

# BRIEFER

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## Climate Security: An Agenda for Future Research

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### INTRODUCTION

Climate change is altering the physical and strategic context in which national and international security is pursued. But it is not just increased climate variability and its socio-economic consequences that could compound instability and violent conflict in the future. The scale of transformation required to mitigate and adapt to the climate crisis, as well as the speed and orderliness with which any such transition must occur, carries additional risk and demands more attention from scholars and policymakers. That was the conclusion of a virtual roundtable organized by the UK Ministry of Defence's Climate Change & Sustainability Directorate and Loughborough University in May 2022, led by the authors of this brief. The following draws from the roundtable conversations.

### CLIMATE CHANGE AS A THREAT TO NATIONAL SECURITY

Climate change has attracted attention from the defense and security community for more than two decades. Initial interest reflected long-standing concern about environmental degradation and resource scarcity as a driver of insecurity and armed conflict. Attention then shifted towards the potential for climate change to act as a 'threat multiplier', aggravating existing challenges around food, energy and

insecurity, especially in more volatile parts of the world.<sup>1</sup> Such claims have prompted intense debate about whether the tensions that led to wars in Darfur (2003-2007) and Syria (2011-) were exacerbated by environmental factors.<sup>2</sup>

Nevertheless, the climate change-as-threat multiplier argument has up to now occupied an outsized space in scholarly and practitioner understanding of the environment-security nexus. This may have contributed to national security communities, in large part, focusing narrowly on preparing for and responding to the tail-end impacts of climate change as they occur, especially in those countries that are regarded as being at greatest risk today. Meanwhile, foresight and anticipation have been relatively neglected in the halls of governments and international institutions: not enough consideration is being given to identifying those countries, which, although currently reasonably stable, may be the next to be overwhelmed by the impacts of climate change in the years ahead.

Increased climate variability and the prospect of even greater extremes are not just multiplying existing threats, but reshaping the broader geopolitical landscape and influencing strategic decisions. In India, for example, recent heat waves (which according to climate attribution studies were made 30 times more likely because of climate change)<sup>3</sup> are claimed to have impacted that country's ability to support efforts to address the global food crisis sparked by Russia's war on Ukraine.<sup>4</sup> In the Pacific, according to media reporting,<sup>5</sup> the Solomon Islands have sought greater political and security alignment with China in part because the West is perceived as being slow to acknowledge the existential crisis facing Pacific islands as sea levels rise.

Indeed, it is time to more broadly rethink national and international security and recognize the diverse ways in which responses to climate change are being factored into decision-making: as both challenge and opportunity. In doing so, it is crucial to understand that climate disruptions are unfolding at a faster pace and with greater impact than originally anticipated in climate models. The accelerated pace and disruption impacts are affecting factors that play into decision making processes and geo-strategic outlooks in such multi-dimensional ways that we now need to keep adaptive and learning capacities active at all times. The challenge is to transform real-time learning into active analytical and response capacity.

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<sup>1</sup> [“National Security and the Threat of Climate Change,”](#) Sherri Goodman et al., CNA, 2007:

<sup>2</sup> See for example, “Chapter Three: Darfur: The First Modern Climate-Change Conflict,” Jeffrey Mazo, The Adelphi Papers, 2009 DOI: [10.1080/19445571003755538](https://doi.org/10.1080/19445571003755538) “Did We See it Coming? State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt,” Werrell, Femia and Sternberg *SAIS Review of International Affairs*, Volume 35, Number 1, Winter-Spring 2015, pp. 29-46

<sup>3</sup> [“Climate Change made devastating early heat in India and Pakistan 30 times more likely”](#), Lottie Butler and Siobhan Stack-Maddox, Imperial College London, May 26, 2022.

<sup>4</sup> [“India heatwave throws food security for loop”](#), Una Galani, Reuters, May 12, 2022.

<sup>5</sup> [“Solomon Islands’ security pact with China raises the question – is Australia the partner for the Pacific it thinks it is?”](#), Kate Lyons, The Guardian, April 20, 2022.

## CLIMATE CHANGE AS A THREAT TO ECOLOGICAL SECURITY

One way to reconceptualize climate security is to adopt a broader notion of ecological security tied to the idea of ecosystem integrity. Rethinking security on an ecological scale goes beyond the traditional focus on mitigation of and adaptation to the climate crisis, as well as its associated risks. Instead, it draws attention to planetary demands for the regeneration of ecosystems (many of which lie across sovereign state borders) that must be addressed if the global climate system is to be kept within tolerable ranges for life on earth as humanity has generally known it. Ecological security makes a direct and more dynamic link between climate change and other inter-related ecological crises outlined in the planetary boundary model, including the loss of biodiversity. It also puts more focus on the need to revitalize environmental resources, especially in those parts of the world where growing food and water scarcity can and should be combated, lest they lead to greater insecurity and conflict.

This kind of regenerative activity needs to be embedded into diplomacy, peacebuilding, post-conflict reconstruction, and defense and development planning. Safeguarding endangered ecosystems and critical resources must also become a shared responsibility of the international community. Already, there is a danger that in the rush to decarbonize, demand and competition for critical materials will further endanger precisely those areas, including across Africa, the Indo-Pacific, and Latin America that are not just extremely vulnerable to the effects of climate change but also crucial for global regeneration and regulation of critical ecological and climate regimes.

### A DISORDERLY TRANSITION?

The potential geostrategic ramifications of decarbonizing the world economy are also understudied. This includes the possibility of greater social unrest over the uneven distribution of costs and benefits associated with any transition, which could contribute towards future conflict and instability. There is also evidence of growing intersections between various ideologies and concerns about climate change (including, for example, the rise of eco-fascism) which could create or exacerbate dividing lines within and between societies. Between states, we should expect to see more disputes over who should carry the costs of mitigation, adaptation and regeneration.

The future of petro-states and what kind of support they should receive to help keep their fossil fuels in the ground deserves greater consideration too (in many cases this may involve negotiations with regimes that many will find unpalatable). Related to this is the issue of how to determine for what purposes fossil fuels can still be used: for instance, will militaries be allowed to remain fossil-fueled, are there emergency

circumstances in which burning carbon may be deemed acceptable, and how will all of this be monitored and regulated?

## **THE FUTURE CHARACTER OF MILITARY OPERATIONS**

Alongside this need to reconsider how climate change, decarbonization, regeneration, security and geopolitics all intersect, more research is needed to understand how the climate crisis and responses to it will affect where, when, how and for what ends defense and security forces are deployed. To help address the climate crisis, militaries will either need to operate with a smaller carbon boot print, or more restraint, or both. This will affect everything from capability choices to operational planning. More provocatively, it invites debate about how future military forces should be structured, what kinds of capabilities they should have at their disposal, and on what kinds of operations they should be deployed.

## **AN AGENDA FOR RESEARCH**

Identifying the most critical knowledge gaps around climate security and devising strategies to share and disseminate novel findings across defense organizations, wider government and society in general is of vital importance. Here, we have identified several priority challenges:

- How are the climate and other ecological crises affecting geostrategic decision-making? To secure a safer and more peaceful world, how should they actually affect decision making? In addition, are government bodies well-equipped, capacitated and coordinated to design the best response to compound challenges?
- What are the geopolitical, security and conflict ramifications of responses to the climate crisis, such as decarbonization and regeneration, to what extent can these be anticipated and/or mitigated, and through what means?
- How will climate change and responses to its impacts affect the ways in which defense and security forces operate? Should defense and security forces' mandate change as a result of new types of compound challenges to include ecological competencies?

All this is coupled with the growing need to strengthen ties between scholarly and practitioner communities to ensure government policies are informed by the latest academic findings and that future research is policy-relevant by design. This represents the fourth priority challenge: to determine how best to build capacity within the scholarly and policymaking communities and empower them to meet the challenges of a warming world. Key questions include:

- How can we think about climate and ecological security risks in a more systemic way?
- How can we increase literacy and strategic competence on these issues within governments?
- What are the skills that future leaders will need to cope with the multi-layered challenges posed by the climate and ecological crises and responses to them?
- More broadly, what are the mechanisms needed to support this type of enquiry? And what are the current barriers to expanding the provision of knowledge?

These questions need to be addressed urgently. Otherwise, defense ministries may be left unable to develop effective responses to climate change and ecological breakdown's security consequences and their cascading impacts, undermining preparedness, readiness and resilience to future shocks, as well as the ability to anticipate and prevent them. Failure to deal appropriately with fast-accelerating and compounding risks may well lead to undermining planetary security, threatening the very viability of human civilizations to function.

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*\* The views expressed in this report reflect the key themes identified at a virtual roundtable organized by the UK Ministry of Defence's Climate Change & Sustainability Directorate and Loughborough University in May 2022. They do not represent the formal position of the UK Ministry of Defence.*