

CLIMATE SECURITY



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Climate security examines the links between climate change and its effects on peace and security. While climate change does not directly cause conflict, there is consensus that it exacerbates vulnerabilities in conflict-affected areas, and that violent conflict further intensifies climate impacts. However, the securitization of climate change raises questions about whose security is prioritized, reflecting differing global priorities between development and security strategies. The Virunga National Park in the DRC serves as a case study to explore how climate security is operationalized, contested, and can be reframed towards fostering equitable and sustainable peace in fragile contexts.

Climate security has emerged as a critical agenda item for the international community in recent years. Defined broadly, climate security encompasses the interplay between climate change and its implications for peace and security. The United Nations (UN) and other global actors such as the North Atlantic Treaty Organisation (NATO), the European Union and the African Union recognize climate change as a “threat multiplier,” exacerbating pre-existing vulnerabilities, from poverty and resource scarcity to displacement and conflict (UN 2019; NATO 2021; European Commission and High Representative for the Union for Foreign Affairs and Security Policy 2023; African Union 2022). This framing reflects the intertwined nature of environmental degradation and geopolitical instability, where climate-induced challenges amplify risks in fragile and conflict-prone regions (Charbonneau 2024). The UN Security Council’s deliberations on climate-related risks illustrate the growing recognition of climate’s role in undermining stability. For instance, discussions on

conflicts in Darfur and Syria often highlight how environmental stressors—such as drought and resource scarcity—exacerbate tensions and trigger migration, further destabilizing regions already grappling with conflict (Charbonneau 2024; Moe 2024).

The Evolution of Climate Security

The concept of climate security has its foundations in the field of environmental security, which emerged in the 1980s and gained prominence in the 1990s. This literature focuses on how environmental and demographic factors, such as population growth or environmental degradation increase the risk of violent conflict (Baechler 1998; Homer-Dixon 1999). By 2007, the distinct focus of climate security began to take shape, with researchers examining the implications of climate change for warfare, national

security, and military strategies.

Early discussions and frameworks around the concept of “climate wars,” which suggested a direct link between environmental stresses, access to natural resources and conflict, have continued to influence debates, including critical perspectives on the risks of militarizing and securitizing climate change (Dyer 2009; Klare 2019). Furthermore, they have underscored the complex

interplay between militarism and carbon emissions (Crawford 2022; Jorgenson et al. 2023; Vinke et al. 2023).

The securitization of climate change has sparked significant debate, through the question of whose security? Is it the security of states and their access to resources? Is it the security of local populations in conflict-affected settings? Proponents argue that framing climate change as a security issue mobilizes political will and resources, as seen in the growing prominence

The securitization of climate change has thus sparked significant debate. But questions remain: whose security? Is it the security of states and their access to resources? Is it the security of local populations in conflict-affected settings?

of climate security in national and international strategies and access to resources such as cobalt and green hydrogen for the green transition (Mazo 2009; Selby et al 2017; Daoudy 2020). For example, the transition to a green economy under the European Green Deal and related initiatives such as the Green Deal Industrial Plan and the Critical Raw Materials Act, represents the EU's strategy to reduce dependence on fossil fuels, enhance energy efficiency and security, and to mitigate the risks associated with climate change and enhanced conflict dynamics. However, critics warn that securitization risks prioritizing military responses over development and adaptation solutions. In the Sahel, for instance, the militarization of climate interventions has raised concerns about exacerbating existing inequalities and overlooking root causes such as governance failures and resource mismanagement (Charbonneau 2024). Global disagreements over climate security's framing and implementation are evident as well in political forums like the UN Security Council. While African nations such as Kenya and Niger advocate for integrating climate security into the Council's mandate, vetoes from countries like Russia and China highlight geopolitical tensions. These contestations reflect differing priorities, with some nations emphasizing development over security-oriented approaches. Although there is no direct causal link between climate change and conflict, there is a consensus that climate change further fragilize communities already affected by violent conflicts, while conflict can exacerbate the impacts of climate change (Dresse et al. 2019; Ide et al. 2021; Ide et al. 2023). This literature has identified interrelated pathways that connect climate change and conflict dynamics, such as livelihood deterioration, changing and accelerating patterns in migration and mobility, the impact of non-state armed groups on environmental degradation and biodiversity loss, from illegal logging and wildlife trading, and their expansion efforts to occupy arable land and exert control over natural resources, as well as political and economic exploitation and mismanagement by elites (Mobjörk, Krampe and Tarif, 2020).

The latest understandings of climate security have shifted the focus to how cooperation on developing technologies and tools to climate change mitigation and adaptation can avoid violent conflict. However, this understanding of climate security and of environmental peace oversimplifies the complex socio-political dynamics at play and neglect deeper historical and socio-political drivers of conflict, including colonial legacies of environmental interventionism and extractive practices, as well as inequality of access to resources despite its abundance (Verweijen and Hoffmann 2024; Selby, Daoust and Hoffman; Ryan and Martin de Almagro 2024). Crucially, a central critique of the current climate security literature and agenda is its perceived neglect of climate justice. Vulnerable nations in the Global South, disproportionately affected by climate change, often lack decision-making power in global climate negotiations and access to climate security finance (Mou, 2024b).

In what follows, the case study of eastern DRC will illustrate the practices shaping the operationalisation of climate security in fragile contexts, the contestations surrounding its framing and implementation, and the prospects for advancing a positive climate peace. By examining these dimensions, the case study underscores the necessity of context-sensitive, equitable, and adaptive frameworks for addressing climate security challenges.

Climate Security in the Democratic Republic of Congo

The Democratic Republic of the Congo (DRC) is grappling with the interconnected challenges of climate change, environmental degradation, resource exploitation, and conflict, all of which contribute to heightened insecurity in the country. On the one hand, DRC is a globally recognized conservation site, and a provider of green hydrogen and biodiverse carbon sinks in the Congo Basin needed for the global green transition efforts. On the other hand, the DRC is one of the most vulnerable countries to climate insecurity (Notre Da

First, rising temperatures and unpredictable rainfall have disrupted agriculture, heightened food insecurity, endangered access to a safe and clean environment, and triggered displacement, further compounding social instability. An estimated 25.4 million people are facing food insecurity in the DRC and from 2008 to 2022, floods and storms displaced approximately 1.7 million people within the DRC, with a significant rise in recorded incidents observed over the past five years (Integrated Food Security Phase Classification 2023; International Displacement Monitoring Center 2022). Second, the eastern provinces of Ituri, North Kivu and South Kivu are marked by armed conflict dynamics and sociopolitical divisions, which includes alliances between both national and foreign actors. Such fragmentation reflects the interplay of regional, national, and local security dynamics, shaping the area's complex landscape, including conflicts which revolve around competition over scarce resources, expansion of the mining industry and displacement of local populations (Mudinga et al. 2024). In turn, the legacies of regional violent conflict and the mismanagement of IDPs and refugee crises – are making local populations more vulnerable to the effects of climate change.

Crucially, the combined effects of a changing climate and the global push towards green energy risk intensifying disputes over resource management and triggering conflicts over critical resources like land and water. Furthermore, despite being one of the most resource-rich nations in the world, the DRC has struggled to translate its geological wealth into improved public services or higher incomes for its population (PRECOP 27). Furthermore, tensions between artisanal and small-scale mining (ASM) operations and government-supported international corporations frequently escalate into violent confrontations (Amnesty International 2021). In addition, the charcoal

There is indeed no direct causal link between climate change and conflict. However, there is a consensus that climate change further fragilizes communities that are already affected by violent conflicts.

industry, developed informally, is a major factor contributing to deforestation and financing of armed groups in the region (Marijnen and Verweijen 2019). It is estimated that 61% of charcoal comes from trees cut in forests, out of which 86% from Virunga National Park (Dubiez et al. 2021).

Operationalisation practices for climate security

If access to energy resources is one of the key issues reproducing conflict dynamics and environmental degradation in the DRC, the country has set up local adaptation strategies and pushed for the development of alternative energy sources as responses to climate-induced challenges. The DRC's government signed a decree in January 2025 for the establishment of the Green Corridor Kivu-Kinshasa, a green economic development, conservation and peacebuilding programme, which will be implemented with the financial support of the EU and its member states (European Commission 2025). The aim is to upscale a previous 'green peace' project, the Virunga Alliance, which combined forest conservation with environmental protection, food security and conflict prevention. The Green Corridor programme seeks to establish a sustainable corridor to facilitate the annual transport of 1 million tons of agricultural products from the Kivu region to Kinshasa, covers a wide range of critical sectors, including protected area conservation, agricultural value chains, energy, security, and transport.

The Virunga Alliance is a partnership between the province of North Kivu authorities, the Virunga Foundation and the private sector. The Alliance has framed climate insecurity as the result of resource abundance, weak governance, and poverty, where armed groups exploit these resources to fund operations, perpetuating cycles of violence. As a response, it has developed a three-leg ecomodernist strategy to foster peace through the economic development of the Virunga park natural resources: first, three hydro-electric power plants are envisioned as stable sources of renewable energy for the DRC and the broader region

commercialised by Virunga Energies, a private company wholly owned by the Virunga Foundation. The electricity generated is commercialized by Virunga Energies, a private company owned by the Virunga Foundation. The second component focuses on promoting export-oriented agriculture in collaboration with the Belgian Envirium Life Sciences Group. The third component the exploitation of luxury ecotourism mostly for wealthy visitors from the Global North (Marijnen 2022).

Contestations to climate security initiatives

While the Virunga Alliance has garnered international praise for its innovative approach to provide resources for the green economy, its outcomes reveal significant limitations at providing climate security to the Congolese populations, and at diminishing the pathways that link climate change and insecurity. First, with regards to livelihood deterioration, access to this electricity provided by the hydroelectric facilities of the Virunga Alliance remains limited, with rural populations still using firewood and charcoal because they do not have enough money to connect to and pay for electricity. This unequal distribution exacerbates socio-economic disparities, undermining the potential for equitable climate security. Second, the uneven distribution of benefits from energy, agriculture, and tourism exacerbates existing inequalities, particularly between urban and rural areas and between wealthy and impoverished populations (Verweijen et al 2020). For instance, the loss of income resulting from the decline in the charcoal market has a negative impact on local livelihoods, which have not been compensated by benefits from ecotourism or the selling of agricultural products. Third, despite efforts, armed groups remain active in and around the park, offering sometimes governance and protection services to the local population, such as enabling commercialisation of charcoal (Hoffmann and Vlassenroot 2014, Hoffmann and Verweijen 2019) and highlighting in this way the inadequacy of ecomodernist interventions to address entrenched conflict dynamics and grievances. Finally, the dependency on foreign funding, expertise, and markets, including via cryptocurrency

(Popescu 2023) only reinforces the park's integration into global capitalist systems, diminishing local economic.

Reimagining climate security

In order to achieve meaningful climate security in the DRC, a reimagining of the concept that critically engage with colonial legacies and prioritize diverse epistemologies, incorporating local knowledge and practices is necessary. First, this involves shifting from a technocratic, market-driven model to a more

inclusive, locally grounded approach. Interventions must move beyond economic factors to address historical grievances, governance failures, and social inequalities. Addressing these inequities requires shifting the focus from state-centric security frameworks to human-centric approaches that prioritize local livelihoods and resilience (Busby, 2022; Charbonneau, 2024). Second, it requires strengthening local governance structures, integrating

state governance with traditional systems, while ensuring community participation in the development and execution of climate change adaptation plans to enhance the legitimacy and sustainability of interventions. Third, it demands a centering of a redistribution of benefits equitably, particularly to marginalized groups, are essential to fostering social cohesion. By addressing the broader socio-political dimensions of conflict, prioritizing local agency, and emphasizing the interconnectedness of climate adaptation, governance, and social cohesion, climate security initiatives can become a more effective and equitable framework for achieving climate justice in fragile contexts like the DRC.

To achieve meaningful climate security in the DRC, it is essential to move beyond technocratic, market-led models and toward inclusive, context-sensitive approaches that engage with historical injustices and local realities.

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