

OPINION

The challenges of the increasing institutionalization of climate security

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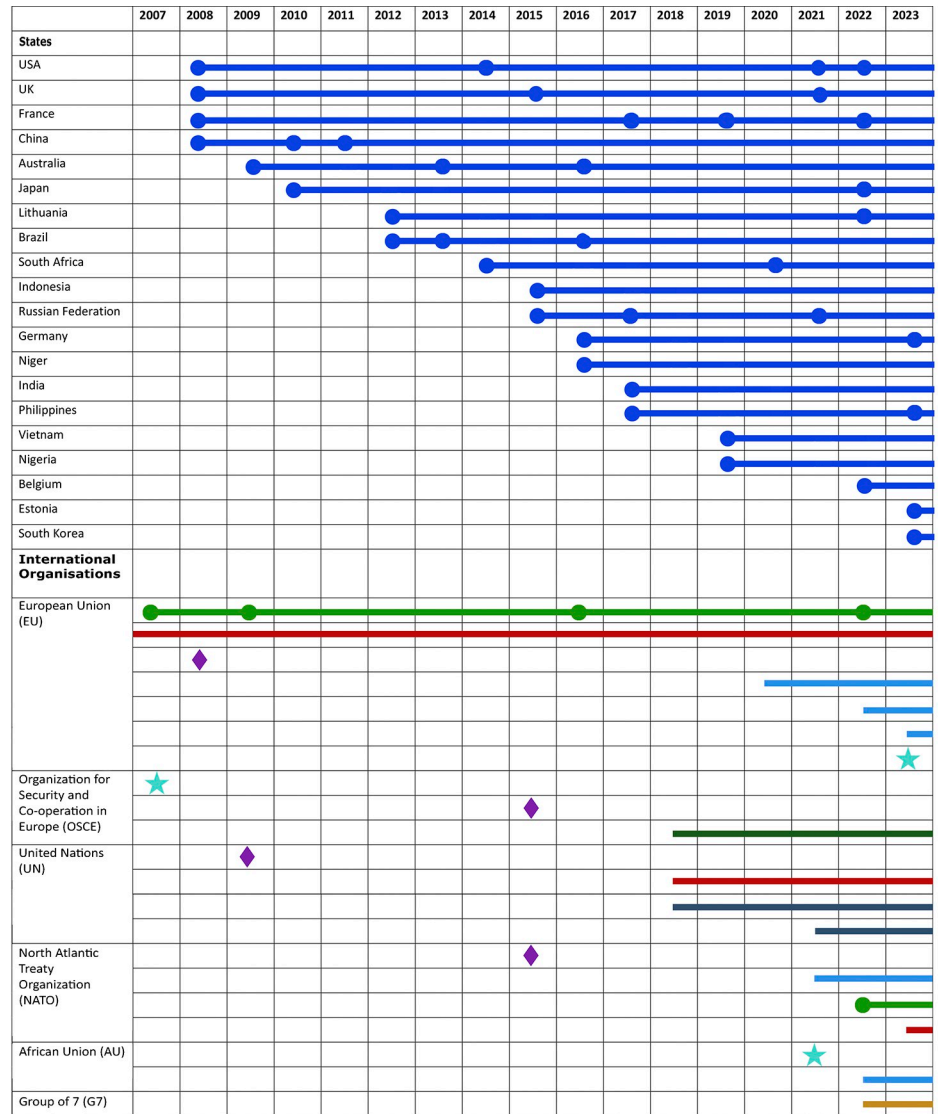
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Summary

A rapid and widespread institutionalization of climate security is underway, led by powerful states and international organizations. Recognition of the climate crisis by security actors as a serious threat to humanity is long overdue, but it is imperative that this institutionalization is critically scrutinized. This commentary highlights specific dangers that accompany the institutional mainstreaming of climate security, including a non-reflexive integration into traditional security paradigms, a growing geopolitical separation between discourses emerging from the Global South and North, and policymaking that tends to draw from a narrow view of the science. Science-based and actionable research informed by pluralistic understandings of climate security is needed to counter this trend.

After years of discussions about whether anthropogenic climate change could have security implications, the issue is now moving to the centre of international security agendas. State and non-state security actors increasingly recognize multiple links between climate change and security, such as threats to states, militaries, human well-being, and the stability of earth systems. Thus, the term ‘climate security’ is used across research and policy domains. The term ‘climate security’ is used and understood differently across diverse research and policy domains. Yet growing recognition of the issue has generated an unprecedented wave of institutionalization of climate security led by powerful states and international organizations

(Fig 1). For example, officials from the United Kingdom (UK) and the United States (US) now frequently refer to climate change as a “threat multiplier” and it features prominently in their national security strategies. The United Nations (UN), the European Union (EU), and regional security actors such as the North Atlantic Treaty Organization (NATO) are investing significant resources to mainstream climate security into their activities [1].



- Mention of climate change in Security & Defence strategy
- Security and Defence Strategies (states and International Organisations)
- **Institution:** Global Monitoring for Environment and Security (launched in 1998, adopted in 2001) by the EU. It was replaced by Copernicus Program in 2014; Climate Security Mechanism (UN, 2018-); Climate Change and Security Center of Excellence (NATO, 2023-)
- **Initiative:** Climate, Environment, Peace and Security Declaration and Initiative (G7, 2022)
- ★ **Declaration:** Madrid Declaration on Environment and Security (OSCE, 2007); Climate Change and Peace and Security: The Need for an Informed Climate-Security-Development nexus for Africa (AU, 2021); Climate and Security: Joint Communication from the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy to the European Parliament and the Council (EU, 2023)
- ◆ **Report:** Climate Change and International Security (EU, 2008); Climate change and International Security (UN Secretary General, 2009); Climate Change and Security: Unprecedented impacts, unpredictable risks (OSCE, 2015); Climate Change, International Security and the Way to Paris 2015 (NATO, 2015)
- **Project:** Strengthening Responses to Security Risks from Climate Change in South-Eastern Europe, Eastern Europe, the South Caucasus and Central Asia (OSCE, 2018-2024)
- **Committee/Community of Practice:** Group of Friends of Climate and Security (UN, 2018); Community of Practice of Climate Security (UN, 2021)
- **Strategy:** Climate Change and Defence Roadmap (EU, 2020); Concept for an Integrated Approach to Climate Change and Security (EU, 2021); Climate Change and Security Action Plan (NATO, 2021); Climate Change and Defence Roadmap (EU, 2022); Climate Change and Resilience Development Strategy and Action Plan (AU, 2022); Climate and Security Action Plan – Compendium of Best Practices (NATO, 2023); Climate and Security: Joint Communication from the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy to the European Parliament and the Council (EU, 2023)

Fig 1. Increasing trend of climate security institutionalization.

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There are dangers associated with such non-reflexive mainstreaming of climate security. Decades of research have shown that climate change does not fit neatly into established understandings and practices of security. Climate security remains a topic of intense political and scholarly debate, and the concept is not clearly defined in either theory or practice. The ideational fragmentation of climate change by some security actors has led to the adoption of different interpretations of climate security and responses [2]. Debates ongoing in the United Nations Security Council (UNSC) since 2007 reveal a highly contested and politicized agenda with a persistent two-camp logic between climate security advocates and opponents, with differences over the scope of climate security and means of addressing it [3]. Some are sceptical about the legitimacy of the UNSC—considering its non-representative configuration—while others are concerned about the largely ad-hoc, reactive, and conflict/crisis-centric nature of the discussions [4]. The current geopolitically structured forms of institutionalization, as reflected in the UNSC that is influenced by power politics, fail to integrate science-based research and climate justice concerns necessary for responses to climate change [5].

Going forward, advancing a security-imbued climate change agenda demands recognition of diverse realities, pluralistic perceptions of security and divergent actor interests; reconfiguration of institutional structures of national and international security; and re-imagining of inclusive approaches to peacebuilding and development. The following sections highlight that without these changes, security institutions might misidentify and miscalculate risks and vulnerabilities, and construct poorly designed responses that mainly attend to the symptoms instead of tackling the root causes of insecurity related to climate change.

Dangers and biases of mainstream climate security institutionalization

Conventional security actors increasingly respond to climate security by incorporating climate change into military scenario exercises, engaging in humanitarian assistance and disaster relief efforts, and undertaking other activities. However, the legitimacy and efficacy of military/defence institutions in addressing the climate crisis is highly contested. Militaries mainly view climate change in terms of its impacts on their interests and resources, such as on military bases and the availability of resilient energy sources for military assets [6]. For example, climate security threats identified by the U.S. Department of Defense are only selectively integrated into planning and decision-making [7]. Furthermore, top-down command structures within conventional security actors/institutions do not align well with sustainable climate interventions that seek to build participation, accountability, and consensus on pathways towards climate-resilient development [8]. Without fundamental transformation, institutionalization through military-informed activities on climate security will likely reinforce dominant state-centric security practices that focus on reactive military measures and a culture of secrecy.

The military sector is one of the biggest emitters of greenhouse gases (GHGs). Conventional military approaches remain entangled with responsibility for climate change even while engaging in climate action. Multi-decadal reliance on oil for existing and planned infrastructure and hardware positions militaries as compromised actors on climate change and inherently resistant to potentially costly internal transformations away from fossil fuels [9].

Another concerning trend is the growing divide in climate security discourse and policy between the Global South and Global North. The Global North's focus on climate change as a threat or 'risk multiplier' emphasizes ways in which climate change will exacerbate resource scarcity and result in increased migration flows across borders, which may amplify existing societal fragilities and geopolitical tensions [10]. On the other hand, most developing countries tend to link climate security with context-specific development and security imperatives, and

adopt a cautious approach towards Global North-driven discourses—imbibing some aspects, while questioning others. Similarly, small island developing states present climate security as an “existential threat,” demanding more climate action and development assistance from the Global North [11].

Currently, the institutional discourse(s), policies and initiatives on climate security are framed and dominated by actors from the Global North. Yet, simultaneously, most of them externalize the problem, locating ‘climate insecurity’ primarily in the Global South. This geographic focus on regions of instability in the Global South fuels suspicions that have also been raised in the UNSC context, such as to legitimize further interventions in the Global South or to restrict decision making procedures at the UN level, hindering potential consensus on cooperation and effective non-military interventions in areas acutely vulnerable to climate impacts [12].

The dominance of traditional militarized security responses and the divergence between Global North and South conceptualizations of climate security leave the risks of transgressing the planetary boundaries or climate tipping points unaddressed [13]. Most climate security approaches fail to protect communities and ecosystems from the full gamut of climate risks as described by earth system science and reflected in the Intergovernmental Panel on Climate Change (IPCC) assessments. In addition, by their focus on threat multipliers, resilience, and human security, Northern climate security discourses deflect most of the responsibility of coping with climate impacts to the Global South, despite the huge disparity in past and present per capita GHG emissions. They also shift institutional responses away from addressing root causes of climate vulnerability such as poverty, inequality, historical responsibility, and injustice.

The Global North-based climate security discourses also deflect attention from other ways in which Western hegemony and its history of colonialism and extractivism has created vulnerability and conflict. In this context, this misuse of climate security could lead to disproportionate and inappropriate responses such as the criminalization of, and militaristic responses to, migration, social movements and climate protests [14]. Similarly, the resulting institutional processes tend to exclude many relevant stakeholders and rights-holders, such as sub-national policymakers, civil society organizations, and importantly, affected local and indigenous communities.

These problems with the ongoing institutionalization of climate security are exacerbated by the fact that the science-practice/policy interface is weak and dominated by think tanks with close ties with governments and international institutions. Practitioners, especially in traditional security sectors, often fail to draw upon varied dimensions of the existing body of research on climate security when constructing their reports and recommendations. Instead, de-politicized approaches are emphasised with a focus on techno-fix solutions, and a conceptual over-reliance on studies that link climate change and conflict [15]. At the same time, the climate security scientific research agenda itself has so far failed to capture the institutional developments and is largely dominated by Global North perspectives.

Reconfiguring approaches to climate security research and practice

The emerging institutionalization of climate security requires urgent attention. Critical research agendas should focus on the pressing questions that accompany the institutionalization processes of climate security and their underlying power dynamics. To adequately respond to the diverse security implications of climate change inter-disciplinary and trans-disciplinary approaches need to be developed quickly and widely. This also means abandoning knee-jerk dismissals of any involvement of military actors and instead carefully considering

how traditional security actors could be incorporated into holistic and effective responses to climate-induced insecurity.

As a counter-move to the current logics of institutionalization, scholars and practitioners need to be attentive to different security discourses and their implications, include multiple actors and local stakeholders and delve into questions of what is being securitized, by whom and to what ends. There is no one-size-fits-all approach to climate security. Thus, going forward, the institutionalization of climate security needs to reflect better the complex, multi-actor, and multi-scalar relational forces that contribute to insecurity, vulnerability, and risk, especially from a Global South perspective.

Similarly, institutions need to better acknowledge and address conflicts that may arise from responses to climate change or perceived climate insecurity. These include the consequences of mitigation and adaptation policies, resource and land grabs, or potential geoengineering schemes. A better understanding of how these may influence and interact with the security implications of climate change, referring to the second order processes dealing with socio-economic aspects, needs to be embedded into research and policy-making.

In short, a reconfiguration of climate security research and practice entails disavowing the prevailing two-camp logic, challenging techno-fix assumptions, expanding beyond a narrow focus on violent conflict, and questioning the institutionalization of concepts and practices by and for powerful Global North actors.

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References

1. Hardt JN, Harrington C, Von Lucke F, Estève A, Simpson NP, editors. *Climate Security in the Anthropocene: Exploring the Approaches of United Nations Security Council Member-States* [Internet]. Cham: Springer International Publishing; 2023 [cited 2023 Nov 12]. (The Anthropocene: Politik—Economics—Society—Science; vol. 33). Available from: <https://link.springer.com/10.1007/978-3-031-26014-8>
2. Floyd R. Global climate security governance: a case of institutional and ideational fragmentation. *Conflict, Security & Development*. 2015 Mar 15; 15(2):119–46.
3. Trombetta M, editor. *Handbook on climate change and international security*. Northampton: Edward Elgar Publishing; 2023.
4. McDonald M. Immovable objects? Impediments to a UN Security Council resolution on climate change. *International Affairs*. 2023 Jul 3; 99(4):1635–51.
5. Von Lucke F. *The Securitisation of Climate Change and the Governmentalisation of Security* [Internet]. Cham: Springer International Publishing; 2020 [cited 2023 Nov 12]. (New Security Challenges). Available from: <https://link.springer.com/10.1007/978-3-030-50906-4>
6. Vogler A. On (In-)Secure Grounds: How Military Forces Interact with Global Environmental Change. *Journal of Global Security Studies*. 2024 Mar 1; 9(1):ogad026.
7. Burnett M, Mach KJ. A “precariously unprepared” Pentagon? Climate security beliefs and decision-making in the U.S. military. *Global Environmental Change*. 2021 Sep; 70:102345.
8. Simpson NP, Simpson KJ, Ferreira AT, Constable A, Glavovic B, Eriksen SEH, et al. Climate-resilient development planning for cities: progress from Cape Town. *npj Urban Sustain*. 2023 Feb 28; 3(1):10. <https://doi.org/10.1038/s42949-023-00089-x> PMID: 36874410
9. Crawford N. *The Pentagon, climate change, and war: charting the rise and fall of U.S. military emissions*. Cambridge, Massachusetts London, England: The MIT Press; 2022. 386 p.
10. Daoudy M. *The Origins of the Syrian Conflict: Climate Change and Human Security* [Internet]. 1st ed. Cambridge University Press; 2020 [cited 2023 Nov 12]. Available from: <https://www.cambridge.org/core/product/identifier/9781108567053/type/book>
11. Teaiwa K. No Distant Future: Climate Change as an Existential Threat. *Australian Foreign Affairs*. 2019 Jan 1; 6: 51–70.
12. Jayaram D. Shifting discourses of climate security in India: domestic and international dimensions. *Third World Quarterly*. 2024 Feb 19: 1–19.
13. Lenton TM, Rockström J, Gaffney O, Rahmstorf S, Richardson K, Steffen W, et al. Climate tipping points—too risky to bet against. *Nature*. 2019 Nov 28; 575(7784):592–5. <https://doi.org/10.1038/d41586-019-03595-0> PMID: 31776487
14. McLaren D, Corry O. “Our Way of Life is not up for Negotiation!”: Climate Interventions in the Shadow of ‘Societal Security.’ *Global Studies Quarterly*. 2023 Jul 12; 3(3):ksad037.
15. Selby J, Hoffmann C, editors. *Rethinking climate change, conflict and security*. First issued in paperback. London New York: Routledge; 2017. 222 p.