

Protecting People, Planet and Peace: Shaping the Future of the Security Sector

Chapeau report of a stocktaking study on security sector roles in climate and environmental security



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Introduction

The impact of climate change and environmental degradation on security is the subject of a growing body of research and is increasingly prominent on international policy agendas. From sudden onset disasters to the more gradual but equally serious problems of deforestation, pollution, and other forms of harm to the environment, **climate and environmental risks are affecting human security**. The combination of rising temperatures, less predictable rainfall, more frequent and severe natural disasters, and the degradation of protective ecosystems affect the availability of food, water, and arable land, leading to **humanitarian and health crises and displacement**. The associated loss of lives and livelihoods and the growing costs of recovery from disasters further undermine human development. Increasing resource scarcity can also become a driver for communal and interstate **conflict, violent extremism**, and radical narratives. All of these effects amplify and enlarge existing vulnerabilities and inequalities, including those based on gender, age, ability, ethnicity, or socioeconomic status.

Over the past several years, much of the research¹ on climate security has focused on better understanding the complex ways in which climate and environmental factors interact with other risks to become “threat multipliers”, exacerbating existing risks and tensions and potentially giving rise to new conflicts. Many organizations are now turning to identifying solutions to these problems, from conservation projects to peacebuilding approaches which address climate and environmental risks. Comparatively little has been done to fully explore how the capacity of security institutions (often on the front lines of responses to these risks) can be leveraged to protect both people and planet, and how their contributions can be better integrated with the work of other sectors.

Tapping into the potential of the security sector **to protect people, planet and peace** is a powerful, yet currently undervalued, instrument to achieve positive impacts along the humanitarian-development-peace nexus. In a context of rapidly accelerating climate change, institutions including the military, police, border guards and civil protection forces are already playing an active and perhaps underappreciated role in responding to risks to local communities, ecosystems, and biodiversity. Their contributions include responding to natural disasters; tackling environmental crimes including illegal logging, mining, and waste disposal, as well as wildlife trafficking;



Photo: DCAF

and occasionally supporting efforts to restore degraded ecosystems, through reforestation campaigns for instance. These contributions are not without risk, as demonstrated by reports of members of security forces being implicated in environmental crime or abuses of human rights, for example, when evicting indigenous communities from protected areas.² At the same time, **the potential capacity of security institutions to address climate and environmental risks is considerable** and could be strengthened through improved management and oversight.

Strengthening governance and addressing questions of transparency, accountability and responsiveness are at the heart of security sector governance and reform (SSG/R), but security sector reform processes have historically focused more on traditional threats to human security, including criminality, violence, and conflict. And yet, in many settings responses to climate and environmental risks are one of the most common points of contact between security institutions and vulnerable populations. At a time when the impact of the climate crisis is increasing,³ it is worth considering how security sector reform processes can play a more meaningful role in protecting communities and the planet from a broader spectrum of risks.

Efforts to improve the contributions of the security sector in these areas are also relevant to a range of international policy agendas. In recent years there has been an increasing focus on the **right to a clean and healthy environment** as a fundamental human right.⁴ **Environmental fragility** now appears as a dimension in the OECD's framework for analysing fragility, underscoring the ways in which environmental risks can undermine resilience and security.⁵ Considering growing concerns regarding the impact of climate change on conflict, integrating an understanding of climate and environmental risks in future SSG/R programmes offers a different and potentially promising pathway for contributing to **conflict prevention** and peacebuilding. Effective security sector responses to disasters, as well as support to disaster risk reduction, can play a role in global **climate adaptation** efforts. Finally, the work of security institutions in responding to climate and environmental risks has implications for humanitarian affairs, development, and peacebuilding, which means tapping into the potential of the security sector to protect people, planet, and peace can also achieve positive impacts at the heart of the **triple nexus**.

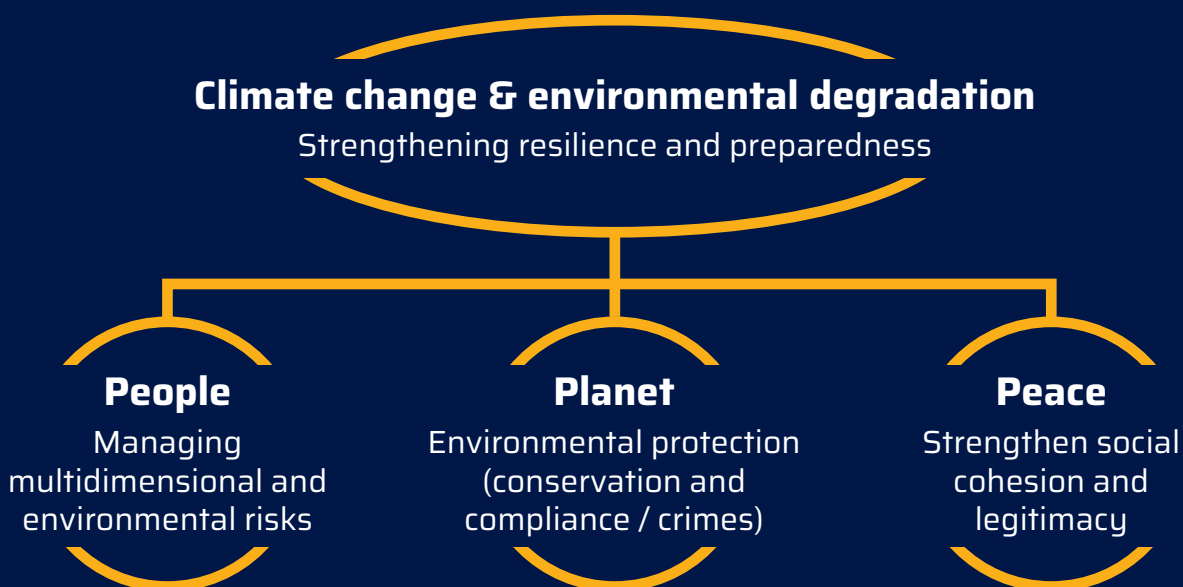
The need to better understand the current and potential contributions of the security sector to addressing climate and environmental risks led four members of DCAF's

International Partners Group to request a **stocktaking study on the role of the security sector** in responding to these risks. The primary objectives of the study were to:

- Explore the role the security sector is currently playing in responding to climate change and environmental degradation;
- Identify opportunities, challenges, and entry points for future SSG/R programmes; and
- Identify limitations and risks associated with security sector involvement in this space.

This report is based on field work done in **Brazil**,⁶ **the occupied Palestinian territory**,⁷ **the Philippines**,⁸ and **Sierra Leone**,⁹ and provides a snapshot of the challenges and opportunities that lie ahead for international partners in the area of security and justice. The stocktaking study focused on two main areas in which security institutions already have a relevant legal mandate: **disaster risk reduction** and **environmental protection**, with an emphasis on responses to **environmental crime**. Additionally, it looked at the potential for **peacebuilding** and **social cohesion** dividends through exploring the role of the security sector in a space in which communities and the state collaborate for preventing, mitigating or responding to climate and environmental harm.

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



A mixed methods approach was applied, combining desk research with field research that included key informant interviews, focus group discussions and direct observation. The study included the perspectives of formal security and environmental institutions, civil society organizations, and communities to explore how national stakeholders and their international partners can realize the full potential of the security sector to contribute to disaster risk reduction, environmental protection, and climate change adaptation.

This report provides a summary of the main climate and environmental risks in each of the four contexts, with an emphasis on those which have the clearest impact on security, as well as the range of stakeholders, legislation, and international commitments which shape the work of the security sector. The report also summarizes key findings from the case studies and describes implications for SSG/R as well as priorities for future programmes.

The findings and recommendations describe the ways in which **climate and environmental security are inherent dimensions of people-centred security**. They emphasize the complex nature of **working across sectoral boundaries** and the need for approaches which better integrate security, environmental and development objectives. They also highlight the importance of including a wider range of stakeholders in future SSG/R programmes and developing a broader definition of what is required from the security sector to **keep communities safe in a future shaped by climate change**. As described below, the ability of security institutions to respond effectively to climate and environmental risks can directly affect community perceptions. Failure to protect communities from this broader spectrum of risks has long-term implications for **social cohesion** and the legitimacy of the state.



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

Photo: DCAF



Reflections on Climate and Environmental Risks

The security sector plays a key role in preparing for, mitigating and responding to climate and environmental risks depending on the type and nature of these risks. **Environmental crime** is most commonly understood as “*illegal activities harming the environment* and aimed at benefitting individuals or groups or companies from the exploitation of, damage to, trade or theft of natural resources, including, but not limited to serious crimes and transnational organized crime”.¹⁰ Environmental crime includes (i) illegal removal of environmental resources, such as through illegal mining, logging, poaching, and fishing, as well as (ii) the illegal deposit of environmentally harmful goods, such as mercury, e-waste and toxic substances. The difference between an **illegal activity** and an **illicit activity** is that the former is forbidden by law, whereas the second breaks social norms. Notably, while illicit activities do not necessarily have to be illegal or criminalized, they can in fact be much more harmful in terms of their impact.

Environmental harm includes any harm done to the environment, ranging from harm to the individual to full ecosystems. Both illicit and illegal activities cause environmental harm.

A **disaster** is “a serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts”.¹¹ Climate-induced disasters include extreme weather events, landslides, flooding and droughts (See Table 1). **Climate change** is an influential factor on disaster risk. **Disaster Risk** is assessed based on combining the (disaster) hazard with levels of exposure and vulnerability. It is mitigated by coping capacity.¹² **Coping capacity** is dependent upon Disaster Risk Reduction efforts (DRR) and Disaster Risk management efforts (DRM). **DRR** is about reducing disaster risks through systematic efforts to analyse and manage the causes of disasters, including through reduced exposure to hazards, decreased vulnerability of people and property, sustainable management of

Table 1: Observed hazards and crimes connected to environmental and climate security.

Context	Environmental Crimes	Natural Hazards
Brazil	<ul style="list-style-type: none"> Illegal mining Illegal waste disposal Illegal logging Illegal agricultural encroachment Wildlife trafficking 	<ul style="list-style-type: none"> Drought Heavy rainfall Land/mudslides Flooding Extreme temperatures
occupied Palestinian territory	<ul style="list-style-type: none"> E-waste disposal and burning Illegal waste disposal Wildlife trafficking 	<ul style="list-style-type: none"> Drought Land/mudslides and rockfalls Extreme weather events
Philippines	<ul style="list-style-type: none"> Illegal logging Illegal mining Wildlife trafficking Pollution (3rd biggest source of plastic pollution globally) IUU fishing Illegal land use conversion 	<ul style="list-style-type: none"> Drought Land/mudslides Extreme weather events Flooding Typhoons
Sierra Leone	<ul style="list-style-type: none"> Illegal logging Sand mining Illegal waste disposal Illegal land use conversion Illegal mining Illegal fishing 	<ul style="list-style-type: none"> Drought Heavy rainfall Land/mudslides Flooding Sea-level rise Extreme weather events

land and the environment (which directly connects DRR to environmental crime), and improved preparedness for adverse events. **DRM** refers to the management of disasters, rather than preparedness and response activities. While DRM focuses on the implementation of DRR, the terms are often used interchangeably, and this note will address both under the term DRR. **Climate change**, particularly through the occurrence of disasters (and the corresponding response or lack thereof), influences **climate risk**.¹³ **Climate security** describes all potential security issues and threats tied to climate change, which includes rising sea-levels, more frequent occurrence of extreme weather events and changing crop yields.¹⁴ Climate security is a subset of **environmental security**. The latter sheds light on security and conflict implications of the environment more broadly as well as changes and degradation thereof.¹⁵ The concept of **environmental risks** then focuses on potential threats and risks to environmental security, for instance risks that arise as a consequence of environmental degradation and change, such as pollution or poaching.¹⁶

The four contexts explored in this study varied in terms of local ecosystems, vulnerability to climate change, and specific environmental and climate risks, although there were also common challenges across the contexts. A brief overview of the distinguishing characteristics and risks from each context is provided in Table 1. The effects of these hazards are exacerbated by vulnerabilities including high reliance on farming and fishing, water supply and sanitation, poor access to safe sources of electricity, unsafe mining practices as well as weak critical infrastructure. More detailed descriptions can be found in the case studies¹⁷ (published separately).

Security Sector Roles in DRR and Environmental Protection¹⁸

In all four contexts in the study, security institutions respond to climate insecurity through complex multi-agency mechanisms. In some cases, security institutions have a leading role, for example through providing initial responses to natural disasters or investigating and responding to environmental crimes. In others, they support civilian agencies in charge of disaster risk management or environmental protection. Across the four contexts of the study, security sector actors are contributing to human security and climate security through the following two core functions: disaster management/civil protection and environmental protection/fighting environmental crimes.

The table below lays out the main actors involved, as well as key national legislation per case study. A broad definition of the security sector was applied in order to capture roles, as well as potential for collaboration.

Photo: DCAF



Table 2: Key actors with a mandate for environmental protection and disaster risk reduction as well as relevant national legislation.

Context	Environmental Protection		Disaster Risk Reduction	
	Stakeholders	Legislation	Stakeholders	Legislation
Brazil	<ul style="list-style-type: none"> President of the Republic Ministry of the Environment and Climate Change Secretariat of the Environment of the Presidency of the Republic with the Brazilian Institute for the Environment and Renewable Natural Resources and the Chico Mendes Institute. The latter coordinate with indigenous people. Military Environmental Police Federal Police Brazilian Armed Forces. State-level and Municipal agencies Brazilian Institute of the Environment and Renewable Natural Resources (IBAMA). 	<ul style="list-style-type: none"> Law N° 6.938 or National Policy for the Environment (1981) Law 9.985, which establishes and regulates the National System of the Environment (2000) Law 9.605 mentioning security sector in relation with environmental crime (1988). Diverse Action Plans for the Amazon, Cerrado, low carbon agriculture, mining. 	<ul style="list-style-type: none"> Civil Defence Ministry of Integration and Regional Development National Secretariat for Protection and Civil Defence National Council for Civil Defence and Protection National Centre for Natural Disaster Monitoring and Alerts Police Brigades Fire Brigades The Army, the Navy, the Military Fire Brigades and the Military Police can participate in the execution of some tasks in emergency response Civil society inclusion through awareness weeks. 	<ul style="list-style-type: none"> National Policy on Protection and Civilian Defence National Civil Defence and Protection System National Policy on Climate Change (N° 12.187/2009) Law N° 12.608 on DRR Decrees 2.652/98, 5.445/2005 and 9.073/2017
oPt	<ul style="list-style-type: none"> Environmental Quality Authority Palestinian Water Authority Environmental Police Civil Police Customs Police Office of the Public Prosecutor 	<ul style="list-style-type: none"> Article 34 of the Basic Law Law on the Environment 	<ul style="list-style-type: none"> Civil Defence Directorate Security forces with specific mandates around DRR security dimensions, such as protection from looting National DRM Platform, supported by a technical team, including Civil Defence, Civil Police, Customs Police, Preventive Security and National Security Forces. Four Disaster Response Groups on recovery, basic human needs; infrastructure and services; economy culture and demographics. National Committee on climate change. Volunteers and civil society representatives. Civil society involvement in DRR through IFRC as an example. 	<ul style="list-style-type: none"> Civil Defence Law no. 3 New DRR Draft Law (Council of Ministers No. (16/142/17M.R/RG))

Context	Environmental Protection		Disaster Risk Reduction	
	Stakeholders	Legislation	Stakeholders	Legislation
Philippines	<ul style="list-style-type: none"> Office of the President of the Philippines National Anti-Environment Crime Task Force Philippines Port Authority (& Bureau of Customs) Environmental Law Enforcement and Protection Service Anti-Illegal Logging Task Force National Bureau of Investigations Environmental Crime Division Department of the Interior and Local Government Philippine National Police Armed Forces of the Philippines Philippine Coast Guard Department of Environment and Natural Resources, Bureau for Aquatic Resources, and Environmental Management Bureau. Bantay Dagat (guards of fishing grounds) and Bantay Gubat (forest guards). Philippine Operations Group on Ivory and Illegal Wildlife Trade (POGI). 	<ul style="list-style-type: none"> Constitution of the Philippines (1987) Wildlife Resources Conservation and Protection Act (2001) Revised Forestry Code (1975) Fisheries Code (1998) National Integrated Protected Areas System Act (1992) Philippine Mining Act (1995) Clean Air Act (1999) Toxic Substances and Hazardous and Nuclear Waste and Control Act (1990) Ecological Solid Waste Management Program (2001) National Plan of Action on Marine Litter (2019) Local Government Code (1991). 	<p>National Disaster Risk Reduction and Management Council:</p> <ul style="list-style-type: none"> Main executive and advisory body: Office of Civil Defence Cabinet-level government stakeholders Private sector representatives Civil society organisations <p>Other actors engaged in DRR:</p> <ul style="list-style-type: none"> Armed Forces of the Philippines Philippine National Police Bureau of Fire Protection Philippine Coast Guard Department of Environment and Natural Resources Department of Science and Technology (for prevention) Department of Interior and Local Government (for local level coordination) Local Government Units Active Role for civil society 	<ul style="list-style-type: none"> Philippine Disaster Risk Reduction and Management Act of 2010 (Republic Act 10121) National Disaster Risk Reduction and Management Plan 2020-2030 National Disaster Risk Financing and Insurance Strategy (2015)

Photo: DCAF



Context	Environmental Protection		Disaster Risk Reduction	
	Stakeholders	Legislation	Stakeholders	Legislation
Sierra Leone	<ul style="list-style-type: none"> National Disaster Management Agency (NDMA) Ministry of the Environment and Climate Change Office of National Security Environmental Protection Authority (attached to MoE) National Protected Area Authority (including Forest Guards) Interministerial Committee (MoE, NPAA, EPA and ONS) Ministry of Mines and Mineral Resources Ministry of Fisheries and Marine Resources Sierra Leone Police, including the Police environmental crime unit and the Criminal Investigations Unit (CID) Republic of Sierra Leone Armed Forces (RSLAF), including the Navy. 	<p>The national legal framework is a complex collection of national legislation, with many laws originating from the 1970s. 2022 amendments included:</p> <ul style="list-style-type: none"> Natural Protected Areas Act Wildlife Conservation Act Environmental Protection Act National Land Commission Act Forestry Act Radiation and Nuclear Safety Act <p>Other relevant legislation:</p> <ul style="list-style-type: none"> Mines and Minerals Act (2009) Petroleum Act (2011) 	<ul style="list-style-type: none"> National Disaster Management Agency (governed by National Platform for DRR and bringing together a wide range of actors; supported by a Secretariat) Ministry of the Environment and Climate Change (also responsible for Meteorological Agency) Office for National Security Republic of Sierra Leone Armed Forces (RSLAF) Sierra Leone Police Meteorological Agency (prevention) Local level mirrors national level. Community actors important DRR resource (especially youth). 	<ul style="list-style-type: none"> National Disaster Management Agency Act (2020) National Adaptation Plan, Military Aid to Civil Authorities Policy Military Aid to Civil Authorities Policy

Photo: DCAF



Findings

1. Across all contexts explored in this study, climate change, environmental crime, and other forms of harm to the environment are affecting human security.

Natural disasters, from flooding and fires to severe storms and landslides, have had a significant impact on communities, causing displacement and the loss of lives and livelihoods. Rising sea levels exacerbate risks in contexts including the Philippines where Manila, one of the largest urban areas in the world, is particularly exposed. Concerns regarding increasing aridity and **access to water** in the occupied Palestinian territory also highlight the potential for natural resources to become a source of conflict.

Illegal mining and logging were prevalent across most contexts, accompanied in some cases by **land grabbing**¹⁹ and other forms of violence including **physical threats and killings of environmental defenders**. Environmental crimes increase disaster risks; deforestation makes landslides more likely and sand mining, as seen in Sierra Leone, erodes protective ecosystems along the coast. The disappearance of mangroves, wetlands and

coral reefs also affects the vulnerability of coastlines to disasters. Illegal mining affects **public health and food security** as the mercury used in the mining process contaminates the local soil and water, as seen in Brazil. Food and economic security are also affected by illegal, unregulated and unreported (IUU) fishing which has depleted fish stocks. Environmental crime has been linked to other forms of transnational organized crime, as in Brazil where criminals are known to invest their profits in acquiring land, which is then used for environmentally harmful practices including logging and ranching.

The **illegal disposal of waste and resulting pollution**²⁰ emerged as a clear concern across all contexts. Widespread pollution is a slow-onset disaster, gradually degrading local ecosystems and affecting food and water security. In the case of the illegal burning of electronic waste, additional consequences for communities include increased incidents of cancer and birth defects. The large-scale dumping of solid waste also blocks drainage channels, increasing the likelihood of flooding.

Finally, climate and environmental risks that are left unaddressed have already had secondary impacts on human security, by driving unregulated **migration**, feeding grievances and **extremist narratives** and recruitment, as seen in Mindanao and the Philippines more broadly,²¹ and providing sources of income for armed groups.

Photo: DCAF



2. Security institutions are already playing an active role in addressing climate and environmental risks.

Disaster response is a well-established role for the **military, civil protection forces**, and in some cases the **police** (see also Table 2). While there was generally an appreciation for the capabilities that security institutions bring to this role, there was also frustration on the part of communities where responses have been too slow to save lives, especially when certain disasters occur regularly and can therefore be anticipated. Many security officials reported that limited financial resources and equipment hinder their ability to prepare for and respond to natural disasters.

The role of the security sector in addressing environmental crime is complex, often political, and still evolving. Most of the police institutions interviewed as part of the study had **environmental crime units** that were in the process of broadening their focus from specific crimes (for instance wildlife trafficking or land grabbing) to a wider range of serious environmental crimes which have become increasingly prevalent. These units had a limited number of personnel and in some cases still needed to better define and deconflict their mandate with other government agencies. These and other police units sometimes support environmental agencies by accompanying them when armed enforcement is required. Other security sector stakeholders include **customs and border management agencies including coast guards**, which play a role in preventing environmentally harmful goods from entering the country or illegally extracted resources from leaving; and **guards** which protect forests and fishing grounds.

The **military** is also involved to varying degrees in environmental protection. In some cases, as in Sierra Leone and the Philippines, they provide support to the police if this is warranted by the threat posed by groups involved in environmental crime and can also contribute in other ways, including through maritime patrols. In recent years, the Brazilian military has played an unusually prominent role in addressing widespread deforestation and illegal mining. It has reportedly been less effective than the civilian agencies previously responsible for these tasks, due to factors including a lack of expertise (such as in identifying prohibited timber) and mandate restrictions which prevented the use of previously impactful approaches such as destroying illegal mining and logging equipment.

As with disaster response, security officials often highlighted a lack of resources as a key factor hindering their ability to contribute to environmental protection, from basic resources such as fuel for patrols to more technical resources such as chemical sampling equipment. Covering **large, remote geographic areas** was cited as a challenge; security officials in Brazil described their use of remote sensing and surveillance technology to address this concern. Multiple interviewees also highlighted a need for all stakeholders, from the police and military to environmental protection agencies, other civilian ministries, and the judiciary, to be better educated on the **scientific and legal aspects of environmental crime**. In some contexts, environmental protection agencies are already playing a role in training security institutions, a practice which has the potential to not only improve technical expertise, but also to strengthen inter-ministerial cooperation.

Across all contexts, there was a recognition that **the exploitation of natural resources is lucrative and vulnerable to corruption**. Interviewees described both security and elected officials as being directly involved or complicit in environmental crime (for instance by accepting bribes to allow illegally extracted natural resources to pass checkpoints). In some cases, the police and military provide **security for large scale mining and agricultural operations**, protecting economically significant activities but also benefiting from corporate profits stemming from environmental harm. In several contexts, the response of the security and justice sectors to the **murder of environmental defenders** is also perceived as inadequate.

Finally, some **intelligence agencies** and units, for example as seen in the Philippines, are beginning to recognize the crucial role climate and environmental risks play in driving tensions, social unrest, migratory movements and crime, and to explore ways to integrate these risks into their foresight and analysis.

3. Security institutions' responses to climate and environmental risks impact their relationship with local communities.

Across all contexts, security institutions' responses to climate and environmental risks affected not only public perception of the security sector itself, but also the state and its legitimacy more broadly. Community members in some contexts highlighted their perception that they are targeted by the police for relatively minor violations of environmental laws, while corporations and criminal

groups which do greater harm to the environment operate with impunity. Powerful political families are also believed to be playing an active role in the illegal exploitation of natural resources, reinforcing **community perceptions that laws are enforced selectively**. In other contexts, the poor track record of security institutions in responding to violence associated with natural resource extraction has **undermined trust in the security sector** and reduced opportunities for the kind of community-police cooperation which is key to addressing environmental crime.

Across multiple contexts, interviewees cautioned against heavy handed approaches to **tackling environmental crime when community livelihoods are at stake**. As one local mayor in the occupied Palestinian territory pointed out, when 70% of the community relies on environmental crime as a primary source of income, arresting perpetrators is neither a practical nor a sustainable solution. Similarly, security officials in Brazil highlighted the challenges of stopping illegal mining or logging. Operations to shut down individual sites are temporarily effective, but activities then resume in another location and the efforts of security institutions are resented by

communities which depend on environmental crime for their income. Building on lessons learned, efforts to stop illegal logging now rarely penalize the individuals engaged directly in these activities but focus instead on identifying and capturing the heads and funders of criminal operations.

In both Brazil and Sierra Leone, protests also occurred in the aftermath of natural disasters when government responses were considered to be too slow or ineffective. In these two contexts as well as the Philippines, security institutions have also been involved in controversial efforts to **resettle communities from and demolish infrastructure in areas that are protected** or at high risk for disasters. At the same time, police in the Philippines noted that their ability to respond effectively to disasters directly affects their **relationships with communities in contested or conflict-affected areas**. Unequal access and service delivery between regions (such as Mindanao in the Philippines, Jordan valley in the occupied Palestinian territory) or urban neighbourhoods and especially informal settlements in Manila and Freetown also contributed to local grievances and a sense of disenfranchisement from the government.

Photo: DCAF



4. In disaster response and environmental protection, security institutions are part of complex, multi-agency efforts in which gaps and overlaps in organizational mandates and approaches have consequences for human and environmental security.

In the area of environmental protection, efforts involve a wide range of agencies including not only security institutions but also environmental ministries, specialized environmental protection agencies, customs and border agencies, ministries of mining and agriculture, and others. Cooperation and coordination between these actors are sometimes a challenge. While the respective roles and responsibilities of security, environmental and other government institutions varied across contexts, **questions of mandates and jurisdiction** were a common concern. In the occupied Palestinian territory, for example, interviewees both within and outside of the government noted that the issue of illegal disposal of electronic waste was “getting lost between ministries”. It was unclear whether primary responsibility should be assigned to municipalities, which oversee waste management; the Environment Quality Authority, which has a role in enforcing environmental regulations; or

the Civil or Environmental Police. In Brazil only the Federal Police have jurisdiction to act within the territory of indigenous reserves, where many environmental crimes take place, limiting the ability of local police (often more present in these areas) to respond. Combatting environmental crime in the Amazon basin is further complicated by the need for cross border exchanges of data among security, environmental and other institutions.

The diversity of actors involved in this area also creates **legal grey areas** and what one official called the “legalization of illegal activities”. The **issuance of permits** for natural resource exploitation emerged as a problem; where multiple civilian agencies issue permits for similar activities, it can be challenging to maintain oversight. Security officials in Sierra Leone explained that civilian agencies sometimes issue permits which exceed quotas or are in protected areas. Once these permits are granted it becomes very difficult for the police to act against permit holders.

In the Philippines, interviewees noted that **differences between national environmental law and local ordinances** create a situation in which corporations select the most favourable locations for activities based in part on where they are most likely to avoid substantial penalties for violations. Finally, decisions outside of the security sector were also seen as exacerbating climate and environmental risks and their security consequences, for example where approaches to **land use or urban planning** allow construction in areas vulnerable to natural disasters.

In the area of disaster response, security institutions may serve as primary responders but are also embedded in civilian led, whole-of-government approaches to disaster

management. The latter struggle with flexible formats for cross-agency resource mobilisation and joint planning. For example, in the Philippines, the Office of Civil Defence and Armed Forces operates at the level of the national government, while local DRR structures operating at the level of Local Government Units (LGUs) cannot easily access the national resources. In other instances, such as Palestine and Sierra Leone, local service delivery was hindered by a lack of devolution of power and resources from the central level. Another common challenge was the **lack of live or tabletop exercises** which could clarify roles and procedures and significantly improve response times. In several contexts there was also a need to better **integrate risk data from across multiple sectors**, as well as utilizing them for data-driven joint planning efforts to improve preparedness and prioritize the allocation of security sector resources.

5. The security sector’s focus on responses rather than preventive approaches is a missed opportunity to fully contribute to human and environmental security.

Security institutions across all four contexts were oriented mainly, although not exclusively, toward responding to disasters and environmental crime after they occur. Given the potentially devastating effects of both risks on communities and the ecosystems on which they depend, multiple interviewees suggested that a more proactive or preventive role would be welcome. In several contexts, communities were frustrated at what they perceived as unnecessarily slow responses to disasters which occur regularly and can be anticipated. Security institutions appeared not to be consistently involved in **civil**

Photo: DCAF



planning or risk reduction efforts, particularly at the local level in cases where disaster risk management has been decentralized. This could be a missed opportunity, especially where the military is one of the few state institutions present in remote areas and has the capacity to address basic infrastructure and other needs.

It was also unclear whether security institutions fully appreciated the **critical role environmental protection plays in disaster risk reduction**, as environmental crimes such as illegal logging, mining and waste dumping degrade local landscapes and make them more vulnerable to landslides and flooding. Interviewees in all four contexts also noted that **weak enforcement of environmental legislation and low penalties for violations** create a permissive environment for environmental crime. More consistent enforcement and steeper penalties could serve as an important deterrent. At the same time, security sector and local government officials also emphasized that many communities are dependent on environmental crime for income, and that prevention must include a focus on developing **sustainable alternative livelihoods** in addition to law enforcement.

Several examples from the study illustrate where security institutions could develop or build on existing approaches. In Brazil, the military has **educated communities on environmental issues** and worked on disaster preparedness during patrols to remote areas. The Brazilian police also focus on **prevention of crime** through targeting illicit financial flows and the smuggling of mercury, which is used in illegal mining. Military units in Brazil, Sierra Leone and the Philippines have also been involved in efforts to **restore degraded areas** and prevent further harm through campaigns to plant trees and clean up plastic waste.

6. Communities play an essential role in addressing security risks related to climate change and environmental harm and can be supported to do so more effectively.

Particularly in remote areas, communities are often the first line of defence for environmental protection and disaster response. Many interviewees at the community level indicated they are eager to perform these roles more effectively. In the occupied Palestinian territory, **civil protection volunteers** at the local level are training to serve as first responders in the case of disasters including fires and floods. In Sierra Leone, this role is

often played by youth, who noted they lack even the most basic equipment (such as wheelbarrows) which could be used in cleaning up disaster-affected areas.

Effective **early warning systems** are also an important means of helping communities prepare for impending disasters. However, these are not always accessible to some of the communities most vulnerable to disaster risks, such as migrants or others living in informal settlements who do not have mobile or network access. Several members of **migrant communities**, some of whom have moved because climate change has affected their livelihoods and food security, also noted that they are reluctant to cooperate with security institutions for fear of eviction or arrest.

Basic **environmental awareness and education** can be helpful in mitigating some of the consequences of disasters and preventing harm to the environment. While this is clearly not the primary duty of the security sector, interviewees in several contexts pointed out that the police and especially the military operate in remote areas of the country where few other state institutions are present; there may be an opportunity to capitalize on their presence by giving them a role in community outreach and education. At the same time, sensitivity is required, particularly in contexts in which community trust in security institutions is low.

In the Philippines, networks of community-based **forest rangers and guards of fishing grounds** play an important role in protecting local ecosystems. They work with local governments and national agencies; many work part time in this role and are compensated by local government units. A number of their members are reportedly former combatants of non-state armed groups, highlighting the interesting role environmental protection can play in longer-term processes related to **conflict prevention and peacebuilding**.

In several contexts in the study, **indigenous communities** have a long history of stewarding and protecting natural resources and biodiversity and offer valuable perspectives on **how to address climate and environmental risks**, yet they have been disproportionately and negatively affected by the illegal exploitation of natural resources. There is a need to create spaces for them to participate in decision-making processes. Violence against these communities and against environmental defenders is on the rise, pointing to a need for security institutions to take their protection seriously

Implications for the Future of SSG/R

1. It is important to recognize and invest in the potential of security institutions to protect people, planet and peace.

Security sector actors, within current mandates, are working on areas of high relevance to climate change and environmental security.

- **Protecting people** – security sector actors are playing a role in mitigating the impacts of climate change on communities through disaster risk reduction and civil protection activities.
- **Protecting the planet** – security sector actors are playing a role in protecting the environment from further degradation through combatting environmental crime and enforcing environmental laws and regulations.
- **Protecting peace** – security sector roles in climate disaster risk reduction and environmental protection significantly impact how security sectors and the state are perceived by populations. This implies a possible source of grievances, but at the same time a potential for peacebuilding, social cohesion and countering extremist narratives.

Security institutions have **unique capabilities** to contribute in this space. Their logistical, organizational, and operational capacities allow them to operate in remote areas and challenging conditions and respond quickly to emergencies. Their human, financial and other resources often allow them to address security challenges at scale. In some contexts, they may also be one of the few state institutions present, making them an important potential partner for conservation efforts and longer-term disaster risk reduction. Most militaries also engage in civil-military cooperation projects, such as building roads or schools in remote areas, which could be extended to include efforts which benefit the environment as well as communities.

Security institutions also experience certain **limitations**. They have a range of competing (security) priorities and in complex security environments it may be difficult for them to allocate scarce resources to what may be considered lower priority missions. With some exceptions, they also lack deeper expertise in conservation and environmental science. Their contributions should therefore be informed and led by those who have this expertise, including environmental protection agencies, civil society

organizations, and communities themselves. Additionally, their involvement should not come at the expense of civilian agencies which have specific mandates and expertise to protect the environment, but should rather support, reinforce, and complement ongoing efforts.

2. The scope of security sector reform programming is widening in view of the impact of climate-induced risks on people's safety and livelihoods.

Security sector institutions, including agencies working on disaster risk reduction and civil protection, as well as agencies enforcing environmental laws and regulations are contributing to people's safety and security. Security sector reform conceptually was built on the premise of human security. Adopting a **people-centred approach in SSG/R programming** means revisiting the foundations of SSG/R programming and recalibrating the priorities to match what was initially envisaged in a human security framework, looking at the root causes of insecurity rather than only at its symptoms. Furthermore, adopting a people-centred approach can enable a shift from a technical supply-driven to a societal demand-driven approach, in order to increase people's trust in the legitimacy of the security sector and thereby strengthen the social contract between security and justice providers and the communities they serve.

In the context of climate change and environmental degradation, a people-centred approach must recognize that **human security is inseparable from the security and health of the local environment**; protecting communities requires a focus on protecting the ecosystems on which they depend. This implies broadening the scope of SSG/R programming to include both climate and environmental risks and the climate security roles played not only by traditional security actors such as the military or police but also by civil protection forces, coast guards, border guards, customs officials, environmental protection agencies, national park services, and environmental defenders.

3. Supporting the climate and environmental security roles of the security sector can contribute to a range of international policy agendas.

SSG/R is neither the first nor the only solution to many of the problems posed by climate and environmental risks. The intent of this study is not to overstate the importance of security institutions in responding to these risks or

imply that resources should be shifted from other critical sectors to the security sector. However, strengthening the ability of security sectors to provide effective, accountable responses to these risks can make an important contribution to several key policy agendas, which means **SSG/R is a potentially impactful investment across multiple domains.**

UN member states have made commitments to provide significant financial support to the countries most affected by climate change, but **climate finance** struggles to reach vulnerable communities in fragile and conflict-affected contexts. Describing the reasons for this gap is outside the scope of this study, but this trend highlights the importance of exploring potential opportunities to better leverage the funding which *is* being directed to these contexts, including security sector assistance, to achieve mitigation and adaptation goals.

In addition to the implementation of the **Sendai Framework**, the **Paris Agreement**, the **Kunming-Montreal Global Biodiversity Framework**, and a number of other environmental conventions, security institutions can also contribute to the **Sustaining Peace Agenda**, the Secretary General's **Prevention Agenda** and **food security**. With regards to crosscutting contributions to the **Sustainable Development Goals**, by preventing harm to the environment and preparing for and reducing the risks of disasters, **SDGs 14 (Life Below Water)** and **15 (Life on Land)** benefit from efforts to prevent environmental crime and the illegal

exploitation of natural resources. Deterring the illegal disposal of waste, as well as the pollution caused by activities such as illegal mining, contributes to **SDG 6 (Clean Water and Sanitation)**. Ensuring security institutions develop gender-sensitive approaches to climate and environmental risks – which recognize the gendered security impacts of climate change – facilitates progress on **SDG 5 (Gender Equality)**. Protecting arable land, harvests and natural resources from contamination and degradation contributes to **SDG 2 (Zero Hunger)**. Finally, accountable security institutions which respond effectively to the climate and environmental risks affecting communities contribute directly to **SDG 16 (Peace, Justice and Strong Institutions)**.

4. Sustainable approaches to climate and environmental security require better integration of security, development, humanitarian, peacebuilding and conservation programming.

Whole of government approaches: The cascading and intersectional risks associated with climate change and environmental degradation engage a range of instruments and actors on the international level. Donor's policy officers at Ministries of Foreign Affairs, Defence, Interior, Economic Development, Climate Change and/ or the Environment are all involved in policy and programming relevant to climate security. Most international assistance programming tackles various parts of the same problem in a disjointed manner.

Photo: DCAF



Mainstreaming climate security into SSG/R portfolios: To address the complexity of the triple nexus, comprehensive programmatic approaches that break up siloes between humanitarian assistance, development aid and security cooperation are needed. For SSG/R and stabilization practitioners, this implies mainstreaming the security sector's climate and environmental security roles into:

- Bilateral country cooperation strategies;
- Cooperation with regional actors (such as ECOWAS, Organization of American States)
- Peace operations and UN and EU CSDP mission mandates;
- Stabilization and security sector assistance programming, including the European Peace Facility and other train and equip efforts and infrastructure support;
- Mediation and peace processes;
- Migration management programmes which incorporate a specific focus on the roles and responsibilities of security institutions in protecting migrants.

Mapping existing programmes and conducting **portfolio reviews** can be particularly helpful in identifying where ongoing programmes can be better leveraged to address climate and environmental risks and where current gaps exist, which could become the focus of future assistance. Security assistance funds in fragile and conflict-affected areas are sometimes significant; their programmatic objectives could be broadened or adjusted to include a focus on leveraging the capacity of security institutions to contribute to disaster preparedness, protect ecosystems and prevent environmental crime, or even restore degraded landscapes (for example as part of efforts to improve relationships with local communities).

Integrating security sector contributions with other policy areas: International partners working in climate, environmental protection and conservation, disaster risk reduction and civil protection should equally recognize the role of security sector actors. Concrete entry points could include integrating security sector climate and environmental roles into humanitarian planning such as the **Humanitarian Response Plans** (HRPs), disaster risk reduction planning and programming, development planning processes such as the **UN Common Country Analysis and UN Sustainable Development Country Framework**, or the joint UN-EU-WB **Recovery and Peacebuilding Assessments** (RPBA). **International**

financial institutions such as multilateral and regional development banks need to recognize the role that security sectors are playing and find innovative ways of including them in their analytical work and financing.

Holistic funding instruments: Because the causes and consequences of climate security challenges cross sectoral boundaries, there is also a need to review existing **national and international funding mechanisms** to assess whether they offer the flexibility required to simultaneously address problems including criminality and physical insecurity, food insecurity and livelihoods, and social tension and conflict. Tapping into **climate financing mechanisms** could be a venue to help mobilize resources for providing holistic solutions and complementing traditional SSG/R instruments.

5. Addressing climate and environmental risks through SSG/R has significant potential to create dividends for peacebuilding and social cohesion.

There is growing concern that climate change and environmental degradation will exacerbate existing tensions and lead to new conflicts and increased violence. Climate and environmental risks matter deeply to communities, as they touch on issues of subsistence, survival, and the relationship between humans and nature which is at the heart of many traditions. They therefore offer an opportunity for trust building, as the actions security institutions take to address these risks can impact **community perceptions of the security sector and the state** writ large.

Governance and accountability in the security sector can play an important role in reducing some sources of tension, including perceived impunity for environmental crime and the violence associated with natural resource extraction, as well as security sector involvement in environmental crime. Local communities are often very aware of the role various actors play, as well as the international demands for natural resources which encourage corrupt behaviour and preferential treatment for extractive companies. They also expect donors to hold partner governments to account. This underscores the need for a strong focus on the accountability of national and international stakeholders in future SSR programmes to avoid doing harm or becoming complicit in corrupt practices.

There is also a clear requirement for programmes in this space to focus on the needs and perceptions of local

communities. Given the role many communities play as de facto first responders to disasters and environmental harm, there are openings to support joint approaches which **strengthen relationships and build trust** between communities and security institutions. To fully seize the opportunity to contribute to conflict prevention and peacebuilding, it will be important to **integrate expertise in peacebuilding, conflict resolution and reconciliation** in the SSG/R programming cycle to ensure approaches go beyond technical fixes and work toward clearly and inclusively defined peace dividends at the community and grassroots levels.

6. Efforts to strengthen law enforcement must be accompanied by a focus on livelihoods and incentives to sustainably address environmental harm.

As one key illustration of the need for coordinated approaches described in point 4 above, many interviewees in this study emphasized that simply strengthening law enforcement is unlikely to lead to a sustainable reduction in environmental crime, particularly where local (and often vulnerable) communities depend on these crimes as their sole source of income. Effective approaches will also need to include economic development and conservation programmes which focus on **alternative livelihoods and incentives for environmentally sustainable activities**. Some of the examples from this study point to the value of integrated approaches in reducing pressures on the environment as well as the potential for criminality and conflict. These include solutions to e-waste burning which combined community policing and oversight with a recycling plant to create economically viable alternatives, as well as municipalities supporting fishing communities in restoring mangrove forests and growing seaweed plantations off the coast, which has created eco-tourism opportunities and alternative income sources, and increased disaster resilience.

The need for a focus on livelihoods also raises the question of where the added value of the security sector ends. In some contexts, security institutions are playing a strong role not only in defence but also in development. While this might be justified in some instances either by necessities (such as engineering skills in Brazil to access remote areas) or a long history of doing so (such as in the Armed Forces of the Philippines' engagement in community development), certain risks may arise if this is done without proper reflection on where the security sector adds value and where other actors have a comparative advantage.

7. Future SSG/R engagements should emphasize learning and partnerships to maximize impact.

In the context of a worsening climate crisis, **continual learning** is critical. Particularly in the area of environmental protection, the approaches of governments, civil society and communities are evolving as **risks themselves evolve rapidly and sometimes unpredictably**. Working at the intersection of environmental and human security offers significant scope for innovative programming which benefits both people and planet. In many cases, it also represents a new way of working, which implies that SSG/R programmes should be designed in a way that maintains a strong emphasis on **doing no harm** but is also reasonably **tolerant of risks** to allow for local experimentation and piloting of new approaches.

Programmes with robust frameworks for monitoring, evaluation and learning can help to ensure that lessons drawn from both successes and failures are shared rapidly across projects, programmes and regions. In many contexts, there are promising emerging good practices at the local level. Donors should support peer-to-peer learning processes and south-south cooperation within and beyond regions to foster mutual learning and sharing of experiences. **Bilateral and multilateral security partnerships** and alliances can also be leveraged to share good practices and develop regional approaches.

International collaboration is needed to close current **gaps in global and regional regulation and cooperation** on environmental protection which have direct consequences for human security. Historically, certain forms of environmental harm such as pollution related to the trading and import of waste, old electronic goods, automobiles, and plastics have remained largely outside the realm of international policy and regulation. Highlighting the importance of these issues in SSG/R programmes can augment ongoing efforts to address these gaps by enabling cooperation and strengthening enforcement. Recently established international agreements, such as the Kunming-Montreal Global Biodiversity Framework and the Treaty to Protect Marine Life in the High Seas, can also provide entry points for addressing these issues.

Programmatic Priorities for SSG/R

1. Develop security sector capacity to analyze and respond to climate and environmental risks.

There are numerous opportunities to support the development of **knowledge, skills and procedures** in areas including disaster risk reduction, disaster response, and the investigation of environmental crime. This should include developing approaches for **risk analysis**, with an emphasis on the collection and analysis of data that can help security institutions to better appreciate the likelihood and impact of various risks, as well as specific trends (for instance related to environmental crime or the occurrence of natural disasters) to support more effective prevention and risk mitigation. Risk analyses should also include a focus on the indirect impacts of climate and environmental factors on human security, from shaping extremist narratives and exacerbating intercommunal tensions to increasing pressures on livelihoods and food security. While other more traditional security priorities may, on the surface and without such analyses, appear to be more urgent to address, decisions about how to allocate resources should be informed by a thorough analysis of the ways in which climate and environmental risks are undermining security.

Strengthening capacities regarding data and information management can ultimately support more effective **planning and budgeting**. Some of the countries hardest hit by the security implications of climate change are also some of the most fragile, with limited resources available to address security risks. Support for detailed analyses of climate/environmental risks and their likelihood and consequences may be helpful in prioritizing and determining where national and local investments in additional capacity are likely to yield the best results. Partnerships can also be leveraged to develop low(er) cost solutions. These may include training civil protection volunteers, working with local conservation NGOs to analyse trends in environmental crime, or having environmental protection agencies train security institutions on environmental risks.

Early warning systems are invaluable tools in fragile and conflict-affected settings and are critical in helping communities prepare for and manage disaster risks. However, they do not always reach the most vulnerable. SSG/R programmes can play a role not only in developing

and implementing such systems, but also ensuring they are designed in a way that reaches groups including women, youth, and indigenous communities, as well as migrants and others living in informal settlements which are highly exposed to flooding and landslides. Working with civil society, NGOs, youth and the media might enable a multiplier effect in these cases, as seen in the case of volunteer flood watchers in the Philippines.

Technology can be a powerful enabler in building capacity to address climate and environmental risks. Drones, artificial intelligence, remote sensing, and digital solutions are emerging as effective and meaningful tools for climate and environmental security, particularly given their potential to surveil, map and assess large and inaccessible geographic areas. Moreover, technological solutions can improve the collection and analysis of data on risks, inform investigations and enable responses. Finally, they have the potential to make risk analysis more actionable and accessible through databases and automated early warning systems. At the same time, any efforts to build technological capacity should be accompanied by a focus on the financial and human resources required to operate and maintain new systems in order to ensure sustainability. Programmes should also include a focus on interagency and cross-border sharing of data.

One way to incentivize a stronger focus on climate and environmental risks is through support to **performance management processes** within security institutions. Incentives-based management systems can introduce environmental and DRR service delivery benchmarks related, for example, to preserving a certain amount of forest or achieving certain disaster response times. Such benchmarks can be an entry point for strengthening accountability as well as service delivery, provided baselines are clear and reliable data can be collected.

There are also opportunities to strengthen **awareness of climate and environmental risks** so they can be integrated into programmes in which these may not be the primary focus. **Community policing** programmes, for example, can include community-based needs assessments which highlight the impact of environmental factors on security and support local communities, police, and other stakeholders in designing new solutions. Efforts to improve **civil-military cooperation** can take a similar approach, focusing on infrastructure and other projects which are beneficial for local ecosystems as well as communities. Other concrete security sector processes that could benefit from a better integration of climate and

environmental risks include the development of SSR and national security strategies as well as sectoral strategies for defense or the police.

2. Strengthening regulatory frameworks and mechanisms for coordination.

Security sector efforts to address climate and environmental risks are embedded in a complex ecosystem which involves a wide range of civilian agencies as well as formal and informal security actors. Gaps and overlaps in mandates can lead to slow responses to natural disasters and create openings for environmental harm, as seen in situations in which poor **urban planning** exacerbates vulnerabilities to natural disasters or the uncontrolled issuance of **permits for natural resource exploitation** by agencies responsible for mining, logging, and fishing undermines the ability of security institutions to arrest perpetrators of environmental crimes. SSR programmes should therefore also include a focus on coordination and integration of security sector contributions with other agencies responsible for environmental protection and disaster risk reduction.

Some of the **legal and regulatory frameworks** for environmental protection and disaster risk reduction fall outside the direct purview of the security sector. However, they are an important part of the wider system which prevents (or enables) the harm stemming from climate and environmental risks. Whether through SSR or other programmes, it is therefore important to modernize frameworks where needed and address **legal loopholes or gaps**, including the excessive issuance of permits for natural resource exploitation and penalties which are unevenly enforced or insufficient to deter criminals. Another potential gap exists around land use practices, which can do serious harm to local ecosystems but are often only addressed as civil offenses at the local or municipal level.

Climate change and environmental harm extend beyond national boundaries, inviting new forms of cooperation across borders and sectors. Tackling serious organized environmental crime, for example, requires coordinated efforts among police, customs and border agencies, conservation organizations, and other institutions in neighbouring countries as well as countries of transshipment or receipt of illegally extracted natural resources. Responses to devastating natural disasters also benefit from the ability to augment national response capacity with regional resources. Wherever possible, SSR programmes should support **regional approaches**

to disaster risk reduction, climate change adaptation and environmental protection.

3. Design approaches to DRR and environmental protection which empower communities and protect the most vulnerable.

Many of the communities most exposed to climate and environmental risks are the first and sometimes only line of defence in disaster response as well as environmental protection. Modest investments in **awareness raising, training and basic equipment** and efforts to **integrate local and national planning** can increase the ability of community representatives to play an effective role and facilitate more rapid responses.

Sensitivity to community needs is essential in collaborative approaches to DRR and tackling environmental crime. Where communities are living in areas considered high-risk for disasters, support to facilitated **dialogue and localized decision making** can help shape and drive community led solutions. Similarly, communities engaged in illegal logging, mining and other practices often rely on these activities for income; in these cases, **alternative livelihoods** must be part of any sustainable solution to environmental crime, implying an approach which extends beyond the security sector.

Future approaches to environmental protection must focus on **protecting those who protect the environment**. This includes environmental defenders, who are at increasing risk of physical violence and murder in many contexts. It also includes **indigenous communities**, which have spent generations protecting the environment and have been disproportionately affected by illegal logging, mining, and other crimes.

Involving communities as key climate security stakeholders can also contribute to **peacebuilding and social cohesion**. Joint programmes which bring together security institutions and community members have the potential to strengthen trust in the state. Across different contexts in this study, community members expressed willingness to work with security institutions to build their own capacity and develop **joint solutions** to increasingly urgent problems. Concrete entry points that have shown some promise in this study include working with community volunteers, DDR programs providing employment for former combatants as forest or sea guards, and joint approaches to managing natural resources.

4. Prioritize good governance, accountability and respect for human rights in SSG/R programmes which aim to address climate and environmental risks.

Many communities are highly dependent on local ecosystems for their livelihoods, which means the actions security institutions do or do not take to address climate and environmental risks may directly impact their survival. There is a clear need for SSG/R programmes in this space to focus on the **needs and perceptions of local communities** as well as those of security institutions. There are also opportunities to strengthen relationships and trust between communities and security institutions around issues which matter deeply at the local level, provided security institutions play a **respectful, collaborative role** in seeking solutions and operate with **integrity and accountability**. This is particularly true in the case of communities such as migrants or indigenous groups which are often disproportionately affected by climate and environmental risks and underserved or even abused by security institutions.

Security officials who are complicit in the **illegal exploitation of natural resources** play a particularly problematic role in accelerating environmental degradation and undermining trust in state institutions. Perceived **impunity for human rights abuses** associated with natural resource extraction is equally concerning. **Corruption** in this domain often extends well beyond the security sector, implicating a wider range of civil and political actors in environmental harm and its consequences for human security. SSG/R programmes addressing environmental crime require a thorough **political economy analysis** of the incentives, drivers and actors related to natural resource exploitation. They should also incorporate a **strong focus on the role of oversight actors** (including parliamentary oversight commissions, human rights commissions, ombuds institutions, anti-corruption bodies, the judiciary, civil society and the media) in addressing corruption and abuses and ensuring security institutions respond to the needs of communities.

5. Support security institutions in contributing not only to responses, but also to prevention and risk mitigation.

Natural disasters and environmental crime both have serious consequences for the local environment and most communities cannot afford the time it takes to **restore ecosystems** damaged by landslides and flooding or polluted by illegal mining or waste dumping. These consequences are also felt at the national level, from the **loss of income** from tourism or failing crops to the **growing insecurity** that comes with internal displacement of communities and greater exposure to the transnational networks involved in environmental crime.

Prevention of environmental crime should become a more central focus for security institutions and for governments more broadly. Any preventive approach will require close collaboration with local communities and may also include an emphasis on **consistent, effective enforcement** of environmental laws and regulations, with penalties which are severe enough to deter serious crimes. And while natural disasters themselves may not be preventable, some of their effects can certainly be mitigated through **disaster preparedness** efforts which integrate national and local stakeholders and involve regular exercises to clarify responsibilities and improve response times. Environmental protection is also key to **leveraging ecosystem functions which mitigate disaster risks**. Risk-informed planning is equally important to ensure scarce resources are allocated wisely and to prevent factors outside the security sector (for instance land use and urban planning) from becoming a source of new vulnerabilities.

The **illegal disposal or dumping of waste** deserves to be highlighted more prominently in efforts to prevent environmental harm. It is a growing problem in many contexts, often overlooked and with serious long-term consequences for human and environmental health, food security, and even disaster risk reduction where solid waste blocks drainage channels. It requires a coordinated response from waste management authorities, police, environmental protection agencies, local government officials, and in the case of transnational shipments of waste from customs and border officials as well.



The security implications of climate change and environmental degradation have made it increasingly clear that protecting communities requires protecting the ecosystems on which they depend.

Conclusion

The security implications of climate change and environmental degradation have made it increasingly clear that **protecting communities requires protecting the ecosystems on which they depend**. It is equally clear that effective approaches to addressing climate and environmental risks require a focus on the principles which are at the heart of **good security sector governance**, including accountability, transparency, participation, responsiveness, and the rule of law. These risks need to be addressed through whole-of-government and whole-of-society responses, of which security is just one part, but the role of the security sector is key and can be leveraged to greater effect in the future.

Security forces and the ministries which manage them will need to consider how they can strengthen their contributions to disaster risk reduction and environmental protection. Parliamentary oversight commissions, civil society organizations, the judiciary, and other oversight actors have a critical role to play in **keeping climate security on national security agendas** and **ensuring security sector responses are effective and accountable** and respond to the needs of communities. They can also play a role in demanding governments carefully balance short term economic interests with the long-term human security consequences of environmental harm stemming from natural resource exploitation. Communities themselves are also stakeholders in climate security; they are living with the consequences of a changing climate and widespread environmental harm and must be involved in designing appropriate solutions.

SSG/R focuses on improving security by making security provision more effective and accountable, within a framework of democratic civilian control, rule of law and respect for human rights. As such, it offers multiple, **concrete entry points** for national stakeholders and their

international partners to incorporate a focus on climate and environmental risks, from consultative processes to draft new national security policies to local efforts to develop community-based approaches to policing. SSG/R also defines security sector stakeholders broadly and focuses on **strengthening relationships and collaboration** among these stakeholders, including security forces, ministries, oversight actors at the national and local level, and communities themselves. It therefore offers an approach which is well suited to the complexity of climate and environmental risks.

International and regional partnerships are more important than ever. In a context of accelerating climate change, international support to SSG/R can foster the development of strong networks and exchanges of data, lessons learned, and emerging good practices. **Connecting programmes with international policy agendas** in areas including climate change adaptation and sustainable development can amplify shared learning and promote collaboration across sectoral boundaries.

In closing, it is also important to highlight several areas which were not the primary focus of the stocktaking study but are relevant to security in the context of climate change and environmental harm. A growing body of research is documenting the **gendered impacts of climate change** on human security; women have a key role to play in developing solutions to climate security problems. **Youth**, often excluded from policy and decision making related to security, also have an important role to play. Globally, they are active and effective advocates for more sustainable approaches to economic development, agriculture, and governance, and have the potential to contribute new ideas and solutions to the challenges described in this study.

Private military and security companies, particularly those active around natural resource extraction, are also important stakeholders to engage in dialogue, sensitization, and regulation, especially considering incidents in which they have violated the physical integrity of communities as well as of human rights and environmental defenders denouncing environmental impacts. Where private sector operations present risks in terms of environmental impacts on communities, SSG/R can also help in drawing the line between the obligation of states to protect the human rights and environment of their populations and the responsibility of companies to respect the same.

Finally, climate security goes hand in hand with **justice and the rule of law**, including a focus on effective prosecution of environmental crimes, land rights, the rights of indigenous peoples as well as on the right to

remedy, and addressing the social, racial and other inequalities exacerbated by a changing climate and widespread environmental degradation. Each of these issues deserves greater attention in future studies and programming which focus on security sector contributions to addressing climate and environmental risks.

This stocktaking study is intended to be a starting point for partners who are interested in (1) understanding the potential contributions of the security sector to climate and environmental security and (2) identifying concrete entry points to integrate a focus on disaster risk reduction and environmental protection in future SSR programmes. DCAF looks forward to continuing to develop this work with its partners and to realizing the potential of SSR to support whole-of-government and whole-of-society efforts to address the current climate and environmental crisis.

Photo: DCAF



Bibliography

Amnesty International. 2022. Protected Areas and Indigenous Peoples' Rights - Amnesty International Submission to the Special Rapporteur on the Rights of Indigenous Peoples. Amnesty International. Available at <<https://www.amnesty.org/en/wp-content/uploads/2022/06/IO4054812022ENGLISH.pdf>>. Accessed 17 July 2023.

Brock (CCS), Steve, Oliver-Leighton Barrett (CCS), Laura Birkman (HCSS), Elisabeth Dick (HCSS), Leah Emanuel (CCS), Sherri Goodman (CCS), Kate Guy (CCS), et al. 2021. "The World Climate and Security Report 2021." Product of the Expert Group of the International Military Council on Climate and Security. Edited by Erin Sikorsky and Francesco Femia. Center for Climate and Security, an institute of the Council on Strategic Risks. Available at <<https://imccs.org/wp-content/uploads/2021/06/World-Climate-and-Security-Report-2021.pdf>>. Accessed 31 August 2023.

Csordas, Viola, Anne Bennett, and Fredrik Wallin. 2023. Stocktaking of security sector roles in climate and environmental security - Report on Sierra Leone. Stocktaking Study. Geneva: DCAF - Geneva Centre for Security Sector Governance. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/StocktakingStudy-SLE-Report-EN_May2023.pdf>. Accessed 26 June 2023.

Csordas, Viola, Floris De Klerk Wolters, and Fabian Keske. forthcoming. Stocktaking of security sector roles in climate and environmental security - Report on the Philippines. Stocktaking Study. Geneva: DCAF - Geneva Centre for Security Sector Governance.

Csordas, Viola, Abigail Robinson, and Fredrik Wallin. 2022. Stocktaking of Security Sector Roles in Climate and Environmental Security - Report on the occupied Palestinian Territory. Geneva: DCAF - Geneva Centre for Security Sector Governance. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/StocktakingStudy-oPT_EN_Jan2023.pdf>. Accessed 3 February 2023.

DasGupta, Rajarshi, and Rajib Shaw. 2017. Disaster risk reduction: A critical approach. In *The Routledge handbook of disaster risk reduction including climate change adaptation*, 12–23. New York: Routledge.

DCAF – Geneva Centre for Security Sector Governance. 2021. Climate Change and its Impact on Security Provision - The Role of Good Security Sector Governance and Reform. Geneva: DCAF. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/Climate_Change_SSGR_DCAF.pdf>. Accessed 12 September 2022.

DCAF – Geneva Centre for Security Sector Governance. 2022. Women Speak: The Lived Nexus Between Climate, Gender and Security. DCAF. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/WomenSpeak2022_EN_FINAL.pdf>. Accessed 17 July 2023.

DCAF – Geneva Centre for Security Sector Governance. 2023. Climate Change and Security Sector Governance and Reform. SSR Backgrounder Series. Geneva: DCAF. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/DCAF_BG_25_ClimateChangeSSGR.pdf>. Accessed 27 June 2023.

Galgano, Francis A., and Edward P.F. Rose. 2021. Military Geoscience. In *Encyclopedia of Geology*, 648–659. Elsevier. Available at <<https://linkinghub.elsevier.com/retrieve/pii/B9780124095489091417>>. Accessed 17 July 2023.

Gaston, Erica, Oliver Brown, Nadwa al-Dawsari, Cristal Downing, Adam Day, and Raphael Bodewig. 2023. Climate-Security and Peacebuilding: Thematic Review. United Nations University - Centre for Policy Research. Available at <https://www.un.org/peacebuilding/sites/www.un.org/peacebuilding/files/documents/climate_security_tr_web_final_april10.pdf>. Accessed 17 July 2023.



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>>.

González Esquivel, Maria Teresa, Diego Garcia Represa, Cristina Hoyos, Abigail Robinson, and Giulia Scortegagna. 2023. Stocktaking of security sector roles in climate and environmental security - Report on Brazil. Stocktaking Study. Geneva: DCAF - Geneva Centre for Security Sector Governance. Available at <<https://www.dcaf.ch/sites/default/files/publications/documents/StocktakingStudy-BRA-EN.pdf>>. Accessed 26 June 2023.

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.

IUCN, International Union for Conservation of Nature. 2021. Conflict and conservation. 1st ed. IUCN, International Union for Conservation of Nature. Available at <<https://portals.iucn.org/library/node/49472>>. Accessed 7 February 2022.

Nagarajan, Chitra, Lisa Binder, Lucas Destrijcker, Sidney Michelini, Lukas Rüttinger, Bokar Sangaré, Barbora Šedová, Janani Vivekananda, and Rania Zaatour. 2022. Weathering Risk climate, peace and security assessment: Mali. adelphi. Available at <<https://adelphi.de/system/files/mediathek/bilder/Climate%2C%20peace%20and%20security%20assessment%20Mali%20Full%20Report.pdf>>. Accessed 31 August 2023.

Nellemann, Christian, Rune Henriksen, Arnold Kreilhuber, Davyth Stewart, Maria Kotsovou, Patricia Raxter, Elizabeth Mrema, and Sam Barrat, eds. 2016. The rise of environmental crime: a growing threat to natural resources, peace, development and security. A UNEP-INTERPOL rapid response assessment. Nairobi, Kenya: UNEP - United Nations Environment Programme.

OECD. 2022. States of Fragility 2022. States of Fragility. OECD. Available at <https://www.oecd-ilibrary.org/development/states-of-fragility-2022_c7fedf5e-en>. Accessed 17 July 2023.

Pacini, Henrique, and Tze Ni Yeoh. 2021. Success of circular economy hinges on better governance of 'waste trade'. UNCTAD. Available at <<https://unctad.org/news/success-circular-economy-hinges-better-governance-waste-trade>>. Accessed 31 August 2023.

Reisinger, Andy, Diego Cammarano, Andreas Fischlin, Jan S Fuglestvedt, Gerrit Hansen, Yonghun Jung, Cloé Ludden, et al. 2023. Synthesis Report of the IPCC Sixth Assessment Report (AR6): Annex I - Glossary. IPCC AR6 SYR.

Sánchez Avendaño, Linda. 2022. INDIGENOUS AND RURAL WOMEN'S VOICES: Recommendations to Address Climate Security Risks in Colombia. Geneva: DCAF - Geneva Centre for Security Sector Governance. Available at <https://www.dcaf.ch/sites/default/files/publications/documents/ColombiaClimateSecurityStudy_April22.pdf>. Accessed 17 July 2023.

Socquet-Clerc, Kevin, Holly O'Mahony, Shiloh Fetzek, Maria-Gabriela Manea, A N M Muniruzzaman, and Fitriani Bintang Timur. 2023. Climate Security and the Security Sector in Southeast Asia. Thematic SSG Brief. Geneva: DCAF - Geneva Centre for Security Sector Governance.

The Secretary-General's Peacebuilding Fund. 2020. Climate Security and Peacebuilding. United Nations Peacebuilding. Available at <https://www.un.org/peacebuilding/sites/www.un.org.peacebuilding/files/documents/brief_climate_security_20200724_2.pdf>. Accessed 17 July 2023.

UN Global Compact. 2023. Environment. Available at <<https://unglobalcompact.org/what-is-gc/our-work/environment>>. Accessed 17 July 2023.

UNDRR. 2023. Disaster. Available at <<https://www.undrr.org/quick/11964>>. Accessed 26 June 2023.

de Vilchez, Pau, and Annalisa Savaresi. 2023. The Right to a Healthy Environment and Climate Litigation: A Game Changer? Yearbook of International Environmental Law 32 (1): 3–19.



Endnotes

1. See for example IUCN, International Union for Conservation of Nature 2021; Brock (CCS) et al. 2021; Nagarajan et al. 2022.
2. Amnesty International 2022.
3. IPCC 2023.
4. de Vilchez and Savaresi 2023. They show how these UN-level decisions are increasingly used in climate litigation cases with success and also recognised by courts.
5. OECD 2022. The report outlines the mutual influence of fragility and climate change. While fragility complicates responses to climate change, the latter also has the potential to render contexts more fragile, such as through droughts and loss in crop yields.
6. González Esquivel et al. 2023.
7. Csordas, Robinson, and Wallin 2022.
8. Csordas, De Klerk Wolters, and Keske forthcoming.
9. Csordas, Bennett, and Wallin 2023.
10. Nellemann et al. 2016, 17 (emphasis added).
11. UNDRR 2023.
12. DasGupta and Shaw 2017, 14.
13. Reisinger et al. 2023.
14. Gaston et al. 2023; The Secretary-General's Peacebuilding Fund 2020.
15. Galgano and Rose 2021.
16. see, for instance, UN Global Compact 2023; Nellemann et al. 2016.
17. Csordas, Robinson, and Wallin 2022; Csordas, Bennett, and Wallin 2023; González Esquivel et al. 2023; Csordas, De Klerk Wolters, and Keske forthcoming.
18. Other relevant resources include DCAF – Geneva Centre for Security Sector Governance 2021; DCAF – Geneva Centre for Security Sector Governance 2022; Sánchez Avendaño 2022; Socquet-Clerc et al. 2023; DCAF – Geneva Centre for Security Sector Governance 2023.
19. See, for instance, 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.
20. The global waste trade is valued at over 300 billion USD annually, and the illicit trade flow's magnitude is "huge" (Pacini and Yeoh 2021), but waste disposal still seems to be seen as a marginal issue, receiving less attention than other violations of environmental laws despite its impact on public health, food security, and the lives of the marginalized communities often involved in waste processing or disposal.
21. Csordas, De Klerk Wolters, and Keske forthcoming.





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