

# National Security Significance of a Changing Climate

## **Naval Climate Engagement**

Leading international action

**Science and Technology**

**Contingency Engineering**

**Health of the Force**

**Online Conference**  
January 19, 2023, 0900 - 1200 EST

**CHSG**  
Climate & Human Security Group



## Letter from the Host

On behalf of the U.S. Naval War College, we welcome you to this virtual conference about the **“National Security Significance of a Changing Climate: Naval Climate Engagement.”**



This is our third conference **National Security Significance of a Changing Climate** online conference. The first conference, “Risk and Resilience in the 21<sup>st</sup> Century,” was a call to action exploring solutions about what a changing climate means for your country, your service, your career field, and each of you personally. The second “Operationalizing Climate Security,” asked how geographic combatant commands (GCCs) are integrating climate change into their mission, strategy, planning, and operations. We are excited to host the next installment—looking deeper at foreign partner engagement with navies.

The progress in the last two years derives from national and defense strategies. Building on the [DoD Climate Risk Analysis \(DCRA\)](#) and [DoD Climate Adaptation Plan \(DCAP\)](#), each service has released their own approach to climate. The Department of the Navy’s [Climate Action 2030](#) seeks to build a climate-ready force by through climate resilience and reducing the climate threat. The Plan pursues climate change efforts that strengthen maritime dominance, empower our people, and strengthen strategic partnerships. To accomplish these goals, we will work internally across the Department of the Navy as well as with naval allies and partners around the world.

We are proud to continue our tradition of hosting open and free events exploring the national security significance of a changing climate. This event is made possible through the generous funding of the William B. Ruger Chair of National Security Economics, Professor Peter J. Dombrowski, and the Naval War College Foundation. Thanks to all for their support of this event.

Sincerely,

A handwritten signature in black ink that reads "Andrea H. Cameron". The signature is fluid and cursive, with a long, sweeping underline.

CDR Andrea H. Cameron, Ph.D., Ed.D.  
Permanent Military Professor  
National Security Affairs Department  
Director, Climate & Human Security Group  
U.S. Naval War College



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This is an interactive PDF.

All navigation links are active.  
Speaker names on agenda link to speaker bios with return links.

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 = USNWC Alumni |  = USNWC Faculty



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Views presented by faculty do not reflect official positions of the USNWC, DON or DOD.

## Agenda

⦿ 9:00 – 9:30 AM EDT (1300 – 1330 UTC)

### Introduction

**Commander Andrea H. Cameron, Ph.D., Ed.D.**, Permanent Military Professor, National Security Affairs Department; Director, Climate & Human Security Studies Group, U.S. Naval War College

### NWC Welcome

**Stephen J. Mariano, Ph.D.**, Provost, U.S. Naval War College

### Keynote Speaker

**Vice Admiral Ricky Williamson**, Deputy Chief of Naval Operations for Fleet Readiness and Logistics, N4, Office of the Chief of Naval Operations

⦿ 9:30 – 10:10 AM EDT (1330 – 1410 UTC)

### High Level Discussion

- **Rear Admiral Paul Beattie**, Director of Naval Staff, Royal Navy
- **Ms. Deborah Loomis**, Senior Advisor to the U.S. Secretary of the Navy (Climate Change)

⦿ 10:10 – 10:20 AM EDT (1410 - 1420 UTC) – **Break** –

⦿ 10:20 – 11:20 AM EDT (1420 – 1520 UTC)

### Panel: **US Naval Areas of Focus**

- **Science and Technology: Mark S. Spector, Ph.D.**, Office of Naval Research, Advanced Naval Platforms
- **Contingency Engineering: Robin O’Connell**, Director of the Climate Change Program Office at the Naval Facilities Engineering Command Headquarters (NAVFAC HQ)
- **Public Health: Ian W. Sutherland PhD, MSPH; CDR, MSC, USN**, Officer in Charge; Navy Entomology

🕒 11:20 – 11:30 AM EDT (1520 – 1530 UTC)

## Closing Remarks

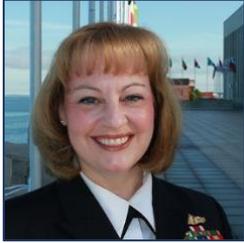
**Commander Andrea H. Cameron, Ph.D., Ed.D.**, Permanent Military Professor,  
National Security Affairs Department; Director, Climate & Human Security Studies  
Group, U.S. Naval War College

## Biographies

### Event Chair

#### Commander Andrea H. Cameron, Ph.D., Ed.D.

-----Chair



Permanent Military Professor, National Security Affairs Dept.; Founding Director of the Climate and Human Security Studies Group, U.S. Naval War College

Commander Andrea H. Cameron is a Permanent Military Professor teaching policy analysis in the National Security Affairs Department at the U.S. Naval War College and the founding director of the Climate and Human Security Studies Group. She also teaches on climate change and national security. Her academic interests explore non-traditional and transnational security threats and their impact on U.S. strategic, national security and economic interests. These research interests include climate change and security, climate and energy policy, human security topics, and civil-military coordination during humanitarian assistance/disaster relief. Andrea Cameron holds a B.A. degree in Political Science from Marquette University, a M.A. in Human Resource Development from The George Washington University, a M.S. in Military Operational Art and Science from the Air Command and Staff College, an Ed.D. in Educational Technology from Pepperdine University, and a Ph.D. in Security Studies from the Naval Postgraduate School.

Andrea Cameron is selected as a Fulbright Scholar in NATO Security Studies in Belgium for academic year 2022-2023. She will be teaching at the College of Europe and continuing her research in climate security.

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[andreahecameron.com](http://andreahecameron.com)

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### Opening Remarks

#### Stephen J. Mariano, Ph.D.

-----Opening Remarks



Provost, U.S. Naval War College

Provost Stephen Mariano, Ph.D. most recently served as the deputy commandant and dean of the NATO Defense College in Rome, Italy. He also served on the faculties of the School of International Service at American University, National Defense University, the Royal Military College of Canada and the U.S. Military Academy. He holds a B.A. in mathematics and economics from the University of California, Santa Barbara, an M.A. in national security affairs from the Naval Postgraduate School, and a Ph.D. in war studies from the Royal Military College of Canada.

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[usnwc.edu](http://usnwc.edu)

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## Keynote Speakers

### Vice Admiral Ricky Williamson

Keynote



Deputy Chief of Naval Operations for Fleet Readiness and Logistics, N4, Office of the Chief of Naval Operations

Vice Adm. Rick Williamson is a native of Jacksonville, Florida. He is a 1985 graduate of the U.S. Naval Academy, where he received a Bachelor of Science in Computer Science. He earned a Master of Business Administration from the Naval Postgraduate School in 1990 and is a graduate of the Armed Forces Staff College in Norfolk, Virginia.

His early sea assignments include tours onboard USS Dewey (DDG 45), USS Briscoe (DD 977), USS Enterprise (CVN 65) and executive officer of USS Rodney M. Davis (FFG 60). He commanded USS Simpson (FFG 56) during NATO's Standing Naval Forces Atlantic 2004 deployment to the United States, the first such visit by NATO to the United States after 9/11. Under his command, Simpson won two

Ashore, his assignments include tours in the Washington, District of Columbia. area as executive assistant to Commander, Navy Installations Command, and deputy director of Plans and Policy. Additionally, he served as a lead examiner of both the steam and gas turbine branches at the Propulsion Examination Board at Commander in Chief, U.S. Atlantic Fleet. In May 2006, he served as executive officer of the Command Leadership School at Newport, Rhode Island. From 2008 to 2011, he served as commanding officer of Naval Base San Diego. During this tour, Naval Base San Diego was selected as the 2010 Presidential Installation Excellence Award and the 2011 Presidential Green Government Award. From March 2016 to June 2019, he served as commander, Navy Region Europe, Africa, Southwest Asia /

Maritime Air Forces, Naples. Williamson assumed duties as deputy chief of naval operations for fleet readiness and logistics June 27, 2019.

Williamson's decorations include the Legion of Merit, Defense Meritorious Service Medal, Meritorious Service Medal, Navy and Marine Corps Commendation Medal, Navy and Marine Corps Achievement Medal and various other unit and campaign awards.

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## High Level Discussion

### Rear Admiral Paul Beattie

High Level Discussion



Director of Naval Staff, Royal Navy

Rear Admiral Paul Beattie joined as the Director Naval Staff in May 2021, following assignments as Chief of Staff to Navy Command, and Head of Naval Staff. He is a graduate of the US Naval War College and the UK Higher Command and Staff Course, holds a MSc in Leadership and Management, and is an advocate for Social Mobility in Defence.



Paul joined the Royal Navy in 1989 and spent his early years conducting maritime embargo enforcement in the Persian Gulf (Op Granby), Northern Ireland (Op Banner) and the Adriatic (Op Sharp Guard) before completing a second Northern Ireland tour as the Commanding Officer of the Patrol Boat HMS Arun. After warfare training, he returned to sea as the Operations Officer of HMS York (Op Veritas) and then HMS Edinburgh (Op Telic). From 2004-2006 he served as the Military Assistant to the Navy Capability lead before returning to sea as the XO (Second in Command) of HMS Westminster, and then as the inaugural XO of the first Type 45 Destroyer, HMS DARING. This was followed by Command of HMS Manchester.

Paul then ventured across the Atlantic. Firstly, completing the US Navy Senior Command Course at Newport, Rhode Island, before serving in the Pentagon on the USN Strategy Staff. He returned to the UK in 2013 to work in Head Office supporting the preparations for the 2015 Strategic Defence and Security Review, during which he authored the UK's first National Strategy for Maritime Security. Promoted to Captain in 2014, he served first as Chief of Staff to the UK Maritime Battle Staff, during a time when the Royal Navy held both NATO Response Force and CJEF Command, and subsequently as the Principal Staff Officer to Commander Joint Forces Command (now UK STRATCOM).

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[royalnavy.mod.uk](http://royalnavy.mod.uk)

### Ms. Deborah Loomis

High Level Discussion



Senior Advisor to the U.S. Secretary of the Navy (Climate Change)

Deborah Loomis received a commission in the Navy upon graduating from the University of Pennsylvania with dual degrees from the Wharton School and the College of Arts and Sciences. She began her career as a surface warfare officer, deploying on USS GONZALEZ (DDG 66) and USS KINKAID (DD 965) before serving as a Navy Liaison to the U.S. Senate.

Ms. Loomis then attended Georgetown Law School on a Navy Law Education Program scholarship. After receiving her law degree, she joined the Navy JAG Corps

where she advised senior Navy leaders including the Chief of Naval Operations and Judge Advocate General.

She returned to Georgetown to earn a master's focused on energy and environmental law and served tours as an environmental counsel at U.S. Fleet Forces Command, OPNAV N4, and the Assistant Secretary of the Navy for Energy, Installations and Environment. In those roles she worked with federal partners across the interagency and in the Department of Defense on projects spanning from the Arctic to Guam.

Ms. Loomis has been working at the nexus between climate change and national security for many years. While stationed in Norfolk, she was an early contributor on a pilot project that brought together representatives from the federal, state and local governments to address sea level rise using a whole of government approach. She has also contributed to several articles and publications on climate and security including the 2020 World Climate Security Report and Climate 21 Project. In her personal capacity she is a Public Voices Fellow on the Climate Crisis through the Yale Program on Climate Change Communications and a member of the Board of Directors of Washington, DC's Green Bank..

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## Panel: US Naval Areas of Focus

*Moderator:*

### **Commander Andrea H. Cameron, Ph.D., Ed.D.**

Panel

Permanent Military Professor, National Security Affairs Dept.; Founding Director of the Climate and Human Security Studies Group, U.S. Naval War College

Photo and Bio are listed as [Event Chair](#).

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[andreahtcameron.com](http://andreahtcameron.com)

*Panelists:*

### **Mark S. Spector, Ph.D.**

Panel



Office of Naval Research, Advanced Naval Platforms Division

Dr. Mark S. Spector is a Program Officer in the Advanced Naval Platforms Division at the Office of Naval Research where he manages research in thermal science, metamaterials, energy conversion, and climate resiliency. In addition, he sits on the Steering Committee of the Department of Defense Energy and Power Community of Interest, the US Navy Climate Working Group, and the NATO Applied Vehicle Technology Power and Propulsion Systems Technical Committee. Previously, he

worked as a Research Physicist at the Naval Research Laboratory. He received his doctorate in Physics from the Massachusetts Institute of Technology and bachelor degrees in Physics and Applied Mathematics from the University of California at Berkeley. Dr. Spector has coauthored 56 journal publications, 3 invited book chapters, and holds 3 patents.

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## Robin O'Connell

Panel



Director of Climate Change Program Office at the Naval Facilities Engineering Command Headquarters (NAVFAC HQ)

Robin O'Connell is currently serving as the Director of the Climate Change Program Office at the Naval Facilities Engineering Command Headquarters (NAVFAC HQ) in Washington DC. Prior to this appointment, she served as the Director of Sustainability & Land Use and Senior Climate Change Advisor. During her 11-yr tenure as the Sustainability & Land Use Director, her focus was to develop a land use approach that struck a balance between sustaining military readiness, resource conservation and renewable energy development. Robin also served as the Director of Global and Strategic Planning, helping to expand NAVFAC's planning portfolio to address the infrastructure needs of new weapons platforms and integrated global logistics. Prior to joining Headquarters, Robin lived and worked in East Asia and the Pacific for more than 20 years, where she held environmental policy and regional development positions in the US Federal government, private industry, academia, and international organizations. Robin received her AB in Asian Studies from Dartmouth College with a major in Chinese and a minor in Geography. She later received her MA in Geography and Regional Planning from the University of Hawaii while serving as a degree fellow at the East-West Center, Environment and Policy Institute.

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## CDR Ian W. Sutherland, Ph.D., MSPH, MSC, USN

Panel



Office in Charge; Navy Entomology

CDR Ian W. Sutherland is the Officer in Charge of the US Navy Entomology Center of Excellence, responsible for the global vision of the DoD's only Command dedicated to preventing mission-stopping diseases spread by the six-legged soldiers that have determined the fate of empires during both war and peace. For nearly 2 decades, he has been seasoned on the unsung intersectional frontlines of global health and national strategic interests: leading humanitarian assistance, outbreak response operations, and research across 25 countries, including Afghanistan, Laos, Vietnam, Ghana, Haiti, Honduras, the Marshall Islands, and has previously served as both the

BUMED Deputy Director for Global Health Engagement and Director of NAMRU-2 Phnom Penh, Cambodia. CDR Sutherland holds a PhD in Microbiology from Colorado State University, an MSPH in Parasitology from Tulane's School of Tropical Medicine, and a Bachelor's degree from the Louisiana Scholars' College.

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[ian.w.sutherland.mil@health.mil](mailto:ian.w.sutherland.mil@health.mil) | [med.navy.mil](http://med.navy.mil)

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## Recommended Resources

### Naval War College (NWC) Climate Change Library Guide

<https://usnwc.libguides.com/climatechange>

This research portal available to all—organizing materials in over ten subpages focused on categories like international climate change and DOD Climate Resources as well as human security issues like water security, food security, and migration. The guide features countless open-source resources from U.S. Government, international, and academic organizations and books, journals, and databases accessible to those with NWC credentials.

### Climate Security Think Tanks and Centers:

- Center for Climate and Security <https://climateandsecurity.org>
- International Military Council on Climate and Security <https://imccs.org>
- Wilson Center—Environmental Change and Security Program (ECSP) <https://www.wilsoncenter.org/program/environmental-change-and-security-program>
- American Security Project (ASP) Climate Security <https://www.americansecurityproject.org/issues/climate-security>
- Center for a New America Security—Climate Change <https://www.cnas.org/research/energy-economics-and-security/energy-exports/climate-change>
- Stimson Center Climate Security <https://www.stimson.org/project/climate-security>
- International Institute for Strategic Studies (IISS)—Environmental and Climate Change <https://www.iiss.org/topics/environmental-and-climate-change>
- Stockholm International Peace Research Institute (SIPRI)—Climate Change and Security <https://www.sipri.org/research/peace-and-development/climate-change-and-risk/climate-change-and-security>
- Stockholm International Peace Research Institute (SIPRI)—Climate Change and Risk <https://www.sipri.org/research/peace-and-development/climate-change-and-risk>
- Planetary Security Initiative <https://www.planetarysecurityinitiative.org>
- Center for Climate and Energy Solutions (C2ES) <https://www.c2es.org>

## Climate Science Research Organizations:

- NASA Climate Change and Global Warming <https://climate.nasa.gov>
- NOAA Climate <https://www.noaa.gov/climate>
- Woods Hole Oceanographic Institution—Climate & Ocean  
<https://www.whoi.edu/know-your-ocean/ocean-topics/climate-ocean>
- Woodwell Climate Research Center <https://www.woodwellclimate.org>
- World Resources Institute Climate <https://www.wri.org/our-work/topics/climate>
- Union of Concerned Scientists (UCS)—Climate Change  
<https://www.ucsusa.org/climate>
- American Meteorological Association—Climate Change  
<https://www.ametsoc.org/ams/index.cfm/about-ams/ams-and-climate-change>
- Center for Climate Systems Research (Columbia University Earth Institute)  
<https://ccsr.columbia.edu>
- The Energy and Resources Institute (TERI) <https://www.teriin.org>

## Thank You

Thank you to the U.S. Naval War College staff and faculty who helped support this event:

**President RADM Shoshana Chatfield, Ed.D.**

U.S. Naval War College

**Provost Stephen Mariano, Ph.D.**

U.S. Naval War College

**Prof. Peter Dombrowski, Ph.D.**

William B. Ruger Chair of National Security Economics

**The Naval War College Foundation**

**Prof. Michael H. Bush, Ed.D.**

Technology & Innovation, College of Distance Education

**CDR Gary Ross** – Public Affairs Office

**Christin Redding** – Office of Alumni Programs

**Karen Sellers** – Director, Special Events

**Carolyn Sarmento** – Special Events

**Dean DePalma** – Media Services

**Marc Cardillo** – Media Services

**Isabel Lopes** – Librarian

And many thanks to the speakers and moderators who worked so hard to make this an incredibly successful event!