

BRIEFER

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The Alliance in a Changing Climate: Bolstering the NATO Mission Through Climate Preparedness

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Gathering clouds

Each year Heads of State and Governments gather at the North Atlantic Council, NATO's principal political decision-making body. The backdrop to this year's meeting will be a deteriorating security environment for the Alliance, and new dynamics in East-West relations and within the Alliance itself. Conflict in eastern Ukraine and the annexation of Crimea, coupled with ongoing instability in the Middle East and North Africa (MENA) and the spread of Islamist extremist groups in the region, present a range of threats that NATO must define its response to.

These immediate crises understandably fill NATO's field of vision. However, the capacity to prepare for and respond to multiple threats is an essential aspect of NATO's role. This has been reflected in the evolution of its mission over time, from Cold War origins, to actions in the Balkans and Afghanistan, to anti-piracy and counterterrorism missions and, most recently, to human trafficking interventions in the Aegean Sea.

Amidst these pressing concerns, another emerging security risk NATO must engage with is climate

change. Climate change will adversely affect the future security environment and intersect with core NATO activities. It has the potential to change the context in which NATO operates dramatically, and will create risks that increase in both likelihood and severity. There is more certainty about this threat than others in NATO's future. With so much potential for disruption, climate change should be treated as a strategic concern for the Alliance – a multiplier of existing risks to NATO, including on its eastern and southern borders.

Climate security and NATO's mission

Climate change has been identified as a driver or “accelerant of instability” by many NATO member state governments.¹ The NATO Alliance has also acknowledged the risks climate change poses to its operations in a range of strategic documents, summit declarations, speeches and other outputs over the last decade.²

This high-level acknowledgment of the issue is important, but NATO should do more to monitor and prepare for climate-related instability, or it risks being caught off-guard in a geostrategic environment that will be increasingly shaped by cli-

mate change. Although climate risks have to some extent been incorporated into the intelligence analysis of conventional threats and response planning, the Alliance could do more to increase institutional commitment and political leadership on the issue.

Furthermore, member states' security interests will be served by addressing this agenda. Adequate preparation will bolster NATO's resilience, ensure the adequacy of forces when responding to more traditional threats, avoid the higher costs of responding to such threats *post facto* and enhance NATO's ability to manage low probability/high impact threats. NATO must remain cognizant of how climate change will alter the geostrategic landscape, monitor and analyze potential outcomes, and continue to adapt its forces.

The benefits of NATO responding to climate risks

By being proactive on climate risks, NATO can mitigate increased stress on its mission priorities and secure a range of operational benefits, including:

1. **Being better prepared for “Gray Swan” events.** Climate change may drive more gray swan events – those which are foreseeable to some extent, but where current predictive capacity is poor. The Alliance was caught off-guard by the Syrian conflict and its repercussions; it is in NATO's best interest to avoid future surprises.
2. **Saving money.** The overall impact of climate change on member countries' GDPs could strain NATO's 2% target for military spending. Climate adaptation and responding to climate exacerbated disasters will demand more of Alliance national budgets, including adapting defense forces to maintain current military capacity and capability. Instability driven in part by climate change may in turn increase demand for capabilities under increasing fiscal and operational stress. Carefully planned engagement with this issue will ensure that money is spent carefully, and give the best chance of controlling the resource demands managing climate risk will bring.
3. **Reducing the likelihood of instability in fragile regions and demand for NATO responses.** As climate reshapes the map of global instability, member states' security may be threatened in new ways, prompting more operations like those in the Gulf of Aden and Aegean Sea. These are within NATO's current capabilities, but the Alliance may increasingly have to choose between responding to crises which compete with NATO's traditional remit.
4. **Enhancing mission effectiveness in the MENA region.** Future climate projections for the region suggest extreme heat and drought will become more frequent and widespread, and such impacts could play a role in deteriorating security in MENA. This would likely make efforts to promote stability in the region far more difficult and could also drive the conditions that support extremist non-state armed groups flourishing.³
5. **Enhancing mission effectiveness in Central Asia.** Climate change could exacerbate existing instability in Central Asia, undoing the progress made in the region by, for example, impacting Afghanistan's water-scarce, agriculture-dependent economy and fueling drought-resistant poppy cultivation as a Taliban revenue stream. Understanding how a changing climate might impact the Alliance's near- and long-term security goals could help the Alliance and member countries leverage programming to support the longer-term success of its missions.
6. **Improving operational effectiveness in the Horn of Africa.** Climate impacts may drive an increase in demand for NATO operations with the African Union and off the Horn of Africa, such as anti-piracy or humanitarian assistance missions, increasing competition for NATO capacities.
7. **Maintaining peaceful relations in the Arctic.** NATO is keeping an eye on the geostrategic implications of a rapidly changing Arctic environment and evaluating its role in this new landscape. A similar watching brief on how climate is im-

pacting other regions of concern, such as MENA, would also support the Alliance's security interests.

8. **More effectively managing demands for humanitarian assistance and disaster response operations.** Demand for humanitarian assistance and disaster response operations may be increased by climate change, and will likely continue to compete with the traditional NATO remit and capabilities.
9. **Maintaining force readiness.** Climate change jeopardizes military installations through sea level rise and flooding, which, if not adequately adapted to, could place a strain on the force readiness of NATO military personnel. Planning for this as a part of defense adaptation will help to maintain readiness.

NATO's existing focus on climate risk

The potential security implications of climate change, and its implications for NATO tasking and future capabilities needs are considered most fully through NATO Allied Command Transformation's Strategic Foresight work, which anticipates and prepares for the future security environment, and its Emerging Security Challenges Division, which advances the Smart Energy agenda on defense adaptation. While each of these NATO nodes addresses aspects of climate stress that are particularly relevant to their work, the force readiness of the Alliance may be enhanced by a more robust process for integrating climate risk into NATO planning and operations.

In part, the institutional commitment to the issue that has existed within NATO to date reflects that the Alliance's agenda and structures are broadly the sum of their parts, and shaped by member countries' priorities. It is perhaps understandable that accounting for climate change is seen as a lower priority than responding to changing conditions in Eastern Europe and the humanitarian crisis on NATO's southern flank. But as risks related to climate change increase and it presents increasingly complex challenges, this focus on the near-term could end up being short-sighted. Bolstering NATO's capacities would mean incorporating consideration of the geostrategic implications of

climate change into the Alliance's deliberate planning, contingency planning and crisis action planning processes – and could support NATO's ability to maintain the collective security of its member states.

Acknowledging climate risk: NATO officials

Climate change has regularly been cited as a topic of concern in a number of NATO fora, but the Alliance has not yet moved the needle very far in implementing comprehensive policies and practices that are necessary to prepare for these risks.

Since the mid-2000s, successive Secretary Generals have addressed climate risks to NATO's mission. In 2008, NATO's then-Secretary General Jaap de Hoop Scheffer stated, "Climate change could confront us with a whole range of unpleasant developments — developments which no single nation state has the power to contain."⁴ In 2009, his successor Anders Fogh Rasmussen wrote a compelling article on NATO's role in addressing the security risks of climate change, noting that, "climate change presents security challenges of a magnitude and a complexity we have never seen before."⁵

Current Secretary General Jens Stoltenberg said in June 2016, "Climate change is also a security threat because it can really change also the conditions for where people live, create new migrant and refugee crises and scarce resources, water, can fuel new conflicts." However, he struck a more cautious note with regard to NATO's role, saying that "NATO is not the first responder to climate change," placing that responsibility with "areas other than defense", specifically environment ministries.⁶

Even if NATO are not the first responders, climate change will shape the security environment that NATO operates in. The 2010 NATO Strategic Concept, one of the organization's central planning documents, acknowledged this, stating:

"Key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs will further shape the future security environment in areas of concern to NATO and have the potential to significantly affect NATO planning and operations."⁷

In May 2017, NATO Supreme Allied Commander Transformation, Gen. Denis Mercier, reiterated that climate impacts “are likely to bring about new conflicts that could involve the 28 NATO countries,” and that NATO’s responsibility is to anticipate its impacts on geopolitical stability.⁸ Despite these acknowledgments from the highest levels in NATO, attention to the issue has been eclipsed by more traditional security concerns.

If NATO is going to succeed in the future, it will benefit from devoting more staff and resources to generating a response that is commensurate with the risk, even in the context of other conventional issues on the NATO agenda.

One vision for a way forward comes directly from Secretary-General Rasmussen, who laid out concrete next steps in a speech in 2009⁹ which remain relevant today. He said:

“I believe that NATO should begin a discussion on how we – NATO as an organization, and individual Allies as well – can do better to address the security aspects of climate change.

“I believe, for example, that the security implications of climate change need to be better integrated into national security and defense strategies – as the US has done with its Quadrennial Defense Review.

“That means asking our intelligence agencies to look at this as one of their main tasks. It means military planners should assess potential the impacts, update their plans accordingly and consider the capabilities they might need in future. It means increasing preparedness to respond to natural and humanitarian disasters, at home or internationally, with all that that implies for training, equipment, and cooperation with civilian agencies.

“We might also consider adapting our Partnerships to take climate change into account as well. Right now, NATO engages in military training and capacity building with countries around the world. We focus on things like peacekeeping, language training and countering terrorism.

“What about also including cooperation that helps build capacity in the armed forces of our Partners to better manage big storms, or floods, or sudden movements of populations?”

Current and projected impacts of climate change on NATO areas of concern

One major topic high on every Head of State and Government’s list is the security situation in the Middle East and North Africa and what it means for the NATO mission. As many leaders will be aware, climate change-related drought played a role in exacerbating Syrian instability in the years prior to the conflict, and future climate impacts will complicate efforts at conflict resolution and stability in the region.¹⁰

The region will continue to face significant challenges around the confluence of underlying security fragilities and climate impacts. MENA is getting hotter and drier, with more extreme heat events and droughts.¹¹ It is projected to warm much faster than the global average, with mean annual temperatures 2–4°C above the long-term average by mid-century, and a possible 10–30% reduction in rainfall over the same period.¹² Over the next 25 years Syria and surrounding countries, as well as parts of North Africa, are projected to experience unprecedented drying, and severe drought is likely to become the normal climate condition.¹³ These conditions will jeopardize livelihoods in MENA and are likely to act as push factors for migration, although most climate-related migration will continue to be temporary and internal rather than international.

The same climate-related security risks are present in other regions of concern to NATO, such as the Sahel and Horn of Africa, where climate impacts are likely to stall or reverse development gains and place additional strains on the capacity of societies to manage conflict. This will make resolving the existing security challenges in the region, such as the violence in northern Nigeria, Mali, Somalia and other countries exponentially more difficult. The ‘southern Flanks’ of NATO (e.g., Spain, Italy, the southern Balkans) will also likely see significantly hotter and drier conditions, so these same climate effects will likely be felt by NATO member states, as well as by other countries in the broader region.

Continuing to focus almost exclusively on response rather than anticipation and mitigation – in MENA and elsewhere – could compromise NATO’s ability to fulfill its mission, especially as it is increasingly concerned with issues to its

South. Augmenting NATO's watching brief on this issue (through Strategic Foresight Analysis and other mechanisms) and enhancing NATO's ability to analyze, anticipate and prepare for potential situations of instability or fragility will strengthen the Alliance's ability to maintain the collective security of its member states and operate in a strategically changed future.

Ongoing, planned and pending responses to climate risk

NATO structures have a number of ongoing, planned and pending responses to the security dimensions of climate change, including strategic planning structures, defense adaptation initiatives, and training Centres of Excellence.

Strategic Planning

An assessment of the impact of climate change on NATO is included in the futures work undertaken as part of the NATO Allied Command Transformation's Long-Term Military Transformation process, which works to "anticipate and prepare for the ambiguous, complex and rapidly-changing future security environment."

The first component of the Long-Term Military Transformation is the Strategic Foresight Analysis report, which provides trend analysis of the future security environment out to 2035. The most recent report references climate change in the context of energy transitions, increasing demand for Humanitarian Assistance and Disaster Response (HA/DR), and as a driver of increased resource competition and potential conflict. The report situates climate risk within larger global trends including urbanization, global economic integration and other pressures on resources. It states,

"...Climate change-related environmental effects may have second or third order effects on other domains (e.g. economic, resources, urbanization, and demographics) and may also be affected by future trends in these domains. The severity of this development will potentially increase the number of conflicts based on a mix of different trends and drivers in combination with environmental and climate change. These conflicts may threaten global stability and security and may therefore

*impact directly or indirectly the members of the Alliance."*¹⁴

The second component of the Long-Term Military Transformation is the Framework for Future Alliance Operations (FFAO), a planning document which builds on the Strategic Foresight Analysis to provide recommendations for Alliance forces on what capabilities they may need to develop to operate successfully in the security environment of 2035 and beyond. This Framework also informs the NATO Defence Planning Process.

The 2015 FFAO references climate change as a factor in challenging access to and use of the global commons, and creating risks through the disruptive impact of migration, large-scale disasters and state to state conflict. The most recent update to the FFAO includes scenarios such as:

*"Continued, on-going, or newly emerging environmental concerns, as well as climate change could trigger state on state conflict... Disruptive migration is driven by turmoil in failed states that erodes personal and family safety and security, economic disparity and the hope for a better life, natural disaster, disease, and famine. Non-state actors, and unforeseen events (environment/natural disaster/climate) are principal enablers for disruptive immigration."*¹⁵

This analysis is broadly in line with the climate security field's analysis and many other defense and security institutions, and recommends the types of actions that other NATO member country militaries are implementing. Including climate change in the Strategic Foresight Analysis and Framework for Future Alliance Operations keeps the issue on NATO's radar, as a significant factor shaping the future security environment. Using this analysis as a basis for defense planning is appropriate and will strengthen NATO capabilities in a climate-changed future.

Defense adaptation

NATO has made considerable efforts to improve energy efficiency and trial alternative energy technologies amongst its forces. Accelerating the pace of implementation in member state militaries will enhance NATO forces' readiness to operate more efficiently and effectively, and make them more resilient.

NATO has a number of defense adaptation and environment-related institutions and initiatives underway, including the Energy Security Centre of Excellence, which provides expertise to NATO and member countries on aspects of energy security, and the Green Defence Framework, which focuses not only on energy efficiency but also environmental protection.

Primary amongst these is the Smart Energy initiative, which was launched in 2011 in recognition of the risks associated with transporting fuel in theatre. The NATO Science for Peace and Security program funded a Smart Energy Team which spent two and a half years undertaking research and outreach, with the aim of integrating smart energy into the NATO Defence Planning Process. The Team's final report was released in September 2015, and identified remaining gaps on these issues within NATO:

“There is a desire and willingness to share knowledge and work collaboratively, yet most national initiatives have been conducted in isolation from other nations. Specifically, there is a lack of cooperative effort between defence, scientific and industrial communities and a lack of communication and collaboration between the scientific and operations communities. Energy efficiency requirements in military procurement are typically lacking, as is standardized terminology and a level of appropriate knowledge and awareness of smart energy. Interoperability is deficient. Finally, NATO lacks a smart energy strategy or framework and a champion to act as a focal point or central hub for all smart energy matters.”

The report also states:

“To implement the strategy, a smart energy champion should be established, single national focal points should be identified, and a smart energy working group should be inaugurated, or at the very least smart energy should be incorporated as a functional area within the current NATO working group structure.”

The Smart Energy initiative is housed within the Emerging Security Challenges Division, which has been working to advance institutional knowledge of technologies and best practices in defense adaptation. This trialed renewables and other energy-efficient technologies in the NATO exercise Capa-

ble Logistician, which took place in Hungary in June 2015. Over 50 pieces of equipment for generating, storing, distributing and consuming ‘Smart Energy’ were used in the exercise. Recommendations and lessons learned from this exercise provide a basis for the Emerging Security Challenges Division to continue to work toward mainstreaming energy efficiency into NATO policies, Minimum Capability Requirements and procurement specifications, as well as developing a Smart Energy Training and Assessment Centre (SETAC) in Europe.

Training and force readiness

NATO is doing more to integrate climate change into its crisis management and disaster response work. NATO's civil emergency response capabilities are primarily housed at the Euro-Atlantic Disaster Response Coordination Center (EARDCC), which coordinates requests and offers of assistance in response to both natural and human-made disasters. NATO also established a Crisis Management and Disaster Response Centre of Excellence (CMDR COE) in 2013, to enhance NATO capacities in this area and build out joint capabilities between NATO, member states, partner nations and international organizations. NATO Centers of Excellence exist outside of formal NATO structures, to train and educate leaders and specialists from NATO member and partner countries.

As a central hub for enhancing civil emergency response capacity, the CMDR COE approaches climate change as a core area of concern. It has held a number of Advanced Research Workshops on the topic,¹⁶ and is engaged in a project to improve computer modelling and simulation of crisis response and disaster management and evaluation of climate change on military activities. Its modelling and simulation platform will be used for running scenarios around combined arms exercises and training in the area of crisis management and disaster response in the context of climate change.

The NATO Response Force, a joint multinational force maintained at a high state of readiness, is prepared to respond militarily to a range of situations including crisis management, and have been deployed for disaster response. As part of NATO's disaster response apparatus, the NATO Response Force is engaged with the Alliance's work to manage and respond to climate risks.

Other areas of activity

The NATO Parliamentary Assembly, although not an official NATO structure, has also called for more institutional focus on the topic of climate change, recently publishing reports on Food and Water Security in the Middle East and North Africa,¹⁷ NATO and Security in the Arctic,¹⁸ Assessing and Mitigating the Cost of Climate Change,¹⁹ Climate Change, International Security and the Way to Paris²⁰ and others. The Parliamentary Assembly also passed a resolution ahead of the December 2015 climate negotiations urging countries to make ambitious commitments to tackling climate change and encouraging NATO to do more to incorporate the issue.²¹ The resolution states that the Assembly is:

“fully convinced that climate change-related risks will affect international security” and reiterates the language of the Strategic Concept, saying that, “climate change-related risks are significant threat multipliers that will shape the security environment in areas of concern to the Alliance and have the potential to significantly affect NATO planning and operations.”

NATO’s Science for Peace and Security program, Committees and working groups including the Civil Emerging Planning Committee, which directs the Euro-Atlantic Disaster Response Coordination Centre, and other structures also deal with aspects of the challenge.²²

These areas of activity, both within and outside of formal NATO structures, demonstrate that the Alliance is making progress in preparing to achieve its mission in a climate-changed future. Moving toward a response that is commensurate with the risk will involve building on and expanding these efforts.

Strengthening NATO’s ongoing, planned and pending responses to climate risk

Given the potential for climate change to significantly reshape the future security environment, expanding internal expertise on this issue across NATO structures would help ensure that the Alliance is better prepared.

Smart Energy is an area where NATO has made real progress and committed institutional resources to proactively dealing with an issue that will affect their operations in the future. Expanding this level of staff-

ing and committed resources to anticipating and preparing for the security risks of climate change will put NATO on a stronger footing.

Incorporating climate scenarios into existing NATO activities around CMDR and scientific research and cooperation is important and necessary, and recent progress, particularly around CMDR, is very positive. Such an approach should expand to prepare for a wider range of complex emergencies in order to be commensurate with the risks associated with climate change

It is possible to develop advanced warning of a range of possible risks associated with climate change, by combining climate science and strategic foresight exercises. This can create time to prepare, but only if the institutional capability to respond to such information exists and is robust, durable and resilient. How well the Alliance will cope with climate-driven security risks will depend on its ability to strengthen its existing institutions that address climate risk, generate higher-level commitment to the issue and see climate risk as a key strategic issue that will affect most of its current and future missions and operations.

Recommendations for additional responses

As a risk factor that is highly likely to impact NATO’s operations, and which has the potential to accelerate instability, a more focused process for integrating climate change planning into relevant NATO departments would be appropriate.

Ways to do this would include:

- a. **Raising the profile of climate change** on the NATO agenda, including at NATO Summits and North Atlantic Council meetings;
- b. **Appointing an issue champion** outside of staff structures to amplify existing work on climate and security, raise the profile of the issue and generate momentum within NATO;
- c. **Expanding internal expertise** on climate risks and continuing to incorporate this awareness of the changing geostrategic landscape into NATO’s strategic planning;
- d. **Developing a common NATO strategy** for addressing the impact of climate change on military operations;

- e. **Encouraging member states to integrate climate** risks into intelligence assessments, and national security and defense strategies (modeled on the US Quadrennial Defense Review);
- f. **Enhancing the operational resilience of NATO forces** by promoting strategic investments in energy efficiency and renewable energy, accelerating the momentum of Smart Energy uptake in NATO member countries' militaries;
- g. **Supporting developing the capacity** of partner nation forces to manage increases in the frequency, severity and variability of natural and humanitarian disasters;
- h. Building on existing crisis management and disaster response capabilities to include more complex emergencies and operations outside of NATO countries.

When faced with other emerging threats, NATO has demonstrated its ability to adapt to an evolving security environment and to adjust institutional structures to meet current needs. In recent years, it has responded to changing dynamics around hybrid threats, cyber-attacks and terrorism by improving military intelligence-sharing between member states, increasing intelligence-gathering capabilities and creating a new position for an Assistant Secretary General for Intelligence, for example.

Special Representative: Incorporating UN Resolution 1325 on gender into NATO operations

In 2012, Norway took the initiative to appoint a Special Representative for Women, Peace and Security as a way to raise the profile of the issue on the NATO agenda. The post was created to highlight NATO's policies and activities on gender, facilitate their coordination and engage with outside agencies working on the topic. In 2014, the Netherlands appointed a successor, who is currently in post.

A similar approach might be taken in the case of climate change. Appointing an issue 'champion' outside of staff structures could be a way of amplifying existing work, raising the profile of the issue and generating momentum within NATO.

Appointing a special representative with the mandate to drive climate planning and response could be an effective way to coordinate action.

Conclusion

Unless NATO is able to generate the momentum to address climate change in a way that is commensurate with the threats it poses to the future security environment, the Alliance risks finding itself facing an even more complicated array of demands and threats in the future, and is likely to face additional challenges in adequately addressing them. Proactively developing capabilities in this area may not seem essential in the face of a revanchist Russia and the expansion of ISIS, but the potential repercussions of climate change for NATO's mission are significant, and warrant an appropriate response.

Strengthening NATO's existing efforts in this area – the inclusion of climate in the Alliance's strategic foresight work, the cutting-edge defense adaptation of the Smart Energy agenda – will continue to bolster member states' security. All three of NATO's essential core tasks as defined in the 2010 Strategic Concept – collective defense, crisis management and cooperative security – would be supported by the Alliance fully incorporating climate risk into NATO institutions.

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