental harm, such as pollution, illegal logging and mining, and violations of existing legislation are sometimes inextricably linked with community livelihoods. Even if law enforcement in this area is strengthened, harm to the environment is unlikely to cease without a focus on creating alternative, clean options for income generation. However, strengthening law enforcement is also crucial because of the strong links between harm to the environment and organised criminal activities, including transboundary activities.
- A variety of civilian and security sector agencies are involved in DRR and combating environmental crime, with mandates that are not always entirely clear or distinct. Moreover, when it comes to issuing environmental licences and permits (for mining, logging, construction, etc), it is not always clear which agency's licensing takes precedence over the other. In a context of many needs and limited resources, both gaps and overlapping mandates open pathways for corruption and undermine the ability of state institutions to deliver the security services that communities need most under the prepare and protect dimensions of this study.

Recommendations

- **Recognising and reinforcing climate security roles:** from human and planetary security perspectives, the international community and national partners should recognise the security sector's role in mitigating climate and environmental risks as a top priority for engagement.
 - This would represent a shift in responsibility and a broader definition of the security sector to include institutions working on civil protection, and further **empower national actors** in leading DRR efforts.
 - In terms of environmental crime, it would mean strengthening **international and regional cooperation on fighting environmental crime**, addressing **domestic factors that enable environmental crime** and recognising the importance of preventing **non-criminalised forms**

of environmental harm.

- Relevant functional areas in the security sector, such as DRR and fighting environmental crime, should be included conceptually in thematic strategies for SSG/R and could become a focus for support in **country or regional engagement strategies** and through **multilateral missions**.
- As this is an emerging area of focus for SSG/R, it will be important for future programmes to collect additional **data that can inform design and implementation** in areas such as the link between security sector roles, peacebuilding and social cohesion.
- **Corruption and accountability:** corruption is both an enabler and a driver of environmental crime. Increased commitment to accountability is required from national authorities and the international partners providing resources. Investment in capacities for tracking financial flows can increase transparency and at the same time enable better forward financial planning.
- **Environmental degradation through waste disposal and pollution:** waste disposal and pollution are **human security issues** that are likely to become more important in the coming years as pressures on ecosystems from climate change and demands for natural resources continue to increase. In addition to affecting public health, polluted land and water supplies diminish both food and water security. In a global context of tightening environmental regulations, security institutions in many regions may also need to strengthen their understanding of the transnational dimensions of illegal waste disposal.
- **Supporting capable communities:** working at the intersection of the environment and security – particularly in contexts of widespread challenges and limited security sector resources – also requires a realistic analysis of **what communities themselves can do as a first line of defence** and where security institutions must play a role.
- **Emphasising prevention:** a longer-term focus on **prevention** is critical for both DRR and environmental protection. **Risk-informed planning** of infrastructure and housing, for example, can make a significant contribution to mitigating future disaster risks but is not always well integrated with DRR functions. Similarly, security sector strategic and operational planning should include climate and environmental risks. In addition, widespread pollution, beyond being an environmental crime, is a **slow-onset disaster** with potentially catastrophic consequences for future food and water security. A preventive approach is essential in enforcing

environmental legislation, as communities can ill afford the **loss of productive agricultural land, reductions in supplies of clean drinking water** or other consequences of environmental degradation.

- **Coordination and integration:** tackling environmental crime and analysing disaster risks require specific technical skills (for example in the area of environmental sampling to detect crimes), and, because of the complexity, particularly **close coordination is required between security institutions and environmental and other government agencies** that may not traditionally work together. Furthermore, at the community level, **environmental harm is often linked with livelihoods** and thus solutions that focus solely on enforcement are unlikely to succeed. Therefore, integrated approaches are essential.
- **Comprehensive international partner approaches:** working effectively on DRR, environmental protection and more broadly on the triple nexus also requires partners to adopt a comprehensive approach. This means international partners developing innovative funding instruments that can cover several hitherto separate sectors and policy areas, and having the ability and willingness to engage with a wide range of national counterparts across sectors.
- **Sustaining peace:** the responses of security actors to climate and environmental risks, as well as the way in which they engage with communities and individual citizens on these risks, have great potential to foster social cohesion and peacebuilding.

Programming should take full advantage of this potential, and training in civil–military relations, dialogue and community engagement is needed. Fostering security actors' understanding of the connections between livelihoods and climate and environmental risks, together with specialised public order management training and preparation that emphasises de-escalation techniques, would mitigate the risks of conflict escalation.

Priorities for next steps

1. **A mapping of ongoing international partner engagement:** to conceptually define the scope, taxonomy and classification of between climate change and environment as well as the humanitarian-development-peace nexus. This mapping will also allow the identification of gaps, opportunities for collaboration and possible synergies.
2. Engagement with the Government of Sierra Leone on **performance-based management:** identification of a pilot agency, development of performance-based service delivery indicators and creation of financial incentives on an institutional and individual basis to deliver against them.
3. Investment in **local and community DRR efforts:** piloting support to the creation of an operational local DRR structures, including a local DRR committee and community DRR volunteer group.



SSG/R needs to mainstream climate and environmental risks so security sectors can help protect people, planet and peace

1. Introduction

Background

This report is part of a larger stocktaking study funded by the Governments of Germany, the Netherlands, Sweden and Switzerland that explores the potential and roles of the security sector in supporting communities vis-à-vis the impacts of climate change and environmental degradation.

It combines two pertinent areas of interest for the security sector when looking at current and future environmental issues in four different countries. In focus here, as shown in Figure 1, are (i) preparation for natural disasters and (ii) environmental protection (with a specific focus on environmental crimes and conservation). These areas are not only interlinked themselves but also relate to questions of conflict, instability, governance and fragility, and hence (human) security.

By assessing the security sector's capacities, priorities and resources in relation to dealing with the two focus areas introduced above, this report presents the findings from **Sierra Leone**. The insights gained will be complemented by similar reports for Brazil, the Occupied Palestinian Territories, and the Philippines. In combination, the four country reports will be synthesised into an overarching report that aims to outline relevant insights, lessons learned, (in)effective arrangements and promising recommendations for the security sector and related governance and reform programming.

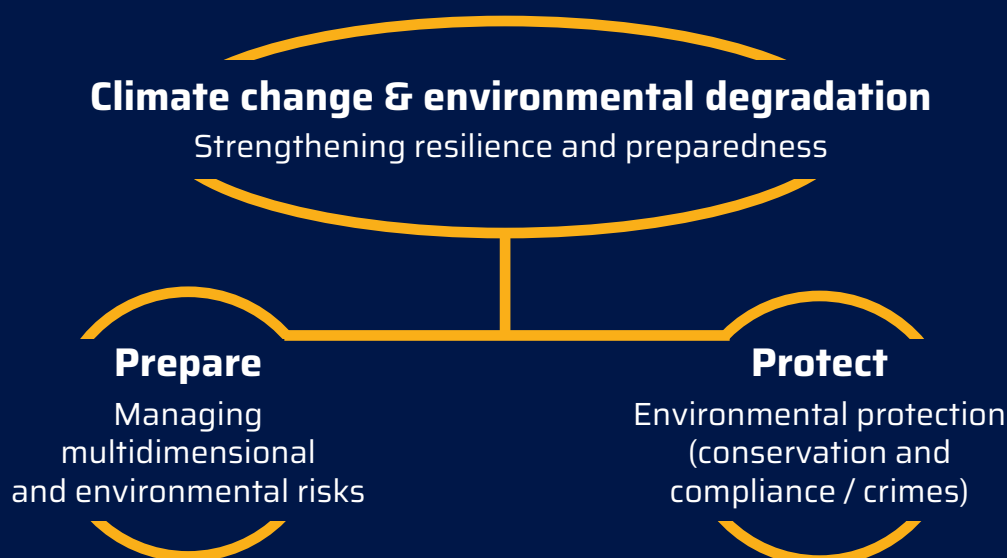
This is done using a two-pronged approach – scrutinising the security sector on the one hand and the community perspective on the other – and is based on the hypothesis that a well-governed, legitimate and accountable security sector can help to break cycles of environmental degradation as well as conflict.

The connections between climate change adaptation (CCA), disaster risk reduction (DRR) and environmental protection have been underlined in various fora. Both DRR and CCA contribute to reducing vulnerability while enhancing societal capacity and therefore resilience. Moreover, good coordination as well as the division of labour and responsibilities between and within institutions in charge of DRR and CCA activities can increase the effectiveness of responses, particularly in more vulnerable contexts². For instance, intact ecosystems have the potential to mitigate climate change impacts and disaster risks, underlining how a healthy environment contributes to lowering the cost of disasters and related responses³. In addition, the nature of land use impacts not only on overall livelihoods but also on local climatic phenomena, such as precipitation, wind patterns and temperature⁴.

Methodology

The question at the core of the stocktaking study, as introduced above, is as follows: 'How can international and national partners realise the full potential of the security sector in CCA, DRR and environmental protection through concrete security sector governance and reform (SSG/R) programming?'

Figure 1: Two pillars of action for the Security Sector in relation to climate change and environmental degradation.



To answer this question, the study includes the role and potential limitations of the security sector in the broad field of climate change and the environment through multiple steps and from various perspectives. The main goal throughout data collection and analysis was to focus on four dimensions of the two main pillars depicted in Figure 1: DRR ('**prepare**') and environmental protection ('**protect**'). The four dimensions were (i) the context, (ii) the coordination and integration of the different entities, (iii) an analysis of the respective capacities and, consequently, (iv) an analysis of impacts on communities, social cohesion and peacebuilding more generally.

As a first step, the team engaged in desk research to learn more about the political, legal and environmental situation in Sierra Leone. This involved reviewing academic reports, media and publications by international organisations, such as United Nations agencies, as well as available governmental sources. Both published and personal sources were used to identify relevant actors in Sierra Leone with mandates around DRR and environmental protection through snowball sampling.

The second step consisted of a ten-day deployment of two experts to Sierra Leone. Sierra Leone was selected for this mission because it is one of the most disaster-prone countries in the world as well as being one of the most vulnerable to climate change⁵. The mission covered a broad range of issues relevant to this mandate, and deforestation and disaster preparedness in urban slums were among the most pertinent. The two international experts were accompanied throughout the mission by two Sierra Leonean team members with extensive networks and knowledge of the context.

During the mission, semi-structured interviews were carried out with representatives from a variety of security and environmental institutions, as well as with international representatives and representatives of local government, and meetings with civil society representatives and academics were also held⁶. Through the organisation of community focus groups in two different locations⁷, equal focus was given to all stakeholders, including youth, traditional leaders, women's group representatives and other community actors. Hence, both top-down and bottom-up insights were gained.

The interviews and focus group discussions (FGD) were primarily intended to examine the roles of the security sector in Sierra Leone in DRR and environmental protection and the sector's level of coordination with other actors, and to gain insights on the resilience of and risk mitigation by communities.

Background on the context in Sierra Leone

Political and socio-economic situation

Sierra Leone has had a multiparty democracy with a well-established electoral track record since the first post-war elections in 2007, and is preparing for presidential elections in 2023. With the launch of voter registration during the mission, there were a number of reports of a highly politicised and competitive electoral contest, which could boil over into localised unrest.

Despite its political progress, Sierra Leone is among the world's least developed countries and has a gross domestic product (GDP) per capita of around USD⁸. After the economically devastating civil war, however, Sierra Leone experienced a prolific period of development, and between 2006 and 2014 its economy was among the fastest growing in Africa. This economic growth was accompanied by a considerable population increase, from around 5 million to 7 million inhabitants between 2002 and 2014⁹. The growing population mostly found itself living in or moving to cities and so urbanisation was also on the rise in Sierra Leone¹⁰. In the case of Freetown, for instance, urban migration led to challenges for urban planning, as the built-up area increased by 101% between 2001 and 2015¹¹. In parallel, environmental degradation increased as a result of migrants' economic activities, including sand mining, quarrying and logging. For instance, logging for firewood has led to a decrease in mangrove cover, with environmental consequences related to mangroves' important contribution to carbon sequestration¹².

The outstanding economic growth resulted in a strong recession when Sierra Leone was hit hard by the Ebola virus disease epidemic between 2014 and 2016, which claimed nearly 4,000 lives¹³. More recently, and shortly after GDP began recovering, Sierra Leone was also affected by the global COVID-19 pandemic, which led to a GDP decrease of 4% in 2020 compared with 2019¹⁴. In both instances, the security sector played a significant role, which served as a steep learning curve on civilian–military cooperation in the context of public health emergencies, supported by planning tools such as tabletop exercises on health incidents.

Background on SSR in Sierra Leone

By the end of the civil war in 2002, Sierra Leone faced a number of seemingly unsurmountable security challenges, including unstable borders and neighbours, a lack of a security infrastructure and completely discredited security institutions. The reform process, building on strong support from the UN and international community, was nothing less than a complete transformation, affecting security, intelligence,

governance and justice institutions. As a result, the transitional justice and security sector reform process in Sierra Leone is considered an example of a successful reform process.

A significant development in addressing the country's security challenges during the reform process was the creation of a national security architecture, including the Office of National Security (ONS)¹⁵.

The ONS has provided coordination and leadership resulting in the development of policies linked to disaster management, such as (i) the Sierra Leone Military Aid to Civil Power (MACP) Policy, for the provision of military support to the civil authority, and (ii) the Sierra Leone disaster management policy.

Climate change risks and vulnerabilities in Sierra Leone

Climate change

Located in Western Africa, Sierra Leone is a small country with a tropical monsoon climate characterised by extremely high temperatures and humidity¹⁶. There is one rainy season per year, normally between April/May and October/November¹⁷. Sierra Leone can experience frequently occurring **natural hazards**, such as floods, heavy rainfall, heatwaves and fires¹⁸ (usually with only localised impact), as well as less frequently but still regularly occurring hazards, such as landslides, seasonal droughts and public health emergencies¹⁹.

Climate change is seen as a **risk multiplier** in that it can increase the likelihood of socio-natural disasters and increase the resulting economic and human costs²⁰. Natural hazards, sea level rise and coastal erosion²¹ exacerbate flood risks, threatening several islands and all coastal communities.²² Changing rainfall patterns²³, such as decreasing overall precipitation or the late onset of monsoon rains, aggravate periodical water scarcity and heavy rains, increasing the risks of flooding and mudslides. Notably, floods related to extreme weather events account for 90% of people affected by disasters²⁴. Moreover, these changes pose risks to food security. Agriculture faces more uncertainty, with climate hazards affecting yields, and changes in seawater upwelling can reduce the amount of fish caught²⁵. Public health is also at risk, with a projected increase in food poisoning, due to there being more toxic algae in warmer waters, and the spread of diseases such as malaria and cholera, which particularly affect young children and pregnant women²⁶.

Sierra Leone is also facing a variety of **human-made hazards**, which either add to or aggravate natural hazards. Public infrastructure is unsuitable in some

regards. For example, in the dry season, water management is a pressing issue, whereas the quality of roads and buildings suffers during the rainy season, posing significant obstacles for rescue operations²⁷. In addition to issues such as the quality of electricity line networks around the country posing fire risks, a large number of issues are closely linked to environmental pollution and degradation, and will be described in more detail below.

Sierra Leone is ranked as one of the **most vulnerable countries to climate change globally**, occupying position 155 (out of 182) in the Notre Dame Global Adaptation Initiative Country Index²⁸. Its economic development has already been hampered by climate change and it has a high population density concentrated in urban areas²⁹. Together, a lack of urban planning, unsuitable construction materials for buildings and inadequate facilities for waste management and sanitation sharply increase vulnerabilities³⁰.

Initiatives addressing climate change

The National Adaptation Plan (NAP) aims to create cross-sectorial awareness of climate change, put in place support structures and spread information so as to 'increase resilience capacity at all levels'³¹. The plan identifies priority sectors, which include agriculture, DRR and natural resources, and mentions two priorities that are pertinent to all priority sectors: (i) soft and hard infrastructure and (ii) gender equality and social inclusion. Furthermore, a national climate change policy and a climate change strategy and action plan have been developed.

The importance placed on the linkages between climate change and environmental protection is also reflected in the fact that the Ministry of the Environment has been rechristened the Ministry of the Environment and Climate Change (MoE) following the latest legislative revisions.

Key environmental harm and crimes in Sierra Leone

Of Sierra Leone's terrestrial and marine areas, 12.75% and 1.63% are protected, respectively³². Nonetheless, a variety of environmental harm and crimes occur in the country, including wildlife crime, waste and pollution. Moreover, many issues are interrelated and aggravated by existing hazards and climate change, rendering the landscape very complex. There is wide agreement among stakeholders that there are significant organised crime elements around wildlife crime in Sierra Leone³³. This includes, but is not limited to, illegal logging, which is sometimes interlinked with other organised environmental crimes, such as illegal, unreported and

unregulated fishing³⁴. As two thirds of the population depend on agriculture for their livelihoods, significant displacement and ultimately conflict risks emerge when land is rendered unfit for farming by pollution or mining³⁵.

Wildlife crimes

Sierra Leone's natural environment is under serious threat. The main threats reported are habitat destruction (mainly caused by deforestation and land-grabbing³⁶ for construction, agricultural activities or mining, including on protected areas) and illegal and unregulated fishing.

There are several causes of deforestation and land-grabbing, such as the need for firewood, the commercial timber trade (legal and illegal), mining (legal and illegal), an increased need for farmland due to a decrease in productivity and an increase in population, and an increased need for land for construction. The impacts of deforestation and land-grabbing range from an increased risk of mudslides, habitat destruction and reduction in wildlife diversity to an overall impact on climate change due to the destruction of large areas of tropical rain forest, reducing its services as a carbon sink.

For fish stocks, the use of filament nets, the appearance of industrial trawlers, including from other countries³⁷, the destruction of marine ecosystems due to pollution and the loss of mangrove fish breeding grounds are highly detrimental. The decline in available fish stocks is particularly important, as c.8% of the country's GDP comes from the fisheries sector, which provides c.80% of annual animal protein intake³⁸. Examples of cascading

risks are sea level rise and coastal erosion, which are intensified by illegal sand mining³⁹, contributing to the further destruction of coastlines. Similarly, the destruction of mangroves also takes away a natural flood protection system.

Waste disposal and pollution

The pollution of air, water and soil related to the disposal of different types of waste and sewage, pollution related to industrial activities, especially mining, and the lack of environmental standards pose significant risks to Sierra Leone's ecosystems and to the health of Sierra Leoneans.

Inadequate facilities for disposing of solid household waste and medical and toxic waste necessitate their disposal by either dumping (polluting the soil or water in the case of disposal in the ocean) or burning (causing air pollution). In the absence of minimal environmental standards, of the import of used goods, such as electronics and vehicles, contributes to pollution. As an example of cascading risks, poor waste management contributes to the destruction of protective ecosystems through pollution and also increases flood risks.

Mining (rutile, iron ore and diamond, stone and sand) is widespread and causes land degradation and loss of farmland, vegetation loss, deforestation, water pollution and water shortages (with high levels of mercury subsequently having impacts on riverine ecosystems, livelihoods and human health), as well as air pollution caused by dust⁴⁰.

Photo: DCAF



2. Prepare

Sierra Leone's architecture for managing disaster risks has been developed significantly in recent years; yet, significant obstacles to effective delivery remain.

The stocktaking team found some promising developments, such as the recent establishment of a civilian-led National Disaster Management Agency (NDMA), which coordinates all DRR efforts. However, the stocktaking team found that the creation of a fully functioning DRR system with reinforced local capacities still faced significant resourcing and organisational constraints. This finding is confirmed by a recent study by Bournemouth University, which concluded that the three most significant single points of failure in the system remain human resources and expertise, followed by difficulties around procedural issues and national/district relations⁴¹. In other words, the system is not yet operational at national or local level. At the national level, the NDMA is not yet able to implement the shift from response to prevention, streamline the multitude of risk assessments or successfully advocate for improved urban planning. With regard to decentralisation and the local level, there is a lack of local operational DRR structures, and there are difficulties in reaching and supporting communities (rendering their potential underutilised in DRR efforts).

While cooperation between the NDMA and the ONS, including in terms of the implementation of security agencies, seems to be positive overall, there remains a disconnect between the coordination and execution of DRR activities. In conjunction with a lack of clarity on mandates, operational-level planning and logistical challenges, this results in long response times and ineffective responses.

Disaster risk reduction structures and stakeholders

Sierra Leone is an engaged signatory of the Sendai Framework for Disaster Risk Reduction⁴² and has taken significant steps towards implementing this framework and establishing a national DRR structure⁴³. Following recent reforms in the system towards establishing a civilian lead for DRR, the military and the police remain the de facto main responders to disasters and emergencies.

The **national DRR system** was reformed in 2020 through the passage of the National Disaster Management Agency Act⁴⁴, establishing that the **NDMA** would take over lead responsibility for DRR from the ONS. The NDMA is mandated 'to manage disasters

and similar emergencies throughout Sierra Leone and to develop the capacity of communities to respond effectively to disasters and emergencies'⁴⁵.

It is governed by the **National Platform for Disaster Risk Reduction**, which is chaired by the Vice-President of Sierra Leone and consists of several security sector stakeholders⁴⁶. Moreover, the NDMA is supported by the NDMA Secretariat, which provides technical and other support to the agency and the national platform. A newly established national disaster management fund is intended to provide finances for 'the development and operation of disaster prevention, disaster risk reduction, climate change risk reduction and other disaster management programs'⁴⁷.

Until 2020, the **Office of National Security (ONS)** had been the lead agency for managing disasters'. Most former ONS staff who had worked on DRR have moved to the NDMA. The ONS still plays a significant role as the primary link between the NDMA and security sector agencies, such as the Republic of Sierra Leone Armed Forces (RSLAF) and the Sierra Leone Police (SLP). In the absence of a separate civil protection agency, **RSLAF** is the de facto responsible stakeholder for emergency responses. This is regulated by the Military Aid to Civil Authorities (MACA) policy⁴⁸. RSLAF are tasked with providing support for emergency and disaster responses. The navy plays a particular role, leading on search and rescue at sea. The **SLP** as the primary law enforcement agency is tasked with providing support to other government agencies. Owing to their presence throughout the country, local police officers are frequently the first responders in the case of a disaster, subsequently alerting the respective additional agencies.

The **Meteorological Agency**, founded in 2016, sits under the MoE, with its deputy director also serving as Sierra Leone's focal point for climate change. Among the agency's key tasks is the provision of seasonal forecasts and data for search and rescue operations and risk assessments.

Local government and disaster risk reduction

The NDMA Act replicates the national DRR structure at the local level and establishes disaster management committees with the same composition of stakeholder groups at the regional, district and chiefdom levels. Municipalities also reportedly play a significant role in DRR (such as Freetown City Council).

Service delivery

Prevention – risk analysis, information sharing and vulnerability reduction

Following good DRR principles, prevention activities aim to reduce the likelihood of a disaster event occurring or the severity of an event⁴⁹. These activities are the joint responsibility of all stakeholders, and include an analysis and understanding of disaster risks, community awareness and education, as well as the development of mitigation strategies (for example investments in infrastructure, land use planning and hazard-specific control activities and early warning strategies) that reduce vulnerability. In the case of Sierra Leone, it appears that, while sensitisation efforts seem to be bearing fruit, much remains to be done with regard to risk analysis and vulnerability reduction, especially in the area of urban planning.

Risk analysis: There has been no comprehensive national vulnerability assessment⁵⁰. However, a multitude of risk analyses and assessments have been and are being conducted by a variety of stakeholders, supported by different international partners and focusing on specific hazards (fires, epidemic disease, sea level rise), geographical areas (for example Freetown) or sectors (land degradation, security threat assessments). This also leads to different approaches to risk assessments between stakeholders, notably the lack of better integration between the NDMA and the Ministry of Health and Sanitation⁵¹. A promising approach is described in the 2017 report *Update of Sierra Leone Hazard Profile and Capacity Gap Analysis* prepared by INTEGEMS⁵².

Information sharing including community awareness: Stakeholders widely acknowledge the importance of community outreach and sensitisation efforts, namely

explaining to communities the impact of certain activities, such as building in flood- or mudslide-prone areas or illegal logging, on their risks of disaster. These efforts appear to be sponsored by several government agencies, notably the Environmental Protection Agency (EPA) and Sierra Leone Meteorological Agency (SLMET) in partnership with local radio and the state broadcaster (radio and TV). The NDMA has also been engaging in a variety of outreach and public education efforts with communities⁵³, including the development and distribution of School Disaster Risk Reduction Teaching Guidelines⁵⁴. While the exact structures for sharing such information remain unclear to the stocktaking team, community stakeholders seemed fairly knowledgeable on the fact that disasters are mainly caused by human activities. Institutional stakeholders highlighted the effectiveness of using data with communities to drive behavioural change. For example, citizens in an informal settlement at the bottom of a hill hosting Freetown's fuel deposit agreed to be resettled after having been shown drone footage of the deposit and recognising the danger they were in. Beyond sensitisation to risk, what is missing is a clear understanding by communities of which government actor is meant to be doing what. An increased understanding of roles, responsibilities and processes, as well as of reporting, would also increase accountability for service delivery and performance.

Vulnerability reduction: In terms of reducing vulnerabilities, three concrete areas were frequently mentioned by a variety of interviewees: (i) tree planting (including the RSLAF's 'one soldier, one tree' campaign) to prevent mudslides; (ii) removing waste and trash from gutters before or during the rainy season to prevent flooding; and (iii) the resettlement of people living in disaster-prone areas. Resettlement appears to have

Photo: DCAF



become a contentious political topic, with communities resisting resettlement in many cases or returning to vulnerable areas following resettlement. This was explained by the perception that the 'new' settlement areas lacked the economic opportunities that one might find in a bustling urban centre and were some distance from other services such as schools.

Preparedness and planning

Preparedness activities include the development of comprehensive disaster management plans that translate risks and resilience factors into concrete actionable guidelines⁵⁵. This includes clarifying roles and responsibilities, establishing a permanent and ad hoc disaster management infrastructure that can be activated, planning what resources and financing will be required, and setting up channels for communication to all stakeholders (including communities) and early warning systems.

Overall, interviewees took quite a critical view of the planning capacities of the Sierra Leonean DRR system. Several obstacles were mentioned with regard to integrated planning; the main obstacle highlighted by interviewees was the lack of financial resources for maintaining a standing capacity for DRR, followed by lack of training and equipment.

Establishing permanent disaster risk reduction

infrastructure: Good DRR is built on partnerships between the stakeholders involved⁵⁶. In Sierra Leone, **national** coordination efforts are led by the newly established NDMA. In addition to having a governing platform – the multistakeholder National Platform for Disaster Risk Reduction, chaired by the Vice-President – the NDMA also has the advantage of bringing together a wide range of partners, including technical agencies such as the EPA, Ministry of Lands, Housing and Country Planning, Ministry of Health and Sanitation, etc, and civil society. The same is true for the structures to be established at regional, district and chiefdom levels. All of this makes the NDMA and its local replica a promising initiative and a potentially solid basis for coordination of **national stakeholders in disaster risk reduction**.

Yet, according to interviewees, these structures are yet to become fully operational, with their lack of functionality creating a practical gap. Despite the intention to establish a disaster management fund, stakeholders indicated that the NDMA's work is hindered by the fact that it has no budget and hence has very limited capacity in terms of staff. The lack of financial instruments and financial tracking also touches on a bigger issue⁵⁷. Without the ability to track expenditures on historical losses and damages, forward financial planning is very challenging.

The lack of budget also translates into a lack of dedicated specialist capacity. Reportedly, the majority of stakeholders (including NDMA staff, security institution staff, EPA staff, communities) do not have the level of scientific literacy necessary to fully understand data and reports by, for example, the Meteorological Agency or to make relevant contributions to risk assessments.

Moreover, stakeholders consistently brought up questions around a lack of clarity on mandates and the delineation of roles and responsibilities. The NDMA is meant to coordinate a multitude of stakeholders whose exact mandates are not clearly delineated and who reportedly are 'comfortable to keep their turf'⁵⁸ and pursue their own, sometimes conflicting, interests. Sources mentioned that, for example, the Ministry of Agriculture and the Ministry of Lands, Housing and Country Planning reportedly have commercial interests in the status quo, to generate revenue through issuing licences (such as for construction in disaster-prone areas). According to stakeholders, resolving these issues would take a great deal of political will and is difficult in the current situation ahead of the 2023 elections.

At the operational level, planning is severely lacking. Security sector stakeholders highlighted the absence of clear plans and guidelines, such as standard operating procedures (SOPs), for joint disaster operations, as well as joint training or exercises⁵⁹.

At the **local level**, stakeholders indicated that – despite the robust legal framework on paper – the 'role of the district councils was not defined exactly, but only assumed'⁶⁰, resulting in not having a standing capacity or funding for DRR-related activities. This directly hampers the functioning of the district disaster management councils and other local structures. This was confirmed by members of communities, who were not aware of the work of the disaster management committee.

Similarly, community volunteers do not have a permanent structure with a clear membership, clear procedures, regular training and access to equipment in cases of emergency, but, instead, are reportedly organised on an ad hoc basis by the Red Cross or international non-governmental organisations (INGOs).

Preparedness: In the absence of a standing capacity for emergency responses, response teams are put together on an ad hoc basis once a disaster has happened, mostly drawing on security agencies and particularly RSLAF. One highly problematic aspect of this is the current absence of a robust process for declaring a disaster, and hence it is unclear when and how responses are activated⁶¹. Similarly, there are no standing financial arrangements, such as a contingency fund or pre-

identified disbursement channels⁶².

The security sector can leverage several advantages. For instance, RSLAF has the advantage of being present throughout the country and having the necessary personnel, engineering skills and equipment for a disaster response.

Yet, there are several problematic implications of the MACA policy's provisions for the ad hoc nature of RSLAF's DRR support and planning⁶³. These translate into a lack of budget, training and dedicated equipment. For RSLAF, all training is anchored in military disciplines, with no specific training for disaster management. Moreover, the lack of budget means that there is no specialised equipment ready to be deployed for disasters, and the operational equipment that does exist is often in bad condition and therefore utilising it for disaster relief puts additional stress on RSLAF stocks.

Setting up communication channels and early warning mechanisms: For early warning mechanisms, the Meteorological Agency leads in providing data and forecasts. It uses multiple channels to disseminate data, for instance through social media and sharing information with partners such as the NDMA. It is also engaged in a variety of outreach and sensitisation efforts, such as providing a weather forecasting app, community radio for maritime areas and a weekly climate hour on public radio.

Constraints for effective early warning and early action are the availability of weather stations (of which there are currently only 47 throughout the country), the fact that precise forecasts can be obtained up to only four hours before an extreme weather event and without a precise geographical location, and the fact that dissemination of warnings is difficult among those without access to the internet or mobile phones.

Response/joint operations

Disaster response operations are operations based on the disaster plans that aim to bring immediate relief in the case of a disaster event⁶⁴.

Procedural issues: In the case of a disaster, NDMA is the lead agency and ONS is the conduit through which the NDMA dispatches responders. This poses challenges to achieving rapid response times, as well as an effective response, because of the procedural aspects mentioned above, under 'Preparedness and planning'.

The MACA policy describes the security sector as a secondary system of support in cases in which civil resources are insufficient⁶⁵. Given that there is no

operational civil protection agency in Sierra Leone, this means that any response is slowed down by the need to activate this system. Response times are further increased because the NDMA does not interact directly with the security agencies, but instead goes through the ONS, which is in charge of overseeing and mobilising the required resources that apply to the MACA policy.

Once activated, there are several procedural issues. At the ONS level, there is a national security group, including different sub-committees, that meets in the ONS situation room. It is led by different line ministries, depending on the type of emergency. In parallel, communities are involved in security and disaster committees at the chiefdom and district levels.

With regard to the chain of command, while the MACA policy recognises the need for more clarity, its provisions remain vague and not easy to operationalise⁶⁶.

Stakeholders confirmed, drawing on the example of the 2017 Regent landslide, that these gaps result in operational difficulties. The lack of coordinated simulations and of a conceptual framework for disasters meant that responders were unprepared. In the absence of training and a coordinated plan, precious time was lost, with RSLAF drawing up a conceptual plan for the ONS on an ad hoc basis. At the community level, respondents gave varied answers when asked to describe recent responses to natural disasters. Some pointed out that, in addition to the local youth, who are usually the first responders, the police and military would come; however, the response was slow and inadequate with regard to effectively saving lives and property, as well as providing relief in the disaster's aftermath. Other respondents indicated that it is mainly INGOs that provide relief in the aftermath of a disaster.

Damage and loss assessments: Another weakness relates to capacities for damage and loss assessments. This includes harmonisation of data collection between, for example, RSLAF, the police, the Ministry of Health and Sanitation and all other actors engaged in data collection. A damage and loss assessment report following the devastating 2017 landslide outlines how the Government of Sierra Leone requested support from the World Bank Global Facility for Disaster Risk Reduction to carry out a detailed evaluation⁶⁷. The report summarises the respective assessments of different governmental agencies in their areas of expertise and describes some 'cross-sectoral linkages'⁶⁸ being used to prevent double counting of damages. While this is a promising sign of cooperation, the report confirms, inter alia, that, in terms of increasing preventive measures, difficulties in interagency cooperation persist.

Working with community safety volunteers

Communities are an important resource with regard to disaster risk responses. In addition to providing key insights on local risk factors and vulnerabilities and being partners in developing prevention solutions, they are a key resource for delivering emergency services, especially when there are access and mobility restrictions. At the strategic level, DRR planning fully recognises this potential of working with volunteers and strengthening community-based response capacities as an extension of state capacity for service delivery.

In practice, the stocktaking team did not find evidence of the existence of or support for these structures. Community members reported not being prepared to deal with disasters and mainly responding when events occur. This is not because they regard the issue as not important, but simply because of a lack of resources. Community members reported how the local youth of urban areas were engaged in preventive measures, such as cleaning up gutters before or during the rainy season, but they lack basic tools and equipment such as protective gear or wheelbarrows.

When community members volunteer to help in emergencies, they seem to be doing so from their own initiative and with little support such as training, equipment, coordination or financial resources. Volunteers are mainly local youth, and some stakeholders indicated cases of abuse, including theft, by individuals among the volunteers.

Social cohesion and peacebuilding

Overall, lack of support by government authorities to provide proper DRR has led to significant

disenchantment and frustration among the communities visited. At the same time, communities acknowledged that the security sector – were the government sincere about it – could play a vital role in DRR, including in leading initiatives to support and empower communities to become active partners in DRR efforts. This makes this a missed opportunity for creating trust in the security institutions as well as in the government.

Perception of the state

Issues around protection from the impact of disasters (man-made and natural) are at the forefront of communities' concerns. From speaking with the different community focus groups, it is evident that severe weather events as well as exposure to flood and fire risks are linked to questions around people-centred security, such as health, livelihood and food security.

Citizens see these areas as clear responsibilities of the state as duty bearer and service provider. Yet, these expectations towards the state are not being met, which is diminishing trust in the government and widening the gap between state and communities. Response times, the ways in which operations are conducted and failure to anticipate events that reoccur with some regularity were mentioned as issues by community focus groups.

In general, this adds to a widespread sense of frustration and of feeling abandoned by the government. This feeling of helplessness is further aggravated by widely repeated perceptions of corruption at all levels. There were also anecdotal reports of some members of the security services benefiting from relief items meant for disaster victims, giving rise to questions relating to the level of corruption versus the level of service delivery. Notably, several interviewees also indicated the complicity of

Photo: DCAF



international partners who continue to provide support to the government despite these obvious shortfalls.

Communities as partners in disaster risk reduction

The stocktaking team found a clear readiness among community members to be partners in DRR efforts. As many were not familiar at all with the local DRR structures and mechanisms, this also meant that they were not involved or consulted in any way. Therefore, community members expressed a wish to be more actively included in consultations and decision-making processes. Representatives of local youth, who many said were the de facto first responders, also expressed a sense of frustration about being left out of consultations and receiving little support.

Hence, stakeholders agreed that more should be done in terms of supporting communities in their own DRR efforts, including in planning and preparedness activities.

Prepare – findings

Service delivery

The newly established DRR structure under the NDMA is a promising initiative and step towards a comprehensive DRR effort. There is a strong policy framework, consisting of the DRR law, the DRR policy, the DRR plan and the NAP. In addition, on the implementation side, the NDMA, as a civilian-led specialised agency whose governing platform is chaired by the Vice-President, has significant potential to convene and coordinate multiple stakeholders. However, a number of areas remain problematic, as discussed below.

Data and budget: The NDMA Act stipulates the establishment of a dedicated disaster management fund. Yet, stakeholders reported the **absence of a dedicated budget** for the NDMA's operations and activities at both national and local levels. Moreover, there is an absence of linking data on disaster risk, loss and damages with budgetary planning. The absence of a dedicated and adequate budgetary allocation could signal the **absence of a strong political commitment** to DRR efforts, especially with regard to reducing risk and prevention.

Decentralisation and empowerment of local government levels: The success of the new DRR architecture relies on its ability to **impact on service delivery at the local level**. Anecdotally, none of the stakeholders at the district or community level mentioned the NDMA or local disaster management committees as being a partner or even an actor. This poses the question as to what extent the new system (noting that

it is not yet fully operational) is actually able to deliver and decentralise services at the regional, district and chiefdom levels, and contribute to broader efforts to strengthen local resilience to climate and disaster risks.

Coordination: The NDMA does not yet have the political clout to fully play its coordination role, and there remains resistance by some stakeholders towards **NDMA coordination**, including opportunities for efficiency with regard to the clear distinction of roles and responsibilities.

Capacity and training: Response times and effectiveness are a weakness of the Sierra Leonean DRR system. One particular weak point is the lack of **operational planning**, for example through contingency planning and regular joint simulation exercises that bring together all relevant stakeholders, and the **provision of dedicated equipment and training modules**. The security sector, especially RSLAF, appears to be engaged and willing to **increase its engagement on DRR**. Similarly, the NDMA seems ready to increase its role in the provision of **specialised DRR training to government stakeholders as well as to communities**, especially with regard to aspects such as data literacy for stakeholders across all sectors.

Prevention

The Sierra Leonean DRR system remains focused on response and relief, and several obstacles are hindering a **move towards more effective prevention** as outlined below.

Risk analysis and data: There are a variety of promising **analytical exercises**. The NDMA and the Meteorological Agency are fully embracing **data-driven approaches** to risk management. International partners also show a high level of engagement in supporting a multitude of risk assessment exercises.

However, in the absence of a unified database under NDMA leadership, there is a high risk of duplication and little opportunity for enabling synergies between the various efforts. There remains room for **data collection efforts to be better consolidated and integrated systematically**, for example in the form of a comprehensive risk assessment exercise. Not investing here is problematic for three reasons. First, it means that stakeholders have no means of (i) understanding and deciding which data are available or lacking, and where there might be overlap or a need to share data among agencies/institutions, and (ii) calculating respective intervals for updating data. Second, this makes it impossible to generate data for budgetary planning, as mentioned above. Third, it jeopardises the ultimate objective of putting the end user at the centre of

all data collection and dissemination efforts. The more complex and disorganised the data, the less accessible and useful, including in low resource settings (i.e. on 1st generation mobile phones, unrelated to the here and now and tied to a local context).

Urban planning: One possibly highly contentious area is **urban planning**, especially the resettlement of communities from disaster-prone areas. Ahead of the upcoming elections in June 2023, it may be especially difficult to generate the required political support with regard to difficult and unpopular choices that would enable meaningful **urban planning and resettlement**.

The mandate and competences of a planned task force, to be established between the MoE and UN-Habitat, are not yet clear.

Similarly, the role of **RSLAF's engineering unit** in demolitions could exacerbate tensions. It remains to be seen if, and to what extent, an inclusive consultation process with communities, taking socio-economic and livelihood aspects into account, will be put in place. Similarly, the extent to which using RSLAF's engineering unit for the construction of new housing will be able to alleviate the associated risks also remains unclear.

Early warning: Capacities and systems for **early warning and early action**, including the predictive and forecasting capacity of the Meteorological Agency, remain weak. So far, promising low-technology outreach initiatives, which reach the largest number of stakeholders, include the climate hour on public radio,

working with social media and the media in general, and working with civil society for early warning within communities.

Social cohesion and community perspectives

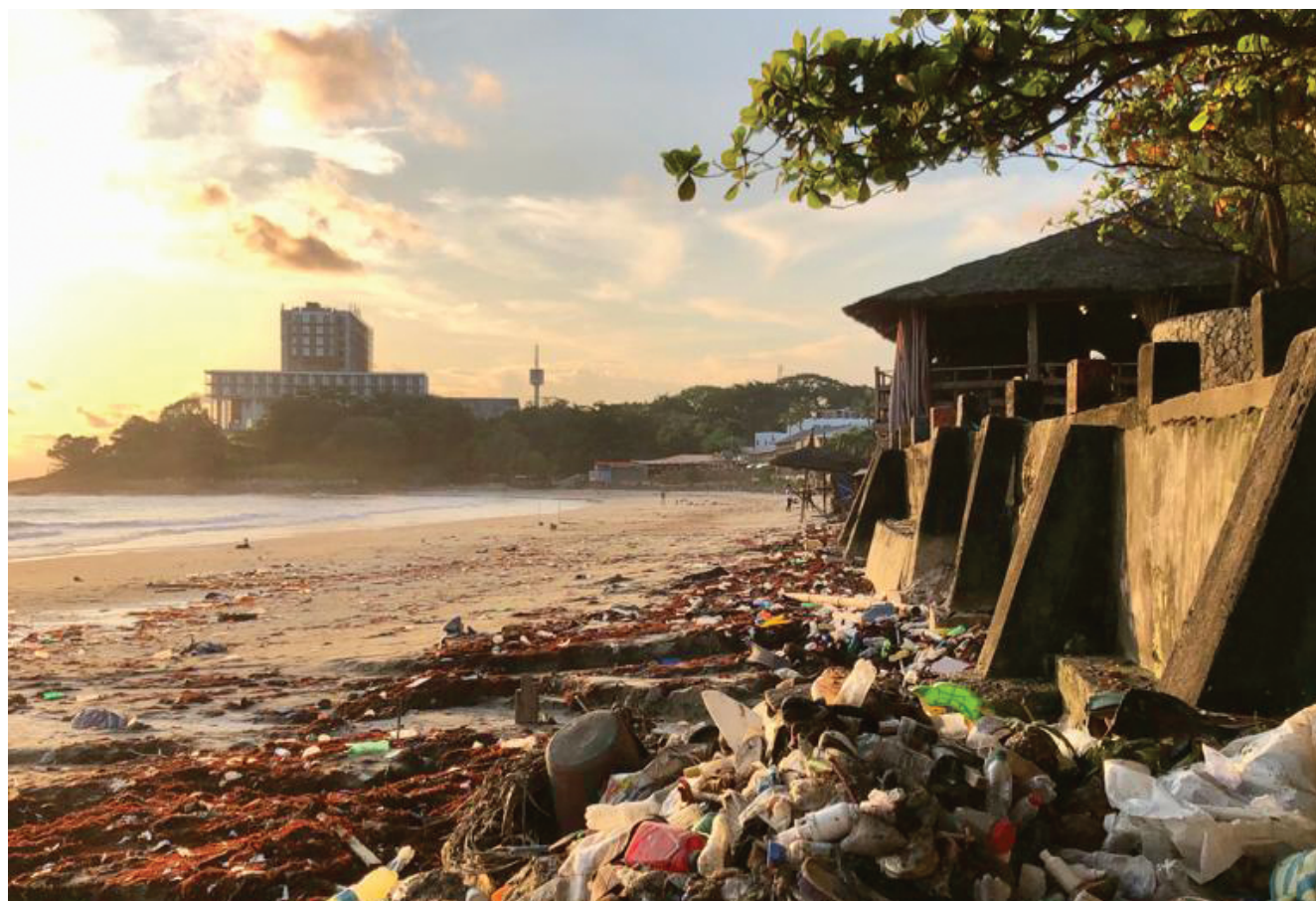
Effective DRR service delivery can strengthen social cohesion and trust in the state. To maximise this potential, **working with communities** is key. However, there are several challenges to this, as discussed below.

The gap between the population of Sierra Leone and the Sierra Leonean government seems to be growing and this threatens to undo peacebuilding gains made since the civil war. The country prides itself on a security sector reform process that **shifted from national to human security**. In the context of climate change and widespread environment degradation, ensuring human security includes having a healthy local environment, food and water security, and greater resilience to future disasters. Yet, opportunities to examine the priorities of individual security institutions and better align at least some of their activities with the needs of communities are not fully utilised.

Communities see a role for the state and the security forces in protecting them from the impact of natural and man-made emergencies. Yet, they share a **sense of frustration with regard to the effectiveness of service delivery and the lack of support for bottom-up initiatives**.

Communities, especially the youth, are willing and

Photo: DCAF



readily volunteer to support DRR, which is significant in a context in which governmental institutions face significant constraints in responding promptly to emergencies. Concrete support for the training of, equipment for and management of community security volunteer structures, as well as concrete opportunities for security institutions to work more closely with communities on DRR, is, however, missing.

3. Protect

Environmental protection in Sierra Leone is a complex undertaking that requires the involvement of a range of governmental and non-governmental stakeholders, as well as a wide range of technical skills and a deep understanding of the multiple factors that put pressure on (or conversely build the resilience of) local ecosystems. Related duties and responsibilities clearly extend well beyond the role of the security sector and a focus on environmental crime, particularly when considering that serious forms of harm to the environment are not always criminalised. Consistent with the exploratory nature of the stocktaking study, the analytical framework described below is used to examine the role of the security sector not only in enforcement relating to what can strictly be considered an environmental crime but also in detecting and preventing a wider range of practices that are both harmful to the environment and detrimental to human security.

As noted in the section on Climate change, environmental risks and vulnerabilities in Sierra Leone, a range of environmentally harmful practices are contributing to environmental degradation in Sierra Leone, with deforestation, waste management, illegal mining (minerals, sand, stone) and construction regularly cited as top environmental concerns.

Overall, environmental protection laws, especially after the latest revision, provide a solid basis for environmental protection; however, their implementation is inadequate and ineffective. This is due to a variety of factors, including inadequate enforcement capacities, remaining legal gaps, tensions in relations to the effects of enforcing these laws with livelihoods and corruption.

Stakeholders

Environmental protection in Sierra Leone involves a wide range of stakeholders, from conservation organisations, civilian agencies and representatives of the criminal justice chain to communities themselves. The recent legal reforms, mentioned above, have established or clarified and expanded the roles and responsibilities of

the following agencies⁶⁹.

The **MoE**, created in 2018, is the central political oversight body for environmental matters. It steers, oversees and manages the work of five specialised agencies⁷⁰. Interviewees mentioned the advantages of this new organisational set-up and its potential to foster increased collaboration between stakeholders and the deconfliction of mandates, for example the EPA and the National Protected Area Authority (NPAA).

Regular meetings of the constituent entities under the leadership of the ministry has apparently greatly enhanced coordination. There is also **an interministerial committee** that includes the heads of these agencies and facilitates collaboration with the ONS. One example given was collaboration on transboundary issues in national parks, with the committee cooperating with the ONS and the military on actions to tackle intruders from Guinea.

The **EPA**, founded in 2008 and now attached to the MoE, has a broad mandate to protect the environment and natural resources⁷¹. Originally focusing on the extractive industry, its main duties are to conduct environmental impact assessments of activities such as fisheries and mining, approve licences for industries such as logging, fishing and mining, engage in environmental protection (such as through its maritime response unit for oil spills) and monitor compliance with environmental standards. In the case of non-compliance, the EPA can withdraw licences, levy fines and bring cases to court. When there is a need for enforcement, it relies on the police and in extreme cases the military. Another area of responsibility is in monitoring waste management; however, as this responsibility is shared between the EPA (which advises on where there are suitable areas for building landfills), the Ministry of Health and Sanitation and city council health inspectors, this is an area that reportedly does not function well.

The minerals sector is central to Sierra Leone's economy and is expected to grow further. Responsibility for designing policies for this sector lies with the **Ministry of Mines and Mineral Resources (MMMR)**, which has contributed to the sector's success in strengthening environmental and economic governance. The MMMR is supported by the National Minerals Agency, which has significant room to manoeuvre in regulating the sector and does so with a strong technical perspective⁷². This improved institutional oversight has also been accompanied by the Mines and Minerals Act and the Petroleum Act since 2009 and 2011, respectively⁷³. Nonetheless, significant gaps remain in environmental governance, allowing individuals to bend rules to their will. Examining the case of artisanal and small-scale

mining, the MMMR and the EPA do not coordinate well, creating inconsistencies and loopholes in their mandates⁷⁴.

The **NPAA** is responsible for the stocktaking of biodiversity and associated risks, the adaptation of protected areas to climate change and its consequences, and increasing awareness for sustainable land use and forest management⁷⁵. The recent update of the Protected Areas Act reportedly expands its responsibilities and mandate in monitoring protected areas. This is done with the support of approximately 800 **forest guards**, a recent addition to the security sector. Forest guards are trained but unarmed park rangers who patrol protected areas and manage forests. Reports on the range of the forest guards' mandate were slightly conflicting – while some interviewees reported that forest guards were allowed to make arrests, others indicated that they were not mandated to arrest or charge and hence needed to be accompanied by police on their patrols. The NPAA also provides training on protection and environmental issues to police investigators, prosecutors and judges.

In terms of security sector actors engaged in environmental law, the police and RSLAF, especially the navy, play a major role. Within the **SLP**, the criminal investigations department (CID), specifically its recently established environmental crime unit, is responsible for environmental issues. The SLP sees itself as the primary law enforcement agency supporting other government agencies to follow their mandates. Concretely, this means that the SLP provides security for the operations of other agencies as well as conducting arrests and investigations. The police also reported mediating localised conflicts, given that the court system is overloaded and difficult to access for many people. There is also a marine police force that works with the navy and is responsible for investigating environmental crimes at sea.

The **environmental crime unit** has recently been established under the CID. Originally started as an anti-land-grabbing unit, with a mandate to implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora protocol, the work of the environmental crime unit has now been expanded to include logging, sand mining and other environmental issues, as a specialised capacity to support the rest of the police on environmental issues. Moreover, it provides support and backup to the patrols and inspection teams of other agencies, such as the EPA or the Ministry of Health and Sanitation, or teams up with the forest guards when demolishing illegal structures, such as dwelling, logging or mining operations. It has a small staff, of fewer than ten people, present only in Freetown, limiting its

functionality and effectiveness. There are similar issues around the lack of training and logistics, especially mobility, in other security agencies.

The military (RSLAF) provides support to the environmental police as well as the forest guards on an on-demand basis for larger and more difficult operations, for example when illegal miners are said to be heavily armed or when an area is of strategic significance. As an example of the latter, RSLAF are currently deployed to protect the Gola dam and its vicinity from deforestation.

The **navy** is working closely with the Ministry of Fisheries and Marine Resources (MFMR) on ensuring the protection of marine resources such as fish stocks. The MFMR oversees the Joint Maritime Committee, which includes the navy, the ONS, the port authority and customs⁷⁶. As the navy does not have the right to make arrests, it usually takes police on patrols, and there is also a joint operations centre.

While in some areas there is evidence of effective cooperation among these stakeholders, there is nonetheless a lack of clarity regarding roles and responsibilities that contributes to ineffective responses to issues, with negative consequences for human and environmental security. An example is the mandates among the EPA, the NPAA, the Mining Authority and the environmental crime police with regard to illegal logging and mining, lacking clarity and consistency.

Service delivery

The following three functions relating to combating environmental crime offer a useful framework for analysing the role of the security sector in environmental protection, as well as possible entry points for future reforms: (i) prevention of future harm, (ii) detection of violations, and (iii) imposition of sanctions (or other actions) against perpetrators⁷⁷.

Prevention of future harm

Legal framework: On a global level, Sierra Leone has signed or ratified a variety of international treaties governing environmental issues, such as wildlife trade⁷⁸, biological diversity⁷⁹ and climate change⁸⁰.

The **national** legal framework is a complex collection of corresponding national legislation, with many laws originating from the 1970s. In an attempt to modernise and take into account current environmental challenges, the entirety of this legislation is currently being updated. This indicates the importance placed on environmental issues by the government.

In 2022, the following acts were amended and are currently in various stages of the legislative process of approval by parliament⁸¹, signature of the President and gazetting: the Natural Protected Areas Act from 2012⁸², the Wildlife Conservation Act 1972⁸³, the Environmental Protection Act from 2000⁸⁴, the National Land Commission Act (2022)⁸⁵, the Forestry Act⁸⁶ and the Radiation and Nuclear Safety Act⁸⁷. The stocktaking team did not have access to the draft legislation and hence had to rely on information provided by interviewees.

Notably, for three acts that are awaiting to be gazetted (the Natural Protected Areas Act, the Environmental Protection Act and the Wildlife Conservation Act), stakeholders reported that there had been a wide consultation process that included the communities affected by the acts, such as communities relying on forests for livelihoods and communities living in proximity to forests. Another round of community outreach once gazetting has taken place is being planned.

From the information obtained, the amendments seem mainly to pertain to the administrative questions around agencies and mandates. All agencies are reporting to the recently established MoE. Moreover, there have been updates on fines and penalties to reflect current prices, and a greater importance has been placed on environmental protection. The NPAA's mandate has also been expanded to allow its inspectors to make arrests without having to wait for the police.

Sensitisation and awareness raising: The EPA has four regional offices that are tasked with routine monitoring as well as community education activities. The police also reported doing community engagement activities at the local level through its community policing partnership, talking to communities and raising awareness on environmental crime. However, interviewees mentioned the difficulties of engaging with citizens who do not understand why they should not engage in, for example, logging or sand mining, as their livelihood depends on these activities (which are in any case widely carried out with apparent impunity). The environmental police indicated that it has not yet engaged in public outreach and sensitisation but recognises the importance of doing so. In principle, the NPAA's mandate also includes sensitisation on land conservation⁸⁸.

Understanding motives and root causes for environmental crime: Effective crime prevention relies on a solid understanding of the motives for, perpetrators of and root causes of crime. Based on interviews, observations and research, there seem to be three different layers of environmentally destructive activities in Sierra Leone: (i) individual and livelihood-driven activities, (ii) organised criminal activities and (iii) corruption.

First, stakeholders at both institutional and community levels agreed that the vast majority of environmental crime and harm **caused at the individual level is driven by poverty and people's means of securing a basic livelihood**. Pressure from land scarcity and population growth has caused exponential migration towards Freetown and the Western Peninsula. This growth requires land for new housing, which often encroaches on protected areas and national forests. Activities such as illegal sand mining, quarrying, logging and mining are often the only source of income for impoverished families.

In some instances, the **absence of infrastructure forces communities to engage in environmentally destructive activities**. Without access to electricity, people rely on firewood, which is often turned into coal. Likewise, without proper waste management infrastructure, waste, including single-use plastic, gets dumped into gutters and eventually ends up in the sea. This was illustrated eloquently by a female participant in an FGD in Tombo. The participant explained that, as a community that depends on artisanal fishing, with over 4,000 boats, but not served by the electrical grid, fishing families in Tombo rely on firewood to smoke and preserve their catch. Therefore, as long as there is no access to refrigeration, she explained, she would continue to climb the protected hills behind the village to gather wood.

Second, turning to **organized crime**, there was vast agreement among stakeholders that the majority of environmental crimes, such as deforestation, mining, pollution of waterways and soil (for example with mercury as a side effect of mining) and illegal and unregulated fishing, are being **perpetrated by organised criminal groups** that usually operate transnationally. Vast maritime spaces in combination with limited marine capacities make effective control impossible. Similarly, porous and expansive borders with Guinea and Liberia provide an opportunity for organised groups of miners and loggers to come to Sierra Leone in what one interviewee described as an 'economic invasion'.

The criminal networks appear to be very well organised, and were described as sometimes heavily armed and often linked to other criminal activities such as human trafficking and drug smuggling⁸⁹.

Finally, **corruption** around environmental protection and degradation has two aspects. First, corruption was reported by interviewees to be an enabler of some organised criminal activities (such as bribing security officials at checkpoints). Second, corruption was said to play an even bigger role in legal forms of institutionalised environmental harm.

The stocktaking team came across anecdotal evidence in the conservation community regarding the extent

of the timber trade with China. On the one hand, the government is making significant efforts to protect its natural forests through revised environmental legislation, the institution of forest rangers and a temporary moratorium on timber logging, including the suspension of all export licences by the NPAA. On the other hand, the team heard reports of one timber export company, which has strong ties to the highest levels of government, being in possession of a valid export licence, creating a de facto monopoly. Through this channel, significant amounts of timber, especially rosewood, were said to be exported to China at prices significantly below the world market price. In addition to the destructive impacts on ecosystems and natural habitats (including monocultures of rosewood trees), this also means significant lost revenue for the country. In what was described as the 'legalisation of an illegal activity', stakeholders expressed concerns about the effectiveness of any response by law enforcement when faced with deeply engrained corrupt networks with ties to members of the elite. They also noted the responsibility of international partners in setting conditions and standards for their bilateral support.

Other preventative approaches: With regard to **prevention**, another mechanism that is being explored is the issuing of special bonds with banks and insurance companies. One problem is that mining companies have no further incentives to adhere to standards and regulations on cleaning up an area once operations have ended. Therefore, to prevent them from simply leaving an area as it is, the EPA thought of creating a bond that companies would be obliged to buy (as a kind of security deposit) and then, over time, as they progressively rehabilitate the area, the bond would be paid back to them.

Detection of violations

Generally speaking, environmental crimes are being detected in **two ways – through either monitoring activities and patrols or specific complaints by citizens**.

With regard to the former, several agencies are mandated to regularly conduct inspections and patrols. Among these are the EPA, which regularly inspects operations it has issued licences to. In the case of any infringements, it can suspend or withdraw the licences and has the right to order a demolition of the site. Similarly, forest guards under the NPAA are tasked with patrolling protected areas and also have the right to apprehend and bring suspects to the closest police station. It remains unclear to what extent the police, including the environmental police, pick up on environmental issues during its own patrols. The navy

and maritime police are responsible for patrolling the coastal areas.

The technical agencies mentioned above rely on police officers to accompany them on some patrols or inspections to provide security. While the environmental crime unit is present in only Freetown, the SLP is present throughout the country, with six regional divisions, two of which are in Freetown. One difficulty mentioned was the expense related to this, as the police require a stipend if they come along. In extreme cases (for example when facing heavily armed miners or loggers), RSLAF provides additional security. Both the EPA and the NPAA have signed memoranda of understanding with the police and military on the scope of the partnership, which is bidirectional. The NPAA for example also provide training to police investigators, prosecutors and judges to strengthen environmental knowledge across the entire criminal justice chain.

In addition to inspections and patrols, detection can happen through a citizen complaint with the local police, which can then bring in the relevant agency (the EPA, NPAA, etc).

Sanctions and remediation

The most common sanction mentioned were the withdrawal of licences (such as for mining operations), as well as the demolition of structures (mainly illegal buildings but also structures for mining operations and logging). While technical agencies such as the EPA and the NPAA do not have a mandate for this, the CID oversees the destruction of equipment, the demolition of installations and arrests (although forest rangers have the right to bring suspects to the closest police station). Anecdotally, it seems that the suspension and withdrawal of licences as well as the destruction of equipment can be done without an investigation or trial.

Without access to the revised legislation, the criteria that must be met for an investigation to be initiated remain unclear. If an investigation is necessary, the CID of the police take over. The CID can be supported by environmental crime unit specialists and will gather evidence to prepare the case to be taken to court. It remains similarly unclear if the handing out of fines and penalties requires an investigation and trial, or if this can be done immediately. With regard to the rehabilitation and remediation of damaged areas, the only information obtained was on the planting of trees (see above under Prepare).

Social cohesion and peacebuilding

Environmental crime and pollution, and their impacts

on ecosystems, have the potential to negatively affect human security and contribute to local tensions and conflict in Sierra Leone. Security forces are obviously not the only solution to these problems. However, given the importance of these issues to the Sierra Leonean population, there is certainly **potential for greater engagement in environmental protection to strengthen trust in security institutions** and the government more broadly.

Building on the distinction between livelihood-driven environmental crimes or harm caused by Individuals and the large-scale activities of organised criminal or corrupt networks mentioned above, there are a number of dimensions and perspectives with regard to the impact of the security sector's role. Communities identified two root causes of environmentally detrimental activities: poverty and corruption.

Communities are well aware of the links between intact ecosystems and their own livelihoods and development perspectives. For example, fishermen in Susan's Bay mentioned the impact of the massive accumulation of plastic waste in the sea on fish stocks.

Despite this, communities in Tombo and Susan's Bay still acknowledged that they engage in environmentally detrimental activities. This is illustrated by the case of tree cutting in Tombo mentioned above. Similarly, inhabitants of the informal settlement of Susan's Bay reported dumping their trash in the gutters out

of necessity, as there are no other options for waste disposal.

In both instances, communities did not advocate increased law enforcement, and reported that there had been clashes with the police around the enforcement of the law. What they would see as more helpful are practical development solutions, such as access to electricity and waste management facilities. Classic conservation programming however was said to fall short in this way, focusing on only environmental issues and not including livelihood components.

National institutions are aware of these tensions and the stocktaking team did find some initiatives aimed at easing the tension between environmental protection and livelihoods. The stakeholder consultation process carried out before the passing of new environmental legislation is an example of such an initiative. The NPAA reported plans to take into account exceptions for sustainable individual use, as well as traditional cultural and medicinal practices, treating them differently from criminal activities, when translating the new act into administrative regulations. Once legislation is final, another round of consultation and sensitisation is planned.

Communities are also aware of large-scale criminal and/or corrupt operations and networks engaged in illegal, unreported and unregulated fishing, timber logging (especially of rosewood) and mining. There is a significant sense of frustration with the government's

Photo: DCAF



inactivity or complacency in relation to what people see as the de facto selling of the country's natural resources for individual enrichment. This also affects how people view the security sector's possible range of actions. Communities have low expectations for the effectiveness of agencies like the environmental criminal police or the forest guards in the face of deeply ingrained corruption at the highest levels (including the possible implication of the forest guards being involved in some of the corruption). For example, there were reports of the operators bribing security sector staff manning checkpoints to smuggle timber and minerals.

Protect – findings

Enforcement

While updated legislation is an important and welcome step in the right direction, the crux of the remaining obstacles to combating environmental crimes and harm lies with **implementation and enforcement**.

Budget and resources: Many obstacles to the enforcement of legislation come down to significant **budgetary constraints**, which challenge environmental governance. While the stocktaking team did not have access to budgets and financial documents, as an example, the NPAA reportedly received only 10% of its requested operational budget for the current year, submitted in January and dispersed in July.

Coordination: The recent revisions of **environmental legislation** are an encouraging sign of interest in and recognition of the importance of the area by the government. Similarly, the creation of the new MoE is a promising step towards improved policy coherence and coordination. Yet, its current capacity to fulfil these functions vis-à-vis the many technical agencies remains weak.

Moreover, significant gaps in the legal and operational frameworks remain and enable the continuation of activities that degrade the environment with impunity. These gaps pertain to issues around **cooperation between relevant government bodies**, such as between the Ministry of Lands, Housing and Country Planning, the MMR, the National Minerals Agency and the Roads and Transport Authority.

For example, waste disposal is one of the main drivers of both environmental pollution and flood risk, yet it is not clear where responsibilities lie among city councils, municipalities, the EPA and the Ministry of Health and Sanitation. Another example relates to who has responsibility for patrols and inspections, for instance forest rangers, the EPA or some other agencies not



Photo: Jess Kwong

included in this study (such as forests and wildlife agencies or the National Minerals Agency).

Data and licenses: The overlapping of roles enables a large group of stakeholders to issue different types of licences, including for building and construction (including in protected areas), for mining operations and for imports (including of used electronic goods or vehicles) and exports (including timber exports). Consequently, this renders the enforcement of environmental legislation void. For example, once legal permits for building are issued by the Ministry of Lands, Housing and Country Planning, even if the construction is in the green belt, environmental agencies and the police have little power to enforce legislation. One stakeholder spoke about 'legalising an illegal activity'.

Capacity and training: The creation of new instruments such as implementing forest rangers is a positive step towards enforcing environmental protection while limiting the risks associated with the securitisation of the environmental protection space. Likewise, the newly established environmental crime unit of the police is another such positive step. Yet, a **lack of capacity and equipment for inspections and patrolling** makes deterrence/prevention, as well as detection,

very challenging. Most agencies do not have sufficient manpower or equipment. The navy reported a lack of necessary equipment to track vessels; ships are not able to stay out at sea after nightfall, leaving the entire coastal area without surveillance at night. With regard to the police, the environmental crime unit is present in only Freetown and is seriously understaffed, with fewer than ten staff. Ideally, there would be environmental crime specialists all around the country. The police also lack proper equipment, including for forensics, making it difficult to collect evidence and build legal cases. Stakeholders reported that access to laboratory testing is highly problematic, and field test kits to test water and soil for chemicals are urgently needed. Forest guards are unarmed and, like other agencies, do not have a sufficient number of vehicles to guarantee mobility or communications, nor do they have sufficient basic supplies (for example handcuffs).

In addition to capacity challenges, all actors, including the environmental police and environmental agencies, **reported a lack of specialised training** on the scientific and legal aspects of environmental crime. Forest guards in particular were said to need more specialised training beyond their one-month training in the RSLAF international peace missions' training centre, which educates guards on physical fitness and patrolling (although many of them reportedly have a military or police background). To strengthen the entire criminal justice chain, other groups, such as prosecutors and judges, should also be included in offers for specialised training.

Prevention

Data and environmental standards: Part of the problem is the **lack of clear environmental standards and data-driven approaches**, for example for the import of electronic goods or the roadworthiness of vehicles. One aspect is that current practice treats all of the above simply as sources of government revenue (for example import taxes or mining licences) without clear environmental standards (for example specifying minimum conditions for imported second-hand electronic goods or for vehicles to be roadworthy). According to one interviewee, basically everything that enters the country this way is de facto waste. Moreover, it gives rise to the question of which legislation has precedence over the other.

Regional cooperation: Environmental crimes linked to organised criminal networks have strong transboundary elements. These crimes can be tackled regionally through strong cooperation among regions to stop transit (such as border management and control of the maritime space) and internationally through strong cooperation



Photo: DCAF

with the countries of origin (for example on smuggling of waste) and destination (such as timber). Efforts in this respect remain extremely weak.

Corruption: Endemic corruption at all levels is both an enabler and a beneficiary of environmental crime. In addition to questions related to the institutions issuing permits and licences for import and export, as well as for natural resource extraction, questions were asked about the level of professionalism of the forest guards. It was reported that the main qualification for recruitment was the political affiliation of the applicants. For the quality and integrity of their work, this means that it is difficult to enforce discipline and professional standards, as they are politically well connected. There were some reports about forest guards colluding with illegal loggers and miners.

Social cohesion and community perspectives

While government agencies recognise differences between environmental crimes committed as part of transnational organised crime and livelihood-driven motives, it remains difficult to translate this distinction into a thorough analytical effort and enforcement measures, and effectively link those who could provide alternative livelihoods. This includes challenges vis-à-

vis international partners who prefer operating in siloed approaches, rendering it impossible to link support to the security sector, climate change mitigation and economic development.

4. Findings and conclusions

Disasters and environmental degradation have a visible impact on human security in Sierra Leone and therefore, particularly in the context of the increasing climate change-related risks, deserve greater attention in efforts to strengthen Sierra Leone's security sector governance. While security sector actors are certainly not the only stakeholders involved in DRR and environmental protection, they do have an important and perhaps underappreciated role to play both in preparing for disaster and in responding to and preventing harm to the environment, which will ultimately affect public health, livelihoods and social cohesion.

Recommendations

In addition to considering recommendations from various Sierra Leonean institutions as a way of informing their own programmes, and as a possible roadmap for supporting Sierra Leone, **international partners** should focus their support on increasing the **accountability** and **effectiveness** of security sector engagement, as well as supporting **comprehensive approaches across the triple nexus** as follows:

1. In recognising their own **accountability** for their support to the Government of Sierra Leone and the extent to which is being used to improve human security, **international partners** should:
 - throw the weight of their bilateral and multilateral development assistance behind encouraging the Government of Sierra Leone to strengthen environmental governance, increase initiatives to fight corruption and reinforce accountability;
 - work with the Government of Sierra Leone to on the annual budget appropriations to ensure that available funding is effectively and efficiently channelled towards priority issues around climate and environmental risks to human security;
 - support initiatives that create positive financial incentives throughout the Sierra Leonean administration for delivering climate and environmental security, such as initiatives developing clear institutional and individual performance indicators and linked bonus schemes;
 - ensure that all programmes are underpinned by a
2. **Comprehensive approaches** by international partners across the **triple nexus** could include the following:
 - International partners should programmatically link climate change, environmental protection, livelihood and food security, as well as peacebuilding and good governance. As an initial step, this would require **mapping all relevant activities in the space to conceptually define** the programmatic range of the climate–development–security nexus. Such mapping would provide an overview of current programming and could identify gaps and opportunities for synergies.
 - They should support **comprehensive approaches** and provide innovative climate finance instruments to tackling disaster risks and environmental violations, for example by combining programmes that aim to strengthen law enforcement and the criminal justice chain in conjunction with a focus on raising environmental awareness, and to provide alternative means of income generation; by making sure that programmes work with multiple institutions (for example the environmental crime police, forest rangers, customs police and the EPA) and develop approaches that use the unique capacities, mandates and expertise of each institution; or by consciously leveraging the positive knock-on effects of youth engagement and skills development when supporting disaster volunteers.
3. To increase the **effectiveness** of DRR and environmental protection, international partners should:
 - prioritise support for Sierra Leone's climate and DRR efforts through the security sector, as well as for environmental protection, in **funding decisions**;
 - provide support for a **needs assessment** of security sector institutions' DRR capacities;
 - prioritise programmes that **concurrently build the DRR capacities** of security institutions, civilian agencies and communities, to allow them to work together in managing and responding to disaster risks;
 - provide support for a **review of new legislation and criminal justice capacity on environmental harm** with regard to the remaining legal gaps that enable the continuation of significant activities that degrade the environment with impunity; possible

thorough political economy analysis that examines the drivers of and incentives for environmentally harmful practices.

areas of interest include the division of labour and cooperation between ministries, corruption and practices around issuing licences;

- support the roll out of DRR legislation, obtain proof of concept and provide **support to a pilot project** in one district, creating a **district disaster management committee and establishing an ideally youth-led volunteer group**; giving communities, especially the youth, a bigger role and more responsibility, as well as the necessary structural and financial support, appears to offer an important opportunity to provide better services and strengthen social cohesion;
- provide support for an **assessment across the entire criminal justice chain**, including of the police and public prosecution, and provide targeted support to build up the criminal justice chain's capacity with regard to environmental crime and related corrupt practices.
- Conduct a strategic analysis of maritime security with regards to environmental protection, both nationally as well as with regards to regional cooperation in the Gulf of Guinea (Yaounde Architecture).

The **Government of Sierra Leone** should do the following:

1. It should address **corruption and strengthen accountability** with regard to licensing and permits as follows:

- It should empower existing oversight actors, such as the Anti-Corruption Commission or the Auditor General, within and external to institutions;
- To strengthen accountability and close one of the gaps in the legal framework on environmental protection, it should task the MoE with developing binding environmental standards to guide all entities issuing licences and permits for import and export, industrial activities, construction and natural resource extraction. The required binding nature of these standards would also require the establishment of a clear hierarchy of legislation and authority.
- It should build the capacity of parliamentarians, civil society and media on these standards and their implementation.

2. It should apply **comprehensive approaches** as follows:

- It should ensure that DRR and CCA efforts are well integrated and fully account for the impacts of slow-onset disasters such as pollution, habitat destruction and changing water patterns.

- As part of broader security planning and climate adaptation efforts, it should strengthen integrated, cross-sectoral planning in the area of land usage management, especially urban planning, to ensure a realistic picture of land use and the associated potential for localised conflict is available.
- It should invest in closing the gap between the state and the population by delivering services around civil protection and DRR consistently across the territory, in a non-discriminatory and inclusive way. This may include strengthening efforts to ensure that the needs and capacities of women, youth and marginalised groups are given a prominent role in DRR;
- Institutionalize approaches that create positive financial incentives for its administration to deliver climate and environmental security, such as linking payment bonuses to clearly defined performance indicators.

3. It should take steps to render the new DRR architecture and environmental law **effective and operational** as outlined below:

- **It should secure adequate resourcing for DRR**, including an adequate annual appropriation for the national disaster management fund. In addition to ongoing funding for the DRR architecture, this would require building on NDMA data on historical losses and damages to define the necessary financial envelope for a contingency fund for response and relief operations, as well as developing standing arrangements for disbursement channels.
- It should strengthen the position of the NDMA beyond coordination, including by allocating a dedicated budget.
- It should roll out the regional-, district- and chiefdom-level DRR structures foreseen in the law, including funds, appointments, processes and the establishment of civil protection volunteers.
- It should ensure that the entirety of the new environmental legislation is passed quickly and clearly maps and clarifies the mandates, roles and responsibilities of all actors involved in DRR, including the structures and capacities of relevant actors at the local government level.
- It should review implementation of the Law on the Environment to identify gaps in enforcement and develop a prioritised, data-driven approach to addressing gaps that have the greatest consequences for human and environmental security.
- It should increase engagement with regional

and international partners on cooperation on transnational aspects of climate risks and environmental crime.

The **ONS and security institutions** should focus on the following:

1. To improve **effectiveness** and service delivery, **RSLAF** in particular should:

- integrate DRR into **strategic planning**; this could include exploring the development of a standing capacity for DRR, and should include streamlining DRR into RSLAF's strategies and planning (such as specialised staff and equipment), strengthening analytical, planning and response capacities for DRR across the security forces, especially RSLAF, and making them available to support DRR and CCA efforts;
- focus on **improving responses and performance management**, for example by conducting a human resources (HR) assessment, developing a set of DRR-related service delivery performance indicators and putting emphasis on disaster risk-specific training within RSLAF standard training;
- strengthen **inter-agency coordination** through joint analysis, information sharing, planning, training and SOPs; this means ensuring that the environmental crime police, as a key source of technical expertise within the security forces, is fully integrated into the DRR system and can help to establish links between DRR, environmental protection and longer-term risk factors associated with climate change.

2. To increase its **effectiveness**, the **SLP** should:

- review the current priorities, activities and capacities of the environmental crime police, with a view to strengthening its presence beyond Freetown to better prevent future harm to the environment;

- coordinate with the rest of the criminal justice chain to ensure that police officers, prosecutors and judges have the technical capacity and training required to properly detect environmental crimes, manage records of seizure, transfer evidence to the prosecutor, draft technical reports and complete all other steps required to ensure that serious environmental crimes can be successfully prosecuted.

3. As part of a broader strategy to **improve trust** in the government and **social cohesion**, the ONS and all security institutions should work with the MoE, the Meteorological Agency, the EPA, the NPAA and other agencies with environmental expertise to:

- strengthen understanding across security institutions of environmental legislation, as well as understanding of the role that climate and environmental factors play in human security, instability and conflict;
- strengthen performance management by creating regular reporting requirements and accountability loops, leveraging on existing or new accountability mechanisms to measure performance;
- identify new opportunities to use security sector planning, and analytical and logistical capabilities to better support civilian authorities in the area of environmental protection;
- explore non-traditional roles of the security sector, including in awareness raising and sensitisation on DRR and environmental issues.

The **NDMA** should do the following:

1. It should focus on strengthening the **prevention and preparedness** components of DRR activities as outlined below:
 - It should **update the national DRR policy and the National Disaster Management Preparedness Plan**, including by developing clear **guidance for all stakeholders** on joint responses.

Photo: DCAF



It should also conduct regular joint exercises and simulations for all stakeholders.

- It should improve early warning mechanisms and prevention strategies, including by developing a **comprehensive disaster risk assessment methodology** and consolidating the available data on risks through the development of an **information management system**. It should also strengthen participatory approaches to data gathering and local consultations, including by adopting an open data policy (making all data publicly available without access restrictions and in formats that are relevant for different audiences, including communities) and strengthening data sharing between agencies. Finally, **low-tech communication channels need to be identified for early warning mechanisms**. These channels must be able to reach remote communities cut off from electricity, mobile phones and the internet.
- 2. It should **operationalise the DRR architecture**:
 - It should focus on fostering decentralisation and ensure that the DRR architecture at the **local level** is operational (including the committees). In addition to a possible pilot (see also recommendation for international partners), another practical area for investment could be the provision of further support for the emergency number project.
 - It should create a system to **recruit, train, deploy and manage community volunteers**, paying attention to participatory and inclusive approaches, and the provision of oversight and accountability of the volunteers.
 - It should liaise with the ONS on developing a surge capacity mechanism to share resources among regions and districts, and on developing basic service delivery indicators to analyse the progress of security forces in moving towards greater responsiveness to community needs.
- 3. It should play a leading role in integrating disaster risk management, CCA and mitigation efforts.
- 4. It should focus on playing a leading role in efforts to **increase the visibility of DRR** structures, processes and risks, and lead on comprehensive sensitisation efforts on disaster and environmental risks, including with state institutions at the national and local levels, as well as communities.
- 5. It should give **communities, especially the youth**, a bigger role and more responsibility, as well as providing the necessary structural and financial support, as doing so appears to offer an important opportunity to provide better services and strengthen

social cohesion.

The MoE should do the following:

1. To fully leverage its role in **policy guidance and ensuring policy coherence**, it should further strengthen its **coordination capacity** and use its position to further **clarify roles, responsibilities and mandates** of the various subordinate agencies.
2. To optimize its role in the management and oversight of subordinate agencies, the MoE should strengthen its capacity and mechanisms for **accountability and oversight** to address corruption at all levels.
3. As lead on climate change and environmental risks, the MoE should increase its engagement in capacity-building:
 - It should invest in the **professionalisation** of its own staff as well as the staff of the various technical agencies, especially forest rangers. An **HR assessment** could be useful for mapping the number of staff, their level of education and training, and their specialisations.
 - The MoE should expand its activities with regard to the **provision of training and educating the instructors** of other government agencies, for example those playing a role in climate and environmental security in the security sector, as well as judges and prosecutors. Relevant topics would be an improved understanding of working with meteorological data, forecasting, geological risks, methods to detect pollution and prohibited substances, as well as the overall climate–security nexus.
4. The MoE's laudable efforts to **consult with communities** on new legislation should be further enhanced. Beyond informing communities, true consultation would also mean investing in dialogue processes, seeking bottom-up inputs and identifying solutions to existing problems.

Implications for security sector governance and reform

- **Recognising and reinforcing climate security roles:** from human and planetary security perspectives, the international community should recognise and engage with the security sector in mitigating climate and environmental risks as a top priority:
 - This would involve a shift from the **delivery of humanitarian aid by international the international community to empowering national partners** to be the main provider of this service, and adopting a broader definition of

the security sector that also includes institutions working on civil protection.

- In terms of environmental crime, it would mean strengthening **international and regional cooperation on fighting environmental crime**, as well as recognising the importance of preventing **non-criminalised forms of environmental harm**. Taking a legal approach that creates strong disincentives and enforcement mechanisms through criminalising offences (in addition to civil offences) has been shown⁹⁰ to be a promising entry point in this regard.
 - To be translated into SSG/R programming, relevant functional areas in the security sector, such as DRR and fighting environmental crime, should be included conceptually in thematic strategies and could become a focus for support in **country or regional engagement strategies** and through **multilateral missions**.
 - As this is an emerging area of focus for SSG/R, it will be important for future programmes to collect additional **data that can inform design and implementation** in areas such as the link between security sector roles, peacebuilding and social cohesion.
- **Corruption and accountability:** corruption is both an enabler and a driver of environmental crime. Increased commitment to accountability is required from national authorities and the international partners providing resources. Investment in capacities for tracking financial flows can increase transparency and at the same time enable better forward financial planning.
- **Environmental degradation through waste disposal and pollution:** waste disposal and pollution are **human security issues** that are likely to become more important in the coming years as pressures on ecosystems from climate change and demands for natural resources continue to increase. In addition to affecting public health, polluted land and water supplies diminish both food and water security. In a global context of tightening environmental regulations, security institutions in many regions may also need to strengthen their understanding of the transnational dimensions of illegal waste disposal.
- **Emphasising prevention:** a longer-term focus on **prevention** is critical for both DRR and environmental protection. **Risk-informed planning** of infrastructure and housing, for example, can make a significant contribution to mitigating future disaster risks but is not always well integrated with DRR functions. Here too, security institutions can offer scenario-based planning and other methodologies
- that may not be commonly used across all sectors. In addition, widespread pollution, beyond being an environmental crime, is a **slow-onset disaster**, with potentially catastrophic consequences for future food and water security. A preventive approach is also essential in enforcing environmental legislation, as communities can ill afford the **loss of productive agricultural land, reductions in supplies of clean drinking water** or the other consequences of environmental degradation.
- **Coordination and integration:** tackling environmental crime and analysing disaster risks require specific technical skills (for example in the area of environmental sampling to detect crimes), and, because of the complexity, particularly **close coordination is required between security institutions and environmental and other government agencies** that may not traditionally work together. Furthermore, at the community level, **environmental harm is often linked with livelihoods** and thus solutions that focus solely on enforcement are unlikely to succeed. Therefore, integrated approaches are essential.
- **Comprehensive international partner approaches:** working effectively on DRR, environmental protection and more broadly on the triple nexus also requires donors to adopt a comprehensive approach. This means international partners developing innovative funding instruments that can cover several hitherto separate sectors and policy areas, and having the ability and willingness to engage with a wide range of national counterparts across sectors.
- **Supporting capable communities:** working at the intersection of the environment and security – particularly in contexts of widespread challenges and limited security sector resources – also requires a realistic analysis of **what communities themselves can do as a first line of defence**, and where security institutions must play a role.
- **Sustaining peace:** the responses of security actors to climate and environmental risks, as well as the way in which they engage with communities and individual citizens on these risks, have great potential to influence social cohesion and peacebuilding. Programming should fully leverage this, and training in civil–military relations, dialogue and community engagement is needed. Fostering security actors’ understanding of the connections between livelihoods and climate and environmental risks, together with specialised public order management training and preparation that emphasises de-escalation techniques, would mitigate the risks of conflict escalation.

Bibliography

- Akinlaja, Emmanuel. 2022. Parliament Ratifies Joint Venture Agreement on The Sierra Leone State Lottery Company Limited. *Sierraloaded*. Available at <<https://sierraloaded.sl/news/parliament-ratifies-joint-venture-agreement-sierra-leone-state-lottery-company/>>. Accessed 26 November 2022.
- Aleksandrova, Mariya, Sascha Balasko, Markus Kaltenborn, Daniele Malerba, Peter Mucke, Oliver Neuschäfer, Katrin Radtke, et al. 2021. *World Risk Report 2021.pdf*. Bochum: Bündnis Entwicklung Hilft. Available at <https://weltrisikobericht.de/wp-content/uploads/2021/09/WorldRiskReport_2021_Online.pdf>. Accessed 12 October 2022.
- Beck, Hylke E., Niklaus E. Zimmermann, Tim R. McVicar, Noemi Vergopolan, Alexis Berg, and Eric F. Wood. 2018. Present and future Köppen-Geiger climate classification maps at 1-km resolution. *Scientific data* 5 (1). Nature Publishing Group: 1–12.
- Blinker, Leslie. 2016. *Country Environment Profile (CEP) Sierra Leone*. Cardiff, United Kingdom: CONSORTIUM PARSONS BRINCKERHOFF. Available at <<https://web.archive.org/web/20081001231356/http://www.delsle.ec.europa.eu/en/whatsnew/Docs/Final%20Report%20Country%20Environmental%20Profile%20%28CEP%29%20SL%2019-OCT-06.pdf>>. Accessed 12 October 2022.
- Busby, Joshua W., Todd G. Smith, Kaiba L. White, and Shawn M. Strange. 2013. Climate Change and Insecurity: Mapping Vulnerability in Africa. *International Security* 37 (4): 132–172.
- CITES. 2023. List of Contracting Parties. Available at <<https://cites.org/eng/disc/parties/chronolo.php>>. Accessed 17 May 2022.
- Collier, Paul, and Marguerite Duponchel. 2013. The Economic Legacy of Civil War: Firm-level Evidence from Sierra Leone. *The Journal of Conflict Resolution* 57 (1). Sage Publications, Inc.: 65–88.
- Convention on Biological Diversity. 2023. List of Parties. Secretariat of the Convention on Biological Diversity. Available at <<https://www.cbd.int/information/parties.shtml>>. Accessed 17 May 2022.
- DCAF ISSAT, International Security Sector Advisory. 2022. Food Security and the Security and Justice Sector. *International Security Sector Advisory Team (ISSAT)*. Available at <<http://issat.dcaf.ch/Learn/SSR-in-Practice/Thematics-in-Practice/Food-Security-and-the-Security-and-Justice-Sector>>. Accessed 16 November 2022.
- European Commission. Directorate General for Environment. 2021. *Combating environmental crimes and related infringements: environmental compliance assurance : guidance document*. LU: Publications Office. Available at <<https://data.europa.eu/doi/10.2779/035969>>. Accessed 25 April 2022.
- Gironde, Christophe. 2019. *Land Grabs, Big Business and Large-Scale Damages*. CIES RESEARCH BRIEF. Geneva, Switzerland: , Centre for International Environmental Studies, The Graduate Institute. Available at <<https://www.graduateinstitute.ch/sites/internet/files/2020-11/Research%20brief%204.pdf>>.
- Government of Sierra Leone. 1988. Forestry Act, 1988. Available at <<http://extwprlegs1.fao.org/docs/pdf/sie5732.pdf>>. Accessed 26 November 2022.
- Government of Sierra Leone. 2000. The Environment Protection Act, 2000. Available at <<http://www.sierra-leone.org/Laws/2000-2.pdf>>. Accessed 6 October 2022.
- Government of Sierra Leone. 2008. ENVIRONMENT PROTECTION AGENCY ACT, 2008. Government of Sierra Leone. Available at <<https://epa.gov.sl/wp-content/uploads/2021/10/EPA-ACT-2018.pdf>>. Accessed 13 October 2022.
- Government of Sierra Leone. 2009. The Mines and Minerals Act, 2009. Available at <<http://www.sierra-leone.org/Laws/2009-12.pdf>>. Accessed 19 December 2022.
- Government of Sierra Leone. 2010. ENVIRONMENT PROTECTION AGENCY ACT, Amendment 2010. Available at <<https://epa.gov.sl/wp-content/uploads/2021/10/EPA-Act-2010-Amended.pdf>>. Accessed 13 October 2022.
- Government of Sierra Leone. 2011. Petroleum (Exploration and Production) Act, 2011. Available at <<http://www.sierra-leone.org/Laws/2011-07.pdf>>. Accessed 19 December 2022.
- Government of Sierra Leone. 2012a. The National Protected Area Authority and Conservation Trust Fund Act. Available at <<http://www.sierra-leone.org/Laws/2012-11.pdf>>. Accessed 13 October 2022.
- Government of Sierra Leone. 2012b. The Nuclear Safety and Radiation Protection Act, 2012. Available at <<http://www.sierra-leone.org/Laws/2012-07.pdf>>. Accessed 26 November 2022.
- Government of Sierra Leone. 2020. The National Disaster Management Agency Act. Available at <<https://disasterlaw.ifrc.org/media/3020>>. Accessed 5 October 2022.
- Government of Sierra Leone. 2021. National Adaptation Plan 2021 - Sierra Leone. Government of Sierra Leone. Available at <https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf>. Accessed 14 June 2022.
- Government of Sierra Leone. 2022a. Military Aid to Civil Authorities - A Guide to Operations in Sierra Leone. Available at <[http://www.mod.gov.sl/docs/RSLAF%20Policy%2026%20-%20Military%20Aid%20to%20Civil%20Authorities%20\(MACA\).pdf](http://www.mod.gov.sl/docs/RSLAF%20Policy%2026%20-%20Military%20Aid%20to%20Civil%20Authorities%20(MACA).pdf)>. Accessed 6 October 2022.
- Government of Sierra Leone. 2022b. The Environment Protection Agency Act, 2022. Available at <<https://www.parliament.gov.sl/uploads/acts/THE%20ENVIRONMENT%20PROTECTION%20AGENCY%20ACT,%202022.pdf>>. Accessed 26 November 2022.

Government of Sierra Leone. 2022c. The Forestry (Amendment) Act, 2022. Available at <[https://www.parliament.gov.sl/uploads/acts/THE%20FORESTRY%20\(AMENDMENT\)%20ACT,%202022.pdf](https://www.parliament.gov.sl/uploads/acts/THE%20FORESTRY%20(AMENDMENT)%20ACT,%202022.pdf)>. Accessed 26 November 2022.

Government of Sierra Leone. 2022d. The Nuclear Safety and Radiation Protection (Amendment) Act, 2022.

Government of Sierra Leone. 2022e. NDMA, Partners Launch Two Key Disaster Management Products, Ensure Access to Timely Data on Prevention and Response – NDMA SL. Available at <<https://ndma.gov.sl/2022/11/08/ndma-partners-launch-two-key-disaster-management-products-ensure-access-to-timely-data-on-prevention-and-response/>>. Accessed 29 November 2022.

Government of Sierra Leone. 2022f. National Land Commission Act, 2022. Available at <<https://www.fao.org/faolex/results/details/en/c/LEX-FAOC212618/>>. Accessed 19 December 2022.

GRAIN. 2008. Seized: The 2008 landgrab for food and financial security. Available at <<https://grain.org/article/entries/93-seized-the-2008-landgrab-for-food-and-financial-security>>. Accessed 26 November 2022.

Hernandez, Marco, Simon Scarr, and Katy Daigle. 2021. The messy business of sand mining. *Reuters*. Available at <<https://graphics.reuters.com/GLOBAL-ENVIRONMENT/SAND/ygdpzkyavw/>>. Accessed 25 November 2022.

IMF, International Monetary Fund. 2022. World Economic Outlook (October 2022) - Real GDP growth. Available at <https://www.imf.org/external/datamapper/NGDP_RPCH@WEO>. Accessed 14 November 2022.

INTEGEMS. 2017. *Update of Sierra Leone Hazard Profile and Capacity Gap Analysis*. Freetown: Integrated Geo-Information and Environmental Management Services (INTEGEMS). Available at <[https://www.harpis-sl.website/images/reports/SECURED_FULL%20REPORT%20FINAL%20\(09-11-2017\)%20-%20SIERRA%20LEONE%20HAZARD%20PROFILE%20AND%20CAPACITY%20GAP%20ANALYSIS.pdf](https://www.harpis-sl.website/images/reports/SECURED_FULL%20REPORT%20FINAL%20(09-11-2017)%20-%20SIERRA%20LEONE%20HAZARD%20PROFILE%20AND%20CAPACITY%20GAP%20ANALYSIS.pdf)>. Accessed 6 February 2023.

INTERPOL, Environmental Security Sub-Directorate. 2014. Study on Fisheries Crime in the West African Coastal Region. Interpol. Available at <<https://www.interpol.int/content/download/5144/file/INTERPOL%20Study%20on%20Fisheries%20Crime%20in%20the%20West%20African%20Coastal%20Region%20EN.pdf>>. Accessed 25 November 2022.

IPCC. 2019. *Summary for Policymakers — Special Report on Climate Change and Land*. Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Available at <<https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/>>. Accessed 8 July 2022.

IPCC. 2022. *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Edited by Hans-Otto Pörtner, Debra C Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A. Alegria, M. Craig, et al. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge UK: Cambridge University Press.

Ishizawa, Oscar A., Luc Bonnafous, Maria Gaspari, Alex Giron Gordillo, Joaquín Muñoz Díaz, Antonios Pomonis, and Nathalie Wandel. 2020. Disaster Risk Management Diagnostic Note - Sierra Leone. International Bank for Reconstruction and Development / The World Bank. Available at <<https://documents1.worldbank.org/curated/en/728231623317357684/pdf/Sierra-Leone-Disaster-Risk-Management-Diagnostic-Note.pdf>>.

IUCN, and UNEP-WCMC. 2022. Protected Area Profile for Sierra Leone from the World Database on Protected Areas. *Protected Planet*. Available at <<https://www.protectedplanet.net/country/SLE>>. Accessed 16 November 2022.

Mabey, Prince, Li Wei, Abu Sundufu, and Akhtar Lashari. 2020. Environmental Impacts: Local Perspectives of Selected Mining Edge Communities in Sierra Leone. *Sustainability* 12: 5525.

Maconachie, Roy, and Felix Conteh. 2021. Artisanal mining policy reforms, informality and challenges to the Sustainable Development Goals in Sierra Leone. *Environmental Science & Policy* 116: 38–46.

Mansaray, Lamin R., Jingfeng Huang, and Alimamy A. Kamara. 2016. Mapping deforestation and urban expansion in Freetown, Sierra Leone, from pre- to post-war economic recovery. *Environmental Monitoring and Assessment* 188 (8): 470.

Miles, Lee, Henry Bang, and Jamie Martin. 2021. *Enhancing Disaster Management in Sierra Leone - Driving African Capacity-Building in Disaster Management (AFRICAB) Final Report*. Bournemouth University - Disaster Management Centre. Available at <<https://eprints.bournemouth.ac.uk/36083/1/BUDM%20SL%20Report%20FINAL%20%28v3%29.pdf>>. Accessed 5 October 2022.

ND-GAIN. 2020. *Notre Dame Global Adaptation Initiative - Rankings*. Notre Dame Global Adaptation Initiative. Available at <<https://gain.nd.edu/our-work/country-index/rankings/>>. Accessed 7 November 2022.


Nehren, Udo, Karen Sudmeier-Rieux, Simone Sandholz, Marisol Estrella, Mila Lomarda, and Tania Guillén. 2014. *The Ecosystem-based Disaster Risk Reduction - Case Study and Exercise Source Book*. Geneva and Cologne: Partnership for Environment and Disaster Risk Reduction and Center for Natural Resources and Development. Available at <https://postconflict.unep.ch/publications/Eco-DRR/Eco-DRR_case_study_source_book_2014.pdf>. Accessed 19 July 2022.



-
- Queensland Government. 2022a. Prevention Preparedness, Response and Recovery Disaster Management Guideline. *Government Website*. Available at <<https://www.disaster.qld.gov.au/dmg/Pages/DM-Guideline-2.aspx#5>>. Accessed 14 July 2022.
- Queensland Government. 2022b. Prevention Preparedness, Response and Recovery Disaster Management Guideline - 5 Response. *Government Website*. Available at <<https://www.disaster.qld.gov.au/dmg/Response/Pages/default.aspx>>. Accessed 14 July 2022.
- Samura, Ibrahim Sorious. 2022. NDMA Embarks on Public Education on Risk Reduction, Prevention And Management of Disaster. *Sierra Loaded*. Available at <<https://sierraloaded.sl/news/ndma-embarks-public-education-risk-reduction-prevention-disaster/>>. Accessed 29 November 2022.
- Sierra Leone National Protected Area Authority. 2019. *Understanding Threats to West African Biodiversity and Linkages to Wildlife Trafficking: Sierra Leone Field Assessment Report*.
- Trzaska, Sylwia, Alex de Sherbinin, Paola Kim-Blanco, Valentina Mara, Emilie Schnarr, Malanding Jaiteh, and Pinki Mondal. 2018. *Climate Change Vulnerability Assessment in Mangrove regions of Sierra Leone: Long Version*. e USAID West Africa Biodiversity and Climate Change (WA BiCC) project. Palisades, NY: Center for International Earth Science Information Network, Columbia University. Available at <http://www.ciesin.columbia.edu/wa-bicc/SierraLeone_Coastal_VA_long-report_jan2018.pdf>. Accessed 16 November 2022.
- UN, United Nations, Department of Economic and Social Affairs, Population Division. 2022. World Population Prospects 2022, Online Edition. United Nations. Available at <<https://population.un.org/wpp/Download/>>.
- UNDP, United Nations Development Programme. 2022. Human Development Index. *Human Development Reports*. United Nations. Available at <<https://hdr.undp.org/data-center/human-development-index>>. Accessed 14 November 2022.
- UNDRR. 2015. Sendai Framework for Disaster Risk Reduction 2015 - 2030. United Nations Office for Disaster Risk Reduction (UNDRR).
- UNODC, and WWF. 2022. *Crimes that Affect the Environment and Climate Change*. Available at <https://www.unodc.org/res/environment-climate/resources_html/Crimes_that_Affect_the_Environment_and_Climate_Change.pdf>. Accessed 22 November 2022.
- UNTC. 2016. Paris Agreement - United Nations Treaty Collection. Available at <https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsq_no=XXVII-7-d&chapter=27&clang=_en>. Accessed 17 May 2022.
- USAID. 2016. CLIMATE CHANGE RISK PROFILE: Sierra Leone - Fact Sheet. Available at <https://pdf.usaid.gov/pdf_docs/pa00mtz3.pdf>. Accessed 16 November 2022.
- Vorrath, Judith. 2014. *From war to illicit economies: organized crime and state-building in Liberia and Sierra Leone*. Report. SWP Research Paper. SWP.
- Wheeler, David. 2011. Quantifying Vulnerability to Climate Change: Implications for Adaptation Assistance. *SSRN Electronic Journal*. Available at <<http://www.ssrn.com/abstract=1824611>>. Accessed 12 October 2022.
- World Bank. 2017. *International Development Association Project Appraisal Document on a Proposed Grant in the Amount of SDR 14.2 Million (US\$20 Million Equivalent) to the Republic of Sierra Leone for an Extractive Industries Technical Assistance Project Phase 2*. World Bank. Available at <<https://documents1.worldbank.org/curated/en/272761511578835426/pdf/SIERRA-LEONE-PAD-11032017.pdf>>. Accessed 19 December 2022.
- World Bank. 2022. World Development Indicators. Available at <<https://datacatalog.worldbank.org/search/dataset/0037712/World-Development-Indicators>>. Accessed 14 November 2022.
- World Bank Group. 2017. *Sierra Leone Rapid Damage and Loss Assessment of August 14th, 2017 Landslides and Floods in the Western Area*. Washington, DC: World Bank. Available at <<http://hdl.handle.net/10986/28836>>. Accessed 29 November 2022.
2022. Co-Chairs' Summary: Bali Agenda for Resilience. Available at <<https://www.preventionweb.net/publication/co-chairs-summary-bali-agenda-resilience>>. Accessed 7 July 2022.
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Endnotes

1. Such as the Environmental Protection Agency and National Protected Area Authority.
2. Co-Chairs' Summary: Bali Agenda for Resilience 2022.
3. Nehren et al. 2014.
4. IPCC 2019.
5. Busby et al. 2013; Aleksandrova et al. 2021; Wheeler 2011.
6. Interviewees included the Vice-President of Sierra Leone and representatives of the Office of National Security, the Sierra Leone Police (including the environmental crime unit and the Inspector-General), the Republic of Sierra Leone Armed Forces, the Ministry of the Environment, the National Protected Area Agency, the Environmental Protection Agency, the National Disaster Management Agency, the Meteorological Agency, district councils, civil society networks for climate change, a chimpanzee sanctuary, the Irish Embassy and the German Embassy.
7. Held in Tombo, a rural community mainly relying on fishing, and Susan's Bay, an urban slum area in a disaster-prone area.
8. World Bank 2022.
9. Collier and Duponchel 2013; IMF 2022; UNDP 2022; UN 2022; World Bank 2022.
10. UN 2022.
11. Mansaray, Huang, and Kamara 2016.
12. Ibid.
13. Ishizawa et al. 2020; World Bank 2022.
14. World Bank 2022.
15. National Security and Central Intelligence Act, 2002.
16. Ishizawa et al. 2020.
17. Beck et al. 2018; Blinker 2016.
18. Government of Sierra Leone 2021.
19. Ishizawa et al. 2020.
20. Government of Sierra Leone 2021; Ishizawa et al. 2020.
21. Sierra Leone's coastline is 560 km.
22. Ishizawa et al. 2020.
23. Government of Sierra Leone 2021.
24. Ibid.
25. Ibid.; Trzaska et al. 2018; for further implications for SSR, see also DCAF ISSAT 2022.
26. Government of Sierra Leone 2021.
27. USAID 2016; Government of Sierra Leone 2021.
28. ND-GAIN 2020.
29. IPCC 2022; Ishizawa et al. 2020.
30. Ishizawa et al. 2020.
31. Government of Sierra Leone 2021, 13.
32. IUCN and UNEP-WCMC 2022.
33. INTERPOL 2014.
34. Vorrath 2014.
35. Mabey et al. 2020.
36. See, for example, Gironde 2019; GRAIN 2008. Definitions for land-grabbing vary, but according to grain.org, who pointed towards a re-emerging trend in 2008, land-grabbing occurs when land is being bought up from local and small-scale farmers for the purpose of controlling large amounts of land in a specific area. This land is then used by the buyers, which can be public or private, to increase their food security and seek financial returns. The environmental consequences include deforestation and biodiversity loss due to increased monocultural and intensive farming practices, while socially exacerbating existing inequalities and risking more land-related conflicts. In the context of Sierra Leone, there have been cases in which land had been sold illegally, whereby the land did not belong to the seller. In other cases, land that belonged to an absent owner was illegally occupied.
37. INTERPOL 2014.
38. Ibid.
39. Sand is a crucial element for the construction of infrastructure projects, such as roads and buildings, because it is a core component for inter alia concrete, cement and windowpanes. Although sand comes in different forms, shapes and sizes, the most abundant kind of sand found in deserts and on the seabed cannot be used for these purposes. Instead, construction needs sand that has specific characteristics, which is mostly found at shores as well as beds of rivers and lakes. Hence, it is in these areas and biomes where the high demand for sand is being met through mining, and it is this sand that is often exported for use in infrastructure projects abroad. As this type of mining is rarely regulated, the diverse environmental and social effects can range from accidents related to the mining to indirect effects, such as mining pits serving as breeding grounds for mosquitos and subsequently increasing public health risks. See, for example, Hernandez, Scarr, and Daigle 2021.
40. Mabey et al. 2020.
41. Miles, Bang, and Martin 2021.
42. UNDRR 2015.
43. For more details on the specific advancements, see Miles, Bang, and Martin 2021.
44. Government of Sierra Leone 2020.
45. Ibid.
46. Such as the National Security Coordinator, the Permanent Secretary, Ministry of Internal Affairs, the Inspector-General of Police, the Chief of Defence Staff, Ministry of Defence, the Director General.
47. Government of Sierra Leone 2020.
48. Government of Sierra Leone 2022a.
49. Queensland Government 2022a.
50. Government of Sierra Leone 2021.
51. Interview, Freetown, September 2022.
52. INTEGEMS 2017.
53. Samura 2022.

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54. Government of Sierra Leone 2022e.
 55. Queensland Government 2022a.
 56. UNDRR 2015; Art. 19 (b) Disaster risk reduction requires that responsibilities be shared by central Governments and relevant national authorities, sectors and stakeholders, as appropriate to their national circumstances and systems of governance; Art. 19 (e) Disaster risk reduction and management depends on coordination mechanisms within and across sectors and with relevant stakeholders at all levels, and it requires the full engagement of all State institutions of an executive and legislative nature at national and local levels and a clear articulation of responsibilities across public and private stakeholders, including business and to ensure mutual outreach, partnership, complementarity in roles and accountability and follow-up.
 57. Ishizawa et al. 2020.
 58. Interviewee, Freetown, September 2022.
 59. A tabletop exercise was conducted for health emergencies following the Ebola crisis, with stakeholders agreeing on the great value of such an exercise.
 60. Interview, Tombo, September 2022.
 61. Ishizawa et al. 2020.
 62. Ibid.
 63. Government of Sierra Leone 2022a. It stipulates that the 'Armed Forces do not maintain standing forces for MACC tasks. Assistance is provided on an availability basis and the Armed Forces cannot make a commitment that guarantees assistance to meet specific emergencies.' (p. 17).
 64. Queensland Government 2022b.
 65. Government of Sierra Leone 2022a: 'when there is a civil emergency because of a natural disaster or malicious threat, responsibility for the immediate response lies with the emergency services. The NSC/NSCCG may request military assistance if they conclude civil resources are found to be locally inadequate and/or such resources are not available within a timeline that would assist in the saving of life or the alleviation of distress' (p. 17).
 66. Ibid.: 'The need for a hierarchy of command is recognized by the civil authorities, but does not necessarily imply a formal chain of command between Central Government and local agencies. A core principle of the Police command chain, for instance, is that the Police are operationally independent of Government (a position diametrically opposite to the position of the Armed Forces for whom an operation must be approved by the Defense Minister). There are in practice, however, well-exercised procedures for the control of incidents at both local and regional levels. These procedures will vary between agencies and therefore a multiagency response to an emergency will require the integration of discrete command structures with different characteristics' (p. 5).
 67. World Bank Group 2017.
 68. Ibid., 26.
 69. The stocktaking team were not able to meet with several key stakeholders and consequently obtained very limited information on these stakeholders: the Ministry of Lands, Housing and Country Planning, the Ministry of Health and Sanitation, the Ministry of Agriculture, the National Revenue Authority, the Maritime Administration, the National Wildlife Authority and the National Forestry Authority.
 70. The Radiation and Nuclear Safety Authority, the Wildlife Authority, the Forestry Authority, the Environmental Protection Authority, National Protected Areas Authority.
 71. Government of Sierra Leone 2008; Government of Sierra Leone 2010.
 72. World Bank 2017.
 73. Government of Sierra Leone 2009; Government of Sierra Leone 2011.
 74. World Bank 2017; Maconachie and Conteh 2021.
 75. Sierra Leone National Protected Area Authority 2019.
 76. INTERPOL 2014.
 77. European Commission. Directorate General for Environment. 2021.
 78. CITES 2023.
 79. Convention on Biological Diversity 2023.
 80. UNTC 2016.
 81. The stocktaking team did not have access to these amendments, but the information was obtained from interviews with the Permanent Secretary of the Ministry of the Environment.
 82. Government of Sierra Leone 2012a.
 83. Government of Sierra Leone 2022f; Akinlaja 2022.
 84. Government of Sierra Leone 2000; Government of Sierra Leone 2022b.
 85. Government of Sierra Leone 2022f.
 86. Government of Sierra Leone 1988; Government of Sierra Leone 2022c.
 87. Government of Sierra Leone 2012b; Government of Sierra Leone 2022d.
 88. Government of Sierra Leone 2012a.
 89. INTERPOL 2014.
 90. UNODC and WWF 2022.
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