INTERNATIONAL MILITARY COUNCIL
ON CLIMATE & SECURITY
COUNCIL ON STRATEGIC RISKS

FEBRUARY 2024

INTEGRATING CLIMATE CHANGE INTO PROFESSIONAL MILITARY EDUCATION

EVENT SUMMARY

JANUARY 24-25, 2024

Elsa Barron and Erin Sikorsky

Edited by Tom Ellison and Francesco Femia

Swedish Defence University

Integrating Climate Change into Professional Military Education: Event Summary

February 2024

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Cover photo: A view of scorched fields in Zealand, Denmark following a summer heatwave. (European Space Agency/Copernicus Sentinel)

www.councilonstrategicrisks.org

DESIGN & LAYOUT BY CSR COMMUNICATIONS: ANDREW FACINI & COURTNEY TILLMAN

PRINTED IN THE UNITED STATES OF AMERICA

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Table of Contents

A view of scorched fields in Zealand, Denmark following a summer heatwave.

Source: European Space Agency/Copernicus Sentinel

Introduction

Conference Attendees Outside Swedish Defence University. (Andreas G. Warne)

On January 24-25 in Stockholm, Sweden, the International Military Council on Climate & Security partnered with the Swedish Defence University to host the inaugural conference, "Integrating Climate Change into Professional Military Education." The conference brought together military educators and climate security experts to share best practices and lessons learned regarding climate security-related training, gaming, and curriculum development. Ms. Caroline Baxter, Deputy Assistant Secretary of Defense (DASD) for Force Education and Training for the US Department of Defense (DoD), provided keynote remarks about the efforts of her office to develop new force-wide guidance and programs on climate security topics.

Overall, the group was in strong agreement that the impact of climate change on security is a threat military education cannot afford to ignore. In the past eighteen months, militaries in nearly 70 countries have been deployed to respond to climate-related disasters. Participants around the table shared multiple concrete examples from their careers in which weather or climate-related hazards affected military readiness and operations. To prepare the future force and navigate the security environment of the coming decades, militaries need to embrace innovative educational approaches to climate security. To do so, the following recommendations were identified over the course of the conference:

Recommendations

Climate Security Education Must Complement, Not Compete With, Other Educational Goals.

As one participant noted, "the buckets" of knowledge and responsibilities of most people in the military are already full. Telling them they must add another topic to their education and training plan, without demonstrating how that topic will contribute to the success of their mission or professional role, is a recipe for failure. Climate education must be tailored to specific roles and audiences and made relevant to the students' fields. Military educators should approach climate training and curriculum development with the following question in mind: "What are the learning exercise objectives and how will climate affect those?" This will be a more successful approach than one that begins with the question of "how can climate change be brought into x topic, class, or training?"

Participants Collaborate to Prioritize Climate Security Interventions During a Serious Game by HCSS. (Andreas G. Warne)

It is also important to ask, "who needs to know what about climate change and when do they need to know it?" DASD Baxter shared that with input from the DoD's Climate Literacy Working Group, her office has narrowed the definition of climate literacy to "being able to make climate-informed decisions." Given the complexity of climate change, it is most important to teach a broad systems thinking approach to the issue followed by a narrower set of technical knowledge that will directly inform decision-making for military personnel. As one participant put it, "focus on what you need to do, not what you need to know."

Senior Champions Are Critical For Success And Operational Level Must Be a Primary Target.

Participants had a robust discussion about which age and rank levels to prioritize with climate security education. There was general agreement that younger students are more likely to seek out climate-related education and need less convincing of the ties between climate change and security. Furthermore, current educators noted that today's students often view climate change as an issue of moral responsibility that factors into their career ambitions. However, participants also agreed that militaries cannot wait for that generation to get into leadership to tackle climate security risks. Conference attendees argued that more 'senior champions' among the uniformed military (versus civilian leadership) are needed to build a culture in which climate security-related education is valued. One suggestion was to focus especially on educational programming and training targeting the operational level and one and two-star generals and admirals.

Climate Gaming is Good, Including Climate in Existing Exercises and Wargames Is Even Better.

The group agreed that climate wargames and serious gaming are critical tools for raising awareness and educating military actors on the risks climate change can pose to tactics, operation and strategy. For example, the French Ministry of Defense has developed a defense-focused version of the Climate Fresk, a

civilian-led climate scenarios exercise, and has trained a cadre of dozens of facilitators to run the game. While not yet a required activity for the French military, there are incentives for soldiers to participate as part of their training regimen.

Some participants expressed concern that many "climate security" games end up primarily as humanitarian assistance/disaster relief (HA/DR) games. While no one disputed the importance of preparing for such efforts, recognizing that climate change is already increasing the HA/DR demand on militaries, it was noted that HA/DR is just one facet of climate security risk that should be addressed through gaming. Additionally, there was agreement that there is benefit to developing games not focused on discrete crisis events as climate impacts layer onto existing security challenges. For example, in a game focused on integrated deterrence run by the Swedish Defence University, it was impossible to ignore the effects of climate change on the Arctic and the impact it will have on allied collaboration in that region.

Michel Rademaker Explains the Benefits of Gaming for Climate Security Decision-Making. (Andreas G. Warne)

Many participants also posited that bringing updated climate change data and considerations into existing wargames and exercises is also important, especially to challenge any underlying assumptions about a stationary environment. While one participant noted the fact that many games are played in a near-term time horizon (maximum 5 years), which can make it challenging to bring in divergent climate trajectories, there are still many opportunities to test operational plans and game strategies against the hazards posed by a warming climate, including contested logistics, scarce water supplies, and multiple, intersecting extreme weather events. One participant suggested compiling a database or repository of past extreme weather events that challenged military operations and readiness, giving the example of a 2013 hail storm in Afghanistan that damaged hundreds of aircraft overnight, to use as injections into wargames. Another participant recommended better training for wargaming specialists so they are better prepared to incorporate climate change topics.

Multiple participants noted complaints they have heard that integrating climate change into war gaming and scenarios exercises makes it "too hard" or "impossible to win." Of course, this is exactly the point. Better to find out in a game than on the actual field of battle.

A Range of Approaches and Robust Collaboration Are Needed.

Participants identified multiple avenues for speeding up the pace of climate education among militaries, outside of the classroom and wargames. For example, In the United States, there is The Naval Education Enterprise Climate Collaboration (NEECC), which includes all five Naval institutes of higher education: the Naval Postgraduate School, Naval War College, the U.S. Naval Academy, the Marine Corps University and the U.S. Naval Community College. The NEECC regularly meets to collaborate on climate security issues, share research and educational resources and host cooperative events. Another example from the French Ministry of Defense is an effort to bridge the gap between science and the military by bringing in world-class scientists

for workshops on specific topics of interest to readiness and operations (e.g. wet bulb temperature).

The group noted the gap between the increasing demand for climate education and the supply of instructors with climate security knowledge. One participant recommended a "train the trainers" approach to improving climate security education. Others noted the importance of drawing on existing meteorologists in the military as a key resource and building their climate data analytic capacity. Additionally, another participant discussed the potential utility of virtual classes and training environments, including those that use virtual reality. Finally, climate security fellowships were mentioned as an opportunity to increase the training of mid-career personnel in particular.

Conclusion

Participants agreed that international collaboration and resource-sharing can accelerate success in integrating climate change into professional military education. That is why we have created a resource compendium (see Annex 2) to circulate ideas and resources on these topics, providing opportunities for students, educators, and professionals alike to prepare to navigate a climate-changed world.

Annex 1:
Participants List

- **Ms. Elsa Barron** - Center for Climate and Security
- **DASD Caroline Baxter** (virtual) - U.S. Department of Defense
- **Mr. Mathieu Bussières** - NATO Climate Change and Security Centre of Excellence
- **Maj. Gen. Anders Callert** - Swedish Defence University
- **Cmdr. Andrea Cameron** - U.S. Naval War College
- **Maj. Gen. Michael Cherinet** - Swedish Armed Forces
- **Dr. José de Arimatéia da Cruz** - U.S. Army War College
- **Dr. Duncan Depledge** - Loughborough University
- **Lieutenant Colonel (GS) Tobias Eigen** - German Ministry of Defence
- **Ms. Alexandra Etienne** - French Ministry of Defence
- **Prof. Kristen Fletcher** - Naval Postgraduate School
- **Col. Mike Gremillion (ret.)** - University of Alabama Global Water Security Center
- **Anders Håkansson** - Swedish Defence University
- **Mr. Lars Hedström** - Swedish Defence University
- **Ms. Saskia Hoffsten** - Swedish Armed Forces
- **Lt. Col. Matthew Holmes** - U.S. Africa Command
- **Third Lieutenant Marieke Jacobs** - Dutch Ministry of Defence, IMCCS Young Leaders
- **Ms. Frida Johansson** - Swedish Armed Forces and SDU
- **Ms. Maria Jontén** - Swedish Defence University
- **Col. Massimiliano Pasqua** - Italian Air Force

- **Mr. Michel Rademaker** - *The Hague* Centre for Strategic Studies
- **Mr. Paul Rushton** - North Atlantic Treaty Organization
- **Mr. Gary Russ** - U.S. European Command
- **Cmdr. Patrick Schwartz** - Swedish Defence University
- **Ms. Louise Selisny** - Climate & (in)Security Project (UK)
- **Ms. Erin Sikorsky** - Center for Climate and Security

Annex 2: **Resource Compendium**

Gaming

Climate war games and serious gaming are critical tools for educating military actors on the risks climate change can pose to tactics, operations, and strategy, raising awareness across many levels of leadership.

Analysis:

- Wargaming Climate Change: Who Plays for the Red Team? Article by Sharon Burke and Andrea H. Cameron.
- What to Do When Mother Nature Plays for the Red Team. Presentation by Sharon Burke and Andrea H. Cameron.
- RECESS White Paper: Climate Change Wargaming. White Paper by Andrea H. Cameron and Brandon Greenblatt.

Example Games:

- Energy Security Tabletop Exercise in Bulgaria Press Release.
- Climate Security Wargame in East Africa, "Elliptic Thunder" Press Release.
- High North Deterrence Game Summary Report.
- *The Hague* Centre for Strategic Studies' Strategic Capability Gaming.
- Climate Security Scenarios for Sweden.
- Climate Security in Mainland Southeast Asia: A Scenarios-Based Assessment.
- Implications for NATO of Climate Security Scenarios in the Balkans.

- Ecological Risk in a Future Southeast Asia: An Ecological Security Policy Game.

Training

In an operational environment increasingly affected by climate change, it is important to tailor training exercises to current and future challenges, narrowing in on a narrower set of technical knowledge that will directly inform decision-making for military personnel.

- DOD Climate Resilience Portal.
- EUCOM Climate Change. Overview by Gary Russ and Steve Zielechowski.
- EUCOM FY24 Climate Change Data Call.
- NATO Climate Change and Security Action Plan Compendium of Best Practices.

Curriculum

Military educators have the opportunity to understand how climate change will affect mission objectives for future military leaders and identify opportunities for integrating climate change education into current learning goals.

- The Climate Security Fellows Program: A Joint Effort of Naval Postgraduate School and Stanford Doerr School of Sustainability. Implemented by Kristen Fletcher and Mark McVay.
- Naval Education Enterprise Climate Collaboration. Implemented by Kristen Fletcher.
- Online Climate Security Overview Course (not defense-specific): Climate Change, Peace and Security: Understanding Climate-Related Security Risks Through an Integrated Lens.

The International Military Council on Climate & Security
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