CLIMATE CHANGE AND SECURITY SECTOR GOVERNANCE AND REFORM

ABOUT THIS SSR BACKGROUNDER

This SSR Backgrounder addresses the importance of climate change as one of the most serious crises of our time. It first explains how climate change is a driver of increased insecurity and conflict and a risk multiplier. Due to cascading impacts upon all areas of human life, it jeopardizes attainment of the Sustainable Development Goals (SDGs) and has serious implications for the UN's Peacebuilding and Sustaining Peace agenda. Climate change also has impacts on the security and defence sectors, which already act as "first responders" in climate emergencies and make their own contributions to climate warming. The Backgrounder outlines how the security sector can contribute to addressing the climate crisis and how climate change may eventually (re) shape its work and operational environment. A lack of preparedness and strategic planning on climate change will not only affect the capacity of security providers to operate but will also diminish state capacity to deliver human and conventional security. Finally, the Backgrounder provides food for thought on how good SSG can contribute to mitigating, adapting, and responding to climate change and how climate actions can be mainstreamed in the SSR framework.

THIS SSR BACKGROUNDER ANSWERS THE FOLLOWING QUESTIONS:

ABOUT THIS SERIES

The SSR Backgrounders provide concise introductions to topics and concepts in good security sector governance (SSG) and security sector reform (SSR). The series summarizes current debates, explains key terms and exposes central tensions based on a broad range of international experiences. The SSR Backgrounders do not promote specific models, policies or proposals for good governance or reform but do provide further resources that will allow readers to extend their knowledge on each topic.

The SSR Backgrounders are a resource for security governance and reform stakeholders seeking to understand and also to critically assess current approaches to good SSG and SSR.

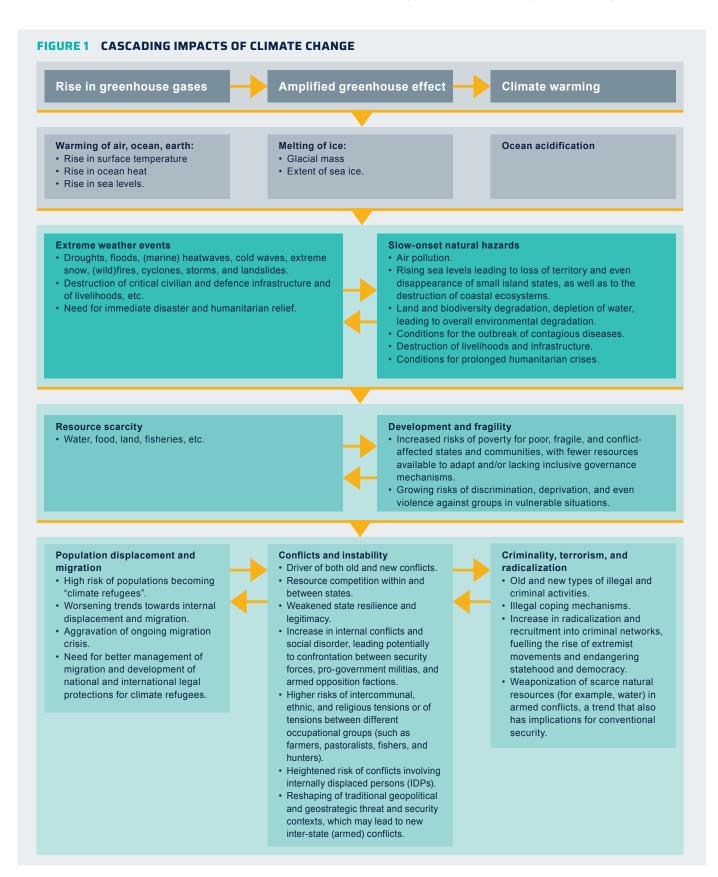## HOW DOES CLIMATE CHANGE EXACERBATE INSECURITY?

Climate change is one of the most serious crises of our time, with destabilizing consequences that call for bold policies from governments and their agencies, international organizations, and civil society. The Intergovernmental Panel on Climate Change (IPCC) has shown that increased greenhouse gas (GHG) emissions due to human activities have led to a rise in global temperatures of 1.1°C above pre-industrial levels, with the last decade being the warmest on record. The IPCC also warns against global warming of more than 1.5°C above pre-industrial levels – a trend that would create severe risks for humanity. In response to the climate crisis, international legal frameworks have been developed in recent decades (see Box 1), most importantly the Paris Agreement, adopted in 2015.

INTERNATIONAL CLIMATE CHANGE FRAMEWORKS

- **1988:** The Intergovernmental Panel on Climate Change (IPCC) is established by the UN Environment Programme (UNEP) and the World Meteorological Organization (WMO). It develops scientific knowledge about climate change and regularly publishes reports on climate change forecasts, impact evaluations, and recommendations for prevention.

- **1992 (effective 1994):** The UN Framework Convention on Climate Change (UNFCCC) is agreed as an international environmental treaty to prevent "dangerous human interference with the climate system". It aims to reduce global GHG emissions in order to prevent climate warming.

- **1997 (effective 2005):** The Kyoto Protocol operationalizes the UNFCCC by committing industrialized countries and economies in transition to limit and reduce their GHG emissions in accordance with agreed individual targets.

- **2015 (effective 2016): The Paris Agreement** sets concrete targets and tools for global climate action for all signatory parties, developed and developing countries alike. Additional arrangements and instruments continue to emerge from annual Conferences of the Parties (COPs).

    - **Article 2.1(a):** Hold global average temperatures to well below 2°C and limit the increase in temperature to 1.5°C above pre-industrial levels.

    - **Article 2.1(b):** Increase countries' ability to adapt to foster climate resilience and reduce greenhouse gas emissions.

    - **Article 5.1:** Conserve and enhance sinks and reservoirs of greenhouse gases, including forests.

    - **Article 8.4:** Areas of cooperation: (a) early warning systems; (b) emergency preparedness; (c) slow-onset events; (d) events that may involve irreversible and permanent loss and damage; (e) comprehensive risk assessment and management; (f) risk insurance facilities, climate risk pooling, and other insurance solutions; (g) non-economic losses; and (h) resilience of communities, livelihoods, and ecosystems.

Rising levels of GHG emissions have cascading effects on all parts of the global climate system, altering weather patterns and endangering essential areas of human life. A multitude of direct and indirect impacts of climate change create insecurity, aggravate poverty, amplify drivers of conflict, and exacerbate fragility and insecurity worldwide (see Figure 1).

The generation of GHGs globally is distributed unevenly among states, as are the impacts of climate change. For example, the 100 countries with the lowest emissions collectively generate just 3% of total emissions, while the 10 countries with the highest emission levels are responsible for 68% of the total. This ratio reflects the highly unequal distribution of wealth across the globe. Moreover, the countries with the lowest emissions – which are also generally the least wealthy – are among those most affected by climate change.

FIGURE 1   CASCADING IMPACTS OF CLIMATE CHANGE

Rise in greenhouse gases	→	Amplified greenhouse effect	→	Climate warming

Warming of air, ocean, earth:
- Rise in surface temperature
- Rise in ocean heat
- Rise in sea levels.

Melting of ice:
- Glacial mass
- Extent of sea ice.

Ocean acidification

Extreme weather events
- Droughts, floods, (marine) heatwaves, cold waves, extreme snow, (wild)fires, cyclones, storms, and landslides.
- Destruction of critical civilian and defence infrastructure and of livelihoods, etc.
- Need for immediate disaster and humanitarian relief.

Slow-onset natural hazards
- Air pollution.
- Rising sea levels leading to loss of territory and even disappearance of small island states, as well as to the destruction of coastal ecosystems.
- Land and biodiversity degradation, depletion of water, leading to overall environmental degradation.
- Conditions for the outbreak of contagious diseases.
- Destruction of livelihoods and infrastructure.
- Conditions for prolonged humanitarian crises.

Resource scarcity
- Water, food, land, fisheries, etc.

Development and fragility
- Increased risks of poverty for poor, fragile, and conflict-affected states and communities, with fewer resources available to adapt and/or lacking inclusive governance mechanisms.
- Growing risks of discrimination, deprivation, and even violence against groups in vulnerable situations.

Population displacement and migration
- High risk of populations becoming "climate refugees".
- Worsening trends towards internal displacement and migration.
- Aggravation of ongoing migration crisis.
- Need for better management of migration and development of national and international legal protections for climate refugees.

Conflicts and instability
- Driver of both old and new conflicts.
- Resource competition within and between states.
- Weakened state resilience and legitimacy.
- Increase in internal conflicts and social disorder, leading potentially to confrontation between security forces, pro-government militias, and armed opposition factions.
- Higher risks of intercommunal, ethnic, and religious tensions or of tensions between different occupational groups (such as farmers, pastoralists, fishers, and hunters).
- Heightened risk of conflicts involving internally displaced persons (IDPs).
- Reshaping of traditional geopolitical and geostrategic threat and security contexts, which may lead to new inter-state (armed) conflicts.

Criminality, terrorism, and radicalization
- Old and new types of illegal and criminal activities.
- Illegal coping mechanisms.
- Increase in radicalization and recruitment into criminal networks, fuelling the rise of extremist movements and endangering statehood and democracy.
- Weaponization of scarce natural resources (for example, water) in armed conflicts, a trend that also has implications for conventional security.

HOW IS CLIMATE CHANGE RELEVANT TO SSG/R?

Climate change has far-reaching implications for human security and challenges the capacity of states to deliver human and conventional security effectively and in an accountable manner. It also puts direct pressure on the security sector because a warmer climate modifies the physical conditions in which security providers operate, with negative impacts on personnel, logistics, and infrastructure. Climate change is a "threat multiplier" and so intervention by security providers becomes more necessary but also potentially problematic if it is not adequately tailored to respond both to changing climate conditions and risks and also to calls for enhanced accountability. Increasingly, climate change and the security sector have mutual impacts on one another. It is paramount for security sector governance and reform (SSG/R) to consider how the security sector can contribute to addressing the climate crisis, as well as how climate change will affect and eventually (re)shape the work of security sector actors.

Nationally, security sectors need to contribute their fair share to the implementation of the Paris Agreement because:

- They can significantly contribute to the reduction of GHG emissions and to a green energy transition in their respective states.

- They can either enable or hamper government capacity to develop climate resilience and good governance of climate-related security risks.

- A lack of preparedness and strategic planning regarding climate change will not only affect the capacity of security providers to operate but will also diminish state capacity to deliver human and conventional security.

Internationally, climate change is intrinsically linked with SSG/R, as both climate action and good governance of the security sector are required to successfully implement two crucial UN policy agendas:

- Climate change can significantly compromise attainment of the 2030 Agenda and the Sustainable Development Goals (SDGs), which seek to eradicate poverty and make societies safer and more peaceful. SDG 13 places climate action and the protection of life within the 2030 Agenda, while SDG 16 aims at improving governance in the security and justice fields – targets that SSG/R can help in achieving.

- Climate change amplifies security crises and creates new insecurity, thereby threatening the UN's Peacebuilding and Sustaining Peace Agenda. SSR is an integral part of many UN peace and political missions, with the aim of creating good governance in the security and justice fields. Given the impacts of climate change on peace and security, SSR needs to integrate climate-sensitive conflict analysis and strategies of adaptation and mitigation of climate change tailored to the security sector.

GENDER-RELATED IMPACTS OF CLIMATE CHANGE

- The impacts of climate change are strongly gendered. Gender norms and gender power dynamics influence the differential exposure of men and women to resource scarcity and to risks created or amplified by climate change, as well as their capacity to cope with them.

- Gender norms and power dynamics are central to differentiated access to, use of, and control of natural resources and economic assets for women and men, as well as physical mobility and migration patterns, decision-making power, and household and community expectations. As a result, women often bear the brunt of conflicts, with little opportunity to influence climate policy.

- Scarcity of natural resources caused by climate change:
  - exposes women to increased risk of gender-based violence (GBV);
  - increases domestic and communal violence as men and women find it impossible to live up to prescribed gendered roles;
  - increases the risk of GBV and sexual violence during and after extreme weather events, including in evacuation centres;
  - exposes women environmental defenders to increased threats of GBV and sexual violence, including GBV committed by security sector personnel involved in responses to climate change.

→ For more information on gender, climate change and security, please refer to **DCAF, Women Speak: The Lived Nexus Between Climate, Gender and Security**

HOW CAN GOOD SSG CONTRIBUTE TO ADDRESSING CLIMATE CHANGE?

Climate change may not only lead to entrenched humanitarian crises, various kinds of conflict, and destabilization, as described above; it can also become subject of securitization (see Box 3).

With securitization involving pitfalls of this nature, good SSG provides a middle ground for policymakers and the security sector, steering a course between the security sector playing no part in the response to climate change on the one hand and securitization or even militarization of climate change on the other.

Good SSG can enhance **effective and accountable security provision** in the context of climate crisis if existing institutional frameworks, guided by principles of good governance, are used to develop a cohesive response by the security sector to climate change, enabling it to invest its expertise, capabilities, and resources to prevent and tackle climate-related security risks either within current mandates or by

SECURITIZATION OF CLIMATE CHANGE

Securitization is the process of representing an issue as an existential threat to state, international, and/or human security, thereby transforming a non-security issue into a matter of security. The aim is to justify extraordinary measures that would otherwise not be taken to tackle the issue.

Like other emerging security challenges (digitalization and cybersecurity, migration, health crises etc.), climate change has been made the object of securitization, being framed as the root cause of new security threats for which states and the international community lack preparedness. Although the relatively successful articulation of the climate-security nexus has contributed to climate change being given greater prominence on global and national agendas, there are also concerns that it may favour security-based solutions, potentially diverting resources from civilian-led solutions and undermining democratic governance.

For instance, such a development is likely:
- in countries where the security sector plays a political role in the absence of a democratic framework of governance;
- in post-conflict or transition countries where SSR is still ongoing or absent, and where security providers may use the climate–security nexus as a pretext for new mission creep, finding a back door to political influence or even using the climate-security crisis as a pretext for seizing power;
- in unprepared and poorly managed countries where overburdened governments may rely on the military and other security sector providers to address climate-related security risks, thereby investing in hard security solutions rather than building up civilian capacity to cope with the effects of climate warming.

aiding civilian authorities when needed. By strengthening the role of oversight institutions in relation to the climate–security nexus, good SSG can ensure that robust democratic control prevents any potential mission creep or abuses by security providers such as extortion, GBV, or violence against communities.

Good SSG promotes **gender-sensitive and participatory approaches** by means of the security sector collaborating with civil society, including women's rights organizations, and civilian authorities to jointly enact climate and mitigation initiatives. By **upholding human rights standards and the rule of law,** good SSG can prevent violence against environmental human rights defenders, climate activists, and land defenders by both security providers and other actors.

For more information on SSG, please refer to the SSR Backgrounder on **Security Sector Governance.**

WHAT ROLES CAN SECURITY SECTOR ACTORS PLAY IN ADDRESSING CLIMATE CHANGE?

Security sector actors need to be more aware of their own relationship with the impacts of climate change, assess their own contributions to climate warming, and play pre-emptive and proactive roles in addressing the climate crisis.

Security providers, such as armed forces, police, intelligence services, border guards, and others, are already often involved as "first responders" in activities related to climate change (see Figure 1), and as climate-related phenomena intensify the need for their involvement will increase further. Positive contributions by security providers include their role in humanitarian and disaster relief, environmental restoration in post-war contexts, the prevention and combating of environmental crime, engagement in environmental conservation practices, and the development of internal strategies for climate adaptation and mitigation. However, security providers are also sometimes involved in harmful interventions where they are directly or indirectly involved in environmentally damaging activities (for example, logging, mining, poaching, and so on), deliver inadequate security services, or engage in corrupt practices, thereby increasing insecurity. Security providers, especially armed forces, have a heavy environmental footprint, requiring a paradigm shift.

Security providers should **mitigate, adapt,** and **respond** to climate change and the security and fragility risks it presents in a number of ways:

- Reduce their own GHG emissions and environmental footprints, for instance in their missions (such as war, weapons testing) and in training/preparing for war.
- Adapt their strategic planning and the way they think about climate change and associated risks.
- Incorporate climate change into their threat and risk assessments and training, and update skills and competencies.
- Adapt their traditional roles/mandates to new climate-related challenges to enable them to act as first responders.
- Develop contingency plans and operational concepts tailored to climate-related emergencies.
- Adapt their budgets to include activities related to climate change prevention and response.
- Adapt their material infrastructure, such as weaponry systems and logistics.

Security management institutions, such as ministries of defence and interior, are involved in strategic planning, which makes them key actors in designing climate-related measures and incorporating them into national security and defence strategies and policies. Furthermore, they are able to develop incentives for green procurement and provide strategic guidance to security actors on integrating climate-related considerations into their operational frameworks.

Formal and informal oversight bodies, such as parliaments and their specialized committees, ombuds and audit bodies, human rights commissions, civil society, and media, play an essential role in ensuring consistency of security sector actons with their mandates, assessing whether the

development of new mandates is necessary, maintaining dialogue with society at large, and countering the securitization of climate change. They can also ensure that robust compliance and monitoring mechanisms are put in place in the security and defence sectors to reduce GHG emissions and environmental footprints.

→ For more information on security sector actors, please refer to the SSR Backgrounders on **the security sector** as well as on various security sector actors, such as **armed forces, police, intelligence, parliaments, civil society** and so on.

FIGURE 2   CLIMATE-RELATED SSR ACTIVITIES AT THE STRATEGIC, ORGANIZATIONAL, AND OPERATIONAL LEVELS

Strategic-level SSR activities
Ensuring that legal, political, and policy frameworks for the security sector reflect climate change targets (mitigation, adaptation, response) and acknowledge climate-related security and fragility risks

For example:

- Evaluating security and defence-related legislation, policies, protocols, and practices to ensure that they reflect climate change targets and climate-related security and fragility risks.

- In particular, setting GHG emission reduction targets for the security and defence sectors, including establishing clear mitigation pathways consistent with the country's mitigation commitments.

- Identifying new legislative frameworks empowering both state and non-state security providers to mitigate and adapt to climate change, as well as to respond to climate-related security risks through existing and/or new mandates.

- Ensuring that such new legislation conforms to all international and human rights laws and integrates a gender perspective in all aspects of the work of security forces concerned with responding to climate security risks, especially in relation to non-state security providers.

- Providing funding and designing financial incentive mechanisms, enabling innovation and the use of green technology, as well as the transition to renewable energy in the defence and security sectors.

- Ensuring appropriate legal and physical protections for environmental human rights defenders, including freedoms of expression and association and access to information and to justice, with attention focused on protecting women.

- Making climate change and climate-related security and fragility risks a feature of security sector review processes in order to identify the degree to which SSG/R reflects climate considerations, including the gender-related impacts of climate change.

- Auditing performance of the security sector in adapting, mitigating, and responding to climate change through parliamentary, independent, and judicial bodies.

- Improving the capacity of civil society, including women's rights organizations, and media to scrutinize actions by the security sector in the field of climate change.

- Raising public awareness, improving knowledge, and encouraging debates about the role of good SSG in dealing with climate change and climate-related security and fragility risks.

- Organizing participatory, inclusive, and bottom-up frameworks to discuss how the security sector should contribute to the climate–security nexus.

- Ensuring women's full and equal participation in any process or initiative related to the climate–security nexus.

- Developing frameworks for interagency, regional, and international cooperation on best practices in the security sector on climate change adaptation and mitigation, and on tackling climate-related security and fragility risks.

Organizational-level SSR activities
Making security sector actors/institutions greener and more aware of climate-related security risks

For example:

- Adapting and/or creating new organizational structures/ capacities to deal with climate change and climate-related security risks in the security sector, including increased risks of GBV.

- Creating organizational frameworks for early warning mechanisms in regard to climate change impacts on the security sector at large and on security provision.

- Adapting doctrines, infrastructure, logistics, and personnel to reflect climate change and climate-related security and fragility risks.

- Developing frameworks for public–private collaboration enabling greening of the defence and security sectors and efficient transition to green energy.

- Adopting integrated approaches to climate-related security and fragility risks in collaboration with other policy communities, civil society organizations, and local communities.

Operational-level SSR activities
Making climate change and climate-related security and fragility risks part of security provision

For example:

- Fostering relations of trust between security providers and communities in which they operate to prevent violence related to climate factors and to build climate resilience.

- Providing support for the development of codes of conduct on climate-related security and fragility risk policies for state and non-state security sector actors.

- Conducting empirical research on the actual deployment of security providers in the field for the creation of climate–security fragility maps, helping security providers with service delivery on the ground.

- Ensuring the availability of training, equipment, and knowledge about impacts of climate change on the security sector and communities in which security providers operate, as well as climate-related security and fragility risks.

- Training on monitoring, prevention, and response to GBV, sexual harassment, and extortion for state and non-state security sector actors.

- Enhancing the capacity of security personnel to be involved in conflict analysis in relation to climate factors and to understand and respond to the gender-differentiated impacts of climate change.

- Increasing climate awareness and responsiveness in the security sector field.

HOW CAN RESPONSES TO THE CLIMATE CRISIS BE MAINSTREAMED WITHIN SSR?

SSR can provide states in transition, those in post-conflict contexts, or those simply adapting to climate change with a framework that integrates the tools needed to simultaneously consolidate democratic governance and build resilience against climate-related security and fragility risks (see Figure 2).

→ For more information on SSR, please refer to the SSR Backgrounders on **Security Sector Reform.**

WHAT TO READ NEXT

On climate change:

- See all IPCC Reports at the website:
https://www.ipcc.ch/reports/

On securitization of climate change:

- Thomas Dietz et al.
The Securitization of Climate Change: Actors, processes and consequences
London/NY: Routledge, 2016.

On the security implications of climate change, including gender:

- Megan Bastik and Camille Risler
DCAF, Women Speak: The Lived Nexus between Climate, Gender and Security
Geneva: DCAF, 2022.

- Allison Carslon and Isabel Schmidt
Managing Cascading Security Implications of Climate Change
FP Analytics of the FP Group, 2020.

On climate change and security sector actors:

- Louise van Schaik et al.
Ready for take-off? Military responses to climate change
The Hague: Clingendael Institute, 2020.

- Louise van Schaik et al.
Decarbonized Defense: The Need for Clean Military Power in the Age of Climate Change Washington
International Military Council on Climate and Security (IMCCS), Centre for Climate and Security, 2022.

- Steve Brock et al.
The World Climate and Security Report 2021
Washington: International Military Council on Climate and Security (IMCCS), Centre for Climate and Security, 2021.

On the contribution of good SSG and SSR to addressing climate change:

- Hans Born (ed.)
Climate Change and its Impact on Security Provision: The Role of Good Security Sector Governance and Reform.
DCAF- Geneva Center for Security Sector Governance, Policy Brief
Geneva: DCAF, 2021.

- Maria-Gabriela Manea
The Security Sector and Climate Change
Geneva Global Policy Brief No. 2/2021.

MORE DCAF SSR RESOURCES

DCAF publishes a wide variety of tools, handbooks and guidance on all aspects of SSR and good SSG, available free-for-download at **www.dcaf.ch**

Many resources are also available in languages other than English.