Climate Security: the implications and risks of climate change to national security

Climate change has been identified as one of the most serious threats to national security[1]. Climate-related disasters such as recurring floods, droughts, desertification, or wildfires will not only cause direct damage but also lead to chains of catastrophic events such as migration, sociopolitical instability and potential armed conflicts that will cost trillions of dollars and millions of lives[2]. Additionally, transitioning to renewable energy will not just influence the power balance between countries, but will also reconfigure trade flows and create new interdependencies around renewables and commodities[3]. If left unchecked climate change could have a severe impact on the economic and social gains made in countries around the world and jeopardise many of the UN Sustainable Development Goals.

These climate-induced risks will have severe consequences to UK national security in terms of overseas instabilities generating new threats to the internal security of the UK. Climate change will directly or indirectly threaten the UKs overseas interests and increase demands for humanitarian operations, disaster relief missions and international peace-keeping efforts. These impacts will subsequently have implications on the preparedness of forces to respond, future resource planning, operational commitments and training associated with supporting global stability.

As the UK's place in geopolitics shifts, it now has an opportunity to cast itself as a `smart' global power and work closely with allies to respond to global needs, especially at times of crisis. The UK is a world leader in several academic and analytical disciplines essential to quantifying and acting upon climate risks such as climate science, data science, AI and social sciences. **This is the right moment for Defence and Security to lead the development of state-of-the-art forecasting and strategic insight tools that can identify and measure climate risks; provide early warnings for climate security-related tipping points; and help policymakers identify where resilience needs to be built in and/or safeguarded.**

To create this evidence base, a substantive research programme is required, which gets to the heart of understanding changing climate security as the outcome of complex, interconnected, dynamical systems. It requires a multidisciplinary team of data, political, social and environmental scientists to address critical research questions and provide insight into the analysis and results. Broad types of research are provided below, but these should be illustrative rather than constraining:

- Critical examination and review of existing research on the relationship between climate change, humanitarian aid, conflict and instability.

[1] "The World Climate and Security Report 2020." Product of the Expert Group of the International Military Council on Climate and Security. Authors: Steve Brock (CCS), Bastien Alex (IRIS), Oliver-Leighton Barrett (CCS), Francesco Femia (CCS), Shiloh Fetzek (CCS), Sherri Goodman (CCS), Deborah Loomis (CCS), Tom Middendorp (Clingendael), Michel Rademaker (HCSS), Louise van Schaik (Clingendael), Julia Tasse (IRIS), Caitlin Werrell (CCS). Edited by Francesco Femia & Caitlin Werrell. Published by the Center for Climate and Security, an institute of the Council on Strategic Risks. Feb 2020.; Campbell, K.M. ed., 2009. Climatic cataclysm: The foreign policy and national security implications of climate change. Brookings Institution Press.; Campbell, K.M. ed., 2009. Climatic cataclysm: The foreign policy and national security implications of climate change. Brookings Institution Press; Gemenne, F., Barnett, J., Adger, W.N. and Dabelko, G.D., 2014. Climate and security: evidence, emerging risks, and a new agenda.; Rüttinger, L., Smith, D.F., Stang, G., Tänzler, D. and Vivekananda, J., 2015. A new climate for peace: Taking action on climate and fragility risks: An Independent Report Commissioned by the G7 Members. Adelphi.; Board, C.M.A., 2014. National security and the accelerating risks of climate change. CNA Corporation.; Louise van Schaik et al, March 2020, Ready for take-off? Military responses to climate change, Clingendael Report, Available at: https://www.clingendael.org/sites/default/files/2020-03/Report_Military_Responses_to_Climate_Change_March_2020.pdf Accessed: 22 June 2020

2 OECD (2018), States of Fragility 2018, OECD Publishing, Paris, https://doi.org/10.1787/9789264302075-en., Hallegatte, S., Bangalore, M., Bonzanigo, L., Fay, M., Kane, T., Narloch, U., Rozenberg, J., Treguer, D. and Vogt-Schilb, A., 2015. Shock waves: managing the impacts of climate change on poverty. The World Bank., Dellink, R., Hwang, H., Lanzi, E. and Chateau, J., 2017. International trade consequences of climate change.

3 The secretariat of the Global Commission on the Geopolitics of Energy Transformation en Thjis Van de Graaf, "A New World: The Geopolitics of the Energy Transformation" (Abu Dhabi: IRENA, 2019), http://hdl.handle.net/1854/LU-8588274.

- Innovative theoretical and conceptual research approaches to the social, economic, geopolitical environmental impacts of climate change to Defence and Security, including changes in the strategic environment, borders and alliances.
- Examination and analysis of available datasets to understand what techniques could be utilised to provide the timely insights to decision makers; For example, new types of data can determine how climate risk hotspots overlap with other structural risks to drive fragility, conflict, migration or maladaptation.
- Development of models, tools and techniques that provide decision makers with early indicators and warnings of potential climate security tipping points. These novel methods can explicitly link climate and socio-economic processes together and help policymakers define the boundaries for 'safe and just operating spaces'.

We recommend that the academic community coalesces around a new research initiative and be supported over five years to design and deliver applied research in climate security risk and resilience, capacity building and development and testing of climate security tools. The research will support the government and relevant agencies by providing targeted, user-driven, policy-relevant evidence on climate-related security risk. We expect that the outputs are also likely to be of interest to a broader community including those concerned with mitigating the effects of climate change at government and international level as well as organisations such as NGOs with more operational concerns.

Programme elements

1. Bringing together disparate researchers and the Defence and Security community

- The proposed initiative requires network building to establish collaborations between the disciplines that are currently too sparse and discontinuous to address this grand challenge. It also needs to extend into the UK Defence and Security community to ensure that research can both inform this community and better understand their needs. A new research initiative will bring together experts from across disciplines to focus on the shared problem with minimal distraction.

2. Providing flexible approaches to projects and programmes

- Multiple research projects will be delivered by a scientific leadership team and a development and testing team will transform them into relevant user-friendly demonstrators and products that support effective climate risk communication and action.

3. Building capacity amongst decision-makers

- A yearly Climate Futures Retreat will bring together national and international academics and key decision-makers from the defence and security community, across different departments to help develop a shared understanding of the problem set and guide the research further. This annual retreat aims to build capacity within the security community and establish a new kind of deliberative approach to decision making, while ensuring that research is integrated with decision-making and has strong data science core.

4. Creating networks

- Establishing and supporting a community of practice on data for climate security and resilience requires management support, community-building, communications and national/international convening.