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climate change & (in)security project



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Responding to Climate (In)security: The Role of Defence.

There are three key points that I want to make upfront.

First, climate change and the response to its impacts are already reshaping the physical and strategic operating environments of our Armed Forces. These impacts are contributing towards geopolitical uncertainty making many of

keynote address

the threats we face more complex and challenging to resolve.

Second, the security implications of climate change matter for Defence and the wider security community. They are everybody's business. And need to be codified into everything that we do.

The third point I'd like to make, is that this is a whole-of-system issue which requires all players within the systems to act. Our contribution must form part of a wider

response, which includes Defence, Development and Diplomatic action.

The world around us is changing. The strategic context is more fraught, fragile and fragmented than ever before.

I believe Russia's invasion of Ukraine has exposed global vulnerability to cascading systemic risks, as well as highlighting the security ramifications of the transition away from fossil fuel-based energy sources.



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The security impacts of climate change are also all around us. We are seeing these manifest in different ways, in every region of the world.

In July, UK temperatures continuously surpassed 40°C for the first time on record, driving a rise in hospitalisations, triggering widespread fires – including across our own training areas – and causing severe disruption transport infrastructure. Extreme flooding events are also increasingly testing national resilience. This was very apparent, for example, in western Germany and eastern Belgium, in July 2021, when flooding – caused by heavy rainfall – killed more than 220 people.

This summer, Europe experienced its worst drought in 500 years. The resulting crop failures have contributed towards rising food insecurity by compounding already high food prices.

Between June and August, Pakistan received nearly 190% more rain than its 30-year average. Its government declared a national emergency. More than 33 million people were impacted, 1.7 million homes were destroyed, and an estimated £26bn in financial losses were caused, with further economic disruption expected.

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All these events were made many times more likely due to climate change, which is now occurring at a pace much faster than previously forecast.

Looking ahead, rising global average temperature will contribute towards even more climate variability and volatility – whether by driving higher temperatures; changing precipitation patterns; or leading to more frequent, intense, and extreme weather. And these are just the direct impacts.



Second and third order consequences of climate change will include increased food and water scarcity, displacement and migration, and humanitarian and economic crises. Climate change will also erode capacity to respond to shocks.

The private sector is getting this. It was interesting (but not surprising) to see climate change top AXA's list of emerging risks of most concern for the first time this year – followed by geopolitical instability and cyber security risks. This year, "climate action failure", "extreme weather", and "biodiversity loss" ranked as the top three most severe risks in the World Economic Forum's agenda-setting Global Risk Report.

So, what does this mean for Defence?

First, it's worth recognising that the UK's Armed Forces are already engaged on the front line of the global response to growing insecurity. Whether contributing towards national responses to more frequent and severe weather events at home or abroad. Or working alongside our allies and partners to tackle the geopolitical and conflict and instability-related threats that climate change impacts are compounding.

This covers a wide range of activities, from the obvious – such as:

British military personnel being deployed to help assist civil authorities in providing flood relief to local communities, as they did, for example, in West Yorkshire during Storm Dennis in February 2020. Or support to Humanitarian Assistance or Disaster Response activities, such as the Royal Air Force's recent transportation of UK military aid packages to Pakistan.

Through to the perhaps less obvious examples – such as: UK Defence's contribution to multilateral stabilisation activities, such as our role within the UN Stabilisation Mission in Mali – where climate change has affected natural resource-based livelihoods and contributed to undermining human security in a context of conflict.

Our Allies and Partners face the same challenge. For example, the Canadian Armed Forces' involvement in response to natural disasters has roughly doubled every five years since 2010. This September, nearly 500 military personnel were deployed across Canada in response to Hurricane Fiona.

Going forward, climate security pressures will have profound operational implications across all domains. This will include:

- where we operate;
- what we need to operate;
- how we operate; and
- who we operate with.

An increasingly number of reports by leading security think tanks – such as the International Institute for Strategic Studies – have highlighted that in addition to greater demand for Humanitarian Assistance and Disaster Relief (HADR) operations, a larger proportion of military operations are now likely to be in environments made more fragile by climate change.

The impact of climate change may also lead to increased demand for Defence to undertake other interventions such as countering illegal wildlife trade, deterring piracy and prohibiting illegal, unregulated and unreported fishing.

As the world transitions away from fossil-fuel based energy sources – in favour of cleaner, more sustainable alternatives – there may also be a role for Defence in responding to any potential new threats that are brought about by this transition, while securing our sources of energy.

The transition will create new supply chain



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dependencies and potential chokepoints. Increased competition to dominate new energy sources, the technologies needed for the clean energy transition, and the critical minerals required for such technologies, also risks spurring new strategic rivalries.

Where such challenges arrive, they will likely have implications for our defence diplomacy. We will need to understand how such dynamics are impacting regional partners and to ensure our engagements with affected countries are sensitive to such pressures.

A disorderly transition could also add to tensions that are already simmering, for example over which countries bear most responsibility for reducing their emissions and paying the cost of impacts that are already baked into the system.

One likely consequence, according to a recent report by the well-regarded climate change think tank E3G, may be growing interest and investment in geoengineering approaches, like solar radiation management, which manipulate aspects of the environment to address climate change rather than reducing GHG emissions.

If this sounds like science fiction, that's because it is. I'm sure many of you will be familiar with Kim Stanley Robinson's book *The Ministry for the Future* in which some of these issues are explored further. But they are also near-term challenges, as illustrated by their inclusion in the US Intelligence Community's National Intelligence Estimate on climate change and responses to its impacts, which published 12 months ago.

This and a growing literature of reports being produced both within and outside of governments are increasingly alerting us to the new reality. Namely, that in addition to changing operational demands, climate-related security risks are also shaping the broader geopolitical and security landscape within which we must operate, by straining existing international security arrangements, creating new geostrategic flashpoints, and raising the potential for inter-state military competition and conflict. China is a good example. It is already the most exposed country in the Asia-Pacific in terms of the number of climate disasters and the number of affected people. By mid-century, 85% of China's population will be exposed to climate-related hazards. Such hazards already cost the Chinese economy billions of yuan annually and cause major disruptions to human settlements and activities.

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Researchers at the Canberra-based Australian Strategic Policy Institute (ASPI) are among a growing community of analysts that are highlighting that climate change will increasingly influence China's economic, foreign and security policy choices over the next decade and beyond.

These impacts deserve greater attention. We need to understand how climate pressures will impact food and water supplies, coastal cities, energy demands, and health security, what this means for countries' internal stability and how they will respond. Existing assumptions about what is influencing our adversaries' behaviour, for example, may need to be updated.

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In many respects, climate change can therefore be described as a 'meta issue'. It is the backdrop against which all Defence-related activity will take place over the coming decades. The aptness and speed with which we continue to integrate climate change considerations into our strategic assessments, strategy, policy and planning will therefore be vital to our ability to stay ahead of future threats.

So, it's clear that climate change matters for Defence. And the good news is that this is being increasingly acknowledged and recognised.

The Defence Command Paper which issued in March 2021, in parallel to the UK's Integrated Review, identified climate change as a transnational challenge that require collective action, alongside biosecurity risks, terrorism and serious and organised crime.

Speaking at the IISS Shangri-La Dialogue in Singapore in June, First Sea Lord, Admiral Sir Ben Key, described climate change as an "existential threat to all of mankind that far outweighs in gravity any threat that man may be doing to fellow man around the world."

The NATO Secretary General, speaking ahead of the NATO Summit this June, recognised climate change as a 'crisis multiplier' and as 'the defining challenge of our time'.

NATO's recent leadership on this agenda is substantial and much welcomed. To paraphrase recent analysis by the European Leadership Network (ELN): at a time when war rages at NATO's doorstep, and collective defence coupled with rising defence spending is at the centre of



everyone's attention, managing to get 30 countries to agree to an ambitious programme on climate security deserves recognition.

"We view NATO's efforts as setting the bar for all member states"

NATO has strong convening power and has set a high level of ambition – which is to be the leading international organisation when it comes to understanding and adapting to the impact of climate change on security. At the Madrid Summit in June, NATO Secretary General reaffirmed NATO's commitment to reducing military greenhouse gas emissions and announced concrete targets for NATO as an organisation.

While the previous Strategic Concept, adopted in 2010, made only a single

mention of climate change, the newly adopted document has dedicated two paragraphs to the impact of climate change on security, which has strong synergies with how we have been framing the issue within a national context.

We view NATO's efforts as setting the bar for all member states to place climate security and sustainability issues at the heart of their national defence and security mandates.

And that's exactly what we've been doing in the UK. My team and I are currently focused on driving change by raising awareness and increasing literacy on the security implications of climate change. Building a shared understanding of the threat and honing thinking about Defence's role in tackling it are a key priority alongside our wider work on climate change mitigation and adaptation.

To give you an example, earlier this year we teamed-up with colleagues from Loughborough University and the US-

based Center for Climate and Security and set out an agenda for future research on climate security. We identified several priority challenges:

- How are the climate and other ecological crises affecting geostrategic decision-making?
- What are the geopolitical, security and conflict ramifications of responses to the climate crisis, and 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 defence and security forces operate?

And, how can we best build capacity within academic and policymaking communities and empower them to meet the challenges of a warming world?

This last point, in particular, encompasses working to increase literacy and strategic competence on these issues and identifying the skills that future leaders will need to cope with the multi-layered challenges posed by climate change.

Supporting the design and delivery of events like today's conference, aimed at strengthening ties between academic and Defence communities, therefore represents a key part of our effort to progress thinking around each of these priority challenges.

As are supporting the development of other initiatives, such as the NATO Climate Change and Security Centre of Excellence which will launch in Montreal next year. It's great that we have Blair Brimmel from Government Affairs Canada speaking in a bit about the work her and her colleagues are leading to establish this new centre. We are genuinely really looking forward to the prospect of being able to work more closely with Canada on these issues and very much expect that the CCASCOE will become a key hub for knowledge and learning on this issue within the Alliance.

In fact, most of our key Allies and partners are already doing outstanding work to progress this agenda and deserve recognition. This includes:



Australia, which is in the process of producing a national intelligence estimate of the implications of climate change for national security.

This April, the French Ministry for the Armed Forces released its Climate & Defence Strategy, which also recommended developing knowledge and foresight and increasing cooperation.

Climate change featured prominently within the US National Security Strategy and Arctic Security Strategy, both released in October 2022. This follows the release of several service-level climate action plans and strategies.

So there is lots going on. And a lot of very fruitful exchanges are taking place bilaterally, as well as within Multilateral fora. Last month's Berlin Climate Security Conference is an excellent example, and illustrates the extent to which climate and wider environmental insecurity really are the security threats that bind us.

But we still have a significant amount of work to do, to share information and turn ideas for greater cooperation in this space into actions.

"Defence must now assess, anticipate, act and adapt to meet the challenge of changing climate."

As I've mentioned already, climate change and the global response are whole-of-system issues with security implications that transcend multiple policy areas and departmental boundaries. What is required is therefore a whole-of-system response, involving Defence, but also wider Development and Diplomatic lines of effort.

We are not proposing here that climate change can be solved through security means. Far from it. But we are acutely aware that climate change and its impacts will affect our national and international



security and the people, organisations and institutions responsible for preserving that security. We must therefore adapt to ensure that the security implications are understood and are being embedded across the breadth of activities that occurs within the defence and security community.

Put simply, we need to make sure that the security implications of climate change are codified into the Defence psyche. Otherwise, we risk being blindsided by the nature and timing of future crises and having a false sense of security.

I started off by saying that the global strategic landscape is changing. Climate change is a key driver of the more turbulent global context. And it's within this evolving context, that the UK and our allies and partners need now to adjust in order to maintain our advantage. Defence is no exception. And at present, risks to the UK and our global interests resulting from climate insecurity are neither fully understood nor incorporated into policy.

What we have is an opportunity to be the change and to put in place a new paradigm. One in which responding to the

security implications of climate change are a central task. I see no reason why every part of Defence shouldn't make tackling climate change a key part of its overall purpose.

The window to act, however, is rapidly closing - requiring a step-change in our approach this decade. Without this, we may weaken our ability to develop effective responses, undermining preparedness, readiness and resilience to future crises, as well as the ability to anticipate and prevent them.

Last year's Climate Change & (In)security Project conference focused on describing the problem. I am hopeful that today's event will provide ample opportunity for us to test and stretch our thinking about how Defence must now assess, anticipate, act and adapt to meet the challenge of changing climate.

I'm therefore really looking forward to listening to today's expert speakers. I'm certain that the discussions will be rich and will genuinely help us to mature ideas around what our role is, as part of a wider national response, to growing climate insecurity.