

National Security Significance of a Changing Climate

Risk & Resilience in the 21st Century

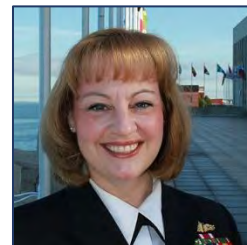
Online Conference January 8, 2021 8:30 am - 3:30 pm EST

Global Power Competition | State Fragility | Defense Support of Civil Authorities |
Defense Infrastructure | Training & Readiness | Ocean Competition



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: Risk and Resilience in the 21st Century."** This event is a call to action—meant to inspire thought and explore solutions about what a changing climate means for your country, service, career field, and each of you personally. Our defense, and the defense of countries around the world, is built within the context of a stable climate. From now on, a stable climate is no longer a valid planning consideration. In fact, the changing climate can be seen as a high-probability, high-impact security threat presenting new risks around the world. Those who will be most competitive in the 21st century are the countries that understand the risks and build resilience at home and abroad. We are excited that so many of you are joining us to explore the ways climate change significantly affects the security environment now and in the future.



Understanding the intersection of climate, the environment, and national security builds from thirty years of work. As you will hear from the speakers in this event—there has been an ongoing continuity of effort as we create more resilient infrastructure and increasingly respond to the changing operational environment. Today, we highlight the significant accomplishments and examine the challenges and opportunities in the future. We look forward and ask ourselves: how does this affect our own country, our allies, and our adversaries? Where might we deploy? What does it mean for the homeland? What does it mean for the oceans? And if we prepare, or not, how much will this cost?

We are proud to be the first Department of Defense (DoD) academic institution to host an open and free event 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 at the U.S. Naval War College. Thank you to Ambassador John Cloud and Professor Peter J. Dombrowski, the former and current Ruger Chair, as well as the Naval War College Foundation 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 Studies Group
U.S. Naval War College



This is an interactive PDF.

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

 = USNWC Alumni |  = USNWC Faculty

 = Naval Postgraduate School



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

Agenda

🕒 8:30 – 9:05 AM EST (1330 – 1400 UTC)

Welcome

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

Opening Remarks

Rear Admiral Shoshana S. Chatfield, Ed.D., President, U.S. Naval War College

Keynote Speaker

Hon. Kenneth J. Braithwaite, Secretary of the Navy

Keynote Speaker

Hon. Alice C. Hill, David M. Rubenstein Senior Fellow for Energy and the Environment Council on Foreign Relations; Former Special Assistant to President Obama and Senior Director for Resilience Policy on the National Security Council

🕒 9:05 – 10:05 AM EST (1405 – 1505 UTC)

Panel 1: How a Changing Climate Affects Global Power Competition

This panel examines climate change in the global security environment with a specific discussion on both China and Russia.

Moderator: **COL Erica L. Cameron**, Army War College Fellow at the United States Institute of Peace; Former Office of the Secretary of Defense (Policy), Strategy and Force Development, Senior Army Strategy Advisor (National Defense Strategy)

Panelists:

- **Hon. Sherri Goodman**, Secretary General, International Military Council on Climate and Security; Former Deputy Undersecretary of Defense (Environmental Security)
- **Dr. Scott Moore**, Director of China Programs and Strategic Initiatives, University of Pennsylvania

- **Dr. Nigel Gould-Davies**, Editor, Strategic Survey and Senior Fellow, Russia and Eurasia, International Institute for Strategic Studies; Former U.K. Ambassador to Belarus

🕒 10:15 – 11:10 AM EST (1515 – 1610 UTC)

Panel 2: **The Impacts of the Changing Climate on Fragile States Around the World**

This panel examines the impact of climate change on state fragility driving future military operating environments as well as how militaries around the world are thinking about this changing environment.

Moderator: **Dr. Annalise Blum**, AAAS Science and Technology Policy Fellow, Office of the Secretary of Defense (Policy), Stability and Humanitarian Affairs

Panelists:

- **Dr. Joshua Busby**, Associate Professor, LBJ School of Public Affairs, University of Texas-Austin
- **Dr. Marcus D. King**, Associate Professor and Director, MA in International Affairs, Elliott School of International Affairs, The George Washington University
- **Vice-Admiral (ret.) Ben Bekkering**, Royal Netherlands Navy, International Military Council on Climate and Security; Former Netherlands Permanent Military Representative to NATO and the E.U.

🕒 11:20 AM – 12:10 PM EST (1620 – 1710 UTC)

Panel 3: **Domestic Security Implications: Operations within the Homeland**

This panel addresses the current domestic operations resulting from climate-related events. The discussion starts with an overview of Defense Support to Civil Authorities (DSCA) and expands into how the DoD Reserve force and U.S. Coast Guard support domestic responders.

Moderator: **Dr. Rebecca Pincus**, Assistant Professor, Strategic and Operational Research Department, Center for Naval Warfare Studies, U.S. Naval War College

Panelists:

- **Mr. Stephen D. Austin**, Assistant Chief of Army Reserve
- **Admiral (ret.) Paul Zukunft**, Former Commandant of the U.S. Coast Guard

🕒 12:10 – 1:00 PM EST (1710 - 1800 UTC) – Lunch Break –

🕒 1:00 – 2:10 PM EST (1800 – 1910 UTC)

Panel 4: Department of Defense Budget and Infrastructure Considerations

This panel addresses the cost of defense planning regarding infrastructure and explores the collaboration between the military and local governments. The panel will conclude with insights regarding the impacts of these events on current training and readiness.

Moderator: **Dr. David L. Alderson**, Professor of Operations Research and Director of the Center for Infrastructure Defense at the Naval Postgraduate School

Panelists:

- **Hon. John Conger**, Director, Center for Climate and Security; Former Principal Deputy Undersecretary of Defense (Comptroller)
- **Hon. W. Jordan Gillis**, Assistant Secretary of Defense for Sustainment
- **Rear Admiral (ret.) Ann C. Phillips**, Special Assistant to the Governor for Coastal Adaptation and Protection for the Commonwealth of Virginia
- **Ms. Joan D. B. VanDervort**, Former Deputy Director, Ranges, Sea & Airspace, Office of the Deputy Assistant Secretary of Defense (Readiness)

🕒 2:20 – 3:20 PM EST (1920 – 2020 UTC)

Panel 5: Blue Competition: U.S. & International Efforts to Develop a Blue Economy

Domestic and international competition is well underway on how to better understand and how to best utilize our oceans and other water resources. These efforts are essential to realizing and advancing U.S. economic, scientific and technological, environmental, security and defense interests. This panel will discuss national and international efforts to develop a “blue” or ocean economy and the implications for U.S. naval and national security concerns.

Moderator: **Prof. Kathleen Walsh**, Associate Professor, National Security Affairs Dept.; Director, Oceanography and Maritime Security Group (OMSG), U.S. Naval War College

Panelists:

- **Rear Admiral (ret.) Tim Gallaudet, Ph.D.**, Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administration, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce
- **Rear Admiral (ret.) Jon White**, President & CEO, Consortium for Ocean Leadership; Former Oceanographer and Navigator of the Navy
- **Dr. Larry Mayer**, Professor and Director of The Center for Coastal and Ocean Mapping at the University of New Hampshire | Chair, U.S. National Committee for the Decade of Ocean Science

🕒 3:20 – 3:30 PM EST (2020 – 2030 UTC)

Closing Remarks

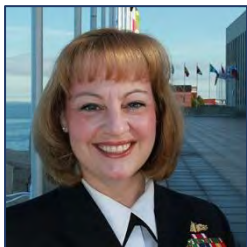
Commander Andrea H. Cameron, Ph.D., Ed.D., Permanent Military Professor, National Security Affairs Department; Director, Climate & Human Security Studies Group, U.S. Naval War College

Bios

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.



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andreahecameron.com

Opening Remarks

Rear Admiral Shoshana S. Chatfield, Ed.D.

Opening Remarks



President, U.S. Naval War College

Rear Admiral Shoshana S. Chatfield is the fifty-seventh President of the U.S. Naval War College and a career naval helicopter pilot. A native of Garden Grove, California, she graduated from Boston University in 1987 with a Bachelor of Arts in International Relations and French Language and Literature. She received her commission through the Naval Reserve Officers Training Corps in 1988 and earned her wings of gold in 1989. Chatfield was awarded the Navy's Political/Military Scholarship and attended the Kennedy School of Government, receiving a Master of Public Administration from Harvard University in 1997. In 2009, the University of San Diego conferred upon her a doctorate of education in leadership studies.



Operationally, she flew the SH-3, CH-46D and MH-60S and deployed in helicopter detachments to the Western Pacific and Arabian Gulf supporting carrier strike group and amphibious ready group operations.

Ashore, she participated in the Joint Staff/OSD Internship Program, augmenting the Joint Staff, Plans and Policy (J-5) Directorate, Central & Eastern European Branch; was assigned as deputy executive assistant to the chief of naval operations; was senior military assistant to the supreme allied commander Europe; and was the United States deputy military representative to the NATO Military Committee. She served as assistant professor of political science at the United States Air Force Academy from 2001-2004.

Chatfield commanded at all levels to include squadron and type wing commander and commander of a joint provincial reconstruction team in Farah Province, Afghanistan. Most recently, Chatfield commanded Joint Region Marianas from January 2017 to August 2019.

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Keynote Speakers

Hon. Kenneth J. Braithwaite

Keynote



Secretary of the Navy

The Honorable Kenneth J. Braithwaite was sworn in as the 77th Secretary of the Navy May 29, 2020. He previously served as the 31st U.S. Ambassador to the Kingdom of Norway.

Secretary Braithwaite graduated from the U.S. Naval Academy in 1984 and was commissioned as an ensign in the U.S. Navy. In 1995, he earned a master's degree in government administration, graduating with honors from the University of Pennsylvania, Fels School of Government. The Secretary has had a distinguished career in the Navy, Naval Reserve, and private sector.

The Secretary joins this event to announce the [Department of the Navy's Strategic Blueprint for the Arctic: a Blue Arctic](#).

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secnav.navy.mil

Hon. Alice C. Hill

Keynote



David M. Rubenstein Senior Fellow for Energy and the Environment Council on Foreign Relations; Former Special Assistant to President Obama and Senior Director for Resilience Policy on the National Security Council

Alice Hill is the David M. Rubenstein Senior Fellow for Energy and the Environment at the Council on Foreign Relations. Her work at CFR focuses on the risks, consequences, and responses associated with climate change. Hill previously served as special assistant to President Barack Obama and senior director for resilience

policy on the National Security Council staff where she led the development of national policy to build resilience to catastrophic risks, including climate change and biological threats. Prior to this, Hill served as Senior Counselor to the Secretary of the U.S. Department of Homeland Security (DHS), in which she led the formulation of DHS's first-ever climate adaptation plan and the development of strategic plans regarding catastrophic biological and chemical threats, including pandemics. Earlier in her career, she was a supervising judge on both the Los Angeles Municipal and Superior Courts and a federal prosecutor at the United States' Attorney's Office in Los Angeles, California. Oxford University Press published her coauthored book, *Building a Resilient Tomorrow*, in 2019. She currently serves on the boards of the Environmental Defense Fund and Munich Re Group's U.S.-based companies. In 2020, Yale University awarded her the Public Voices Fellowship on the Climate Crisis.

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Twitter: [@Alice_C_Hill](https://twitter.com/Alice_C_Hill)

Panel 1: How a Changing Climate Affects Global Power Competition

Moderator:

COL Erica L. Cameron

Panel 1



Army War College Fellow at the United States Institute of Peace; Former Office of the Secretary of Defense (Policy), Strategy and Force Development, Senior Army Strategy Advisor (National Defense Strategy)

Colonel Erica Cameron is an Army Strategist and a United States Army War College Fellow at USIP. Prior to joining the institute, COL Cameron served at operational and strategic levels advising both military and civilians on a wide array of policy, strategy, planning, and budget issues. Her assignments include deployments to multinational headquarters in Iraq and Afghanistan, and positions at the highest echelons of the U.S. Army, Department of Defense, and Interagency.

Colonel Cameron holds a B.A. in International Relations from Pennsylvania State University, a Masters in Military Arts and Science in Theater Operations from the U.S. Army School of Advanced Military Studies, and an MPA from Harvard Kennedy School.

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Panelists:

Hon. Sherri Goodman

Panel 1



Secretary General, International Military Council on Climate & Security; Former Deputy Undersecretary of Defense (Environmental Security)

Sherri Goodman is a Senior Fellow at the Woodrow Wilson International Center's Polar Institute and Environmental Change & Security Program, as well as a Senior Strategist at the Center for Climate & Security. She is the Secretary General of the International Military Council on Climate & Security (IMCCS), representing over 35 military and national security organizations across the globe.

Sherri is credited with educating a generation of U.S. military and government officials about the nexus between climate change and national security using her famous coinage, "threat multiplier," to fundamentally reshape the national discourse on the topic.

Sherri is the former President and CEO of the Consortium for Ocean Leadership. She served as Senior Vice President and General Counsel of CNA (U.S. Center for Naval Analyses). She is the founder and Executive Director of the CNA Military Advisory Board, whose landmark reports include *National Security and the Threat of Climate Change (2007)*, *National Security and the Accelerating Risks of Climate Change (2014)*, and *Advanced Energy and U.S. National Security (2017)*.

Sherri served as the first Deputy Undersecretary of Defense (Environmental Security) and has twice received the DOD medal for Distinguished Public Service.

She serves on the boards of the Atlantic Council, the Council for Strategic Risks, the Joint Ocean Commission Leadership Initiative, the Marshall Legacy Institute, the Sandia National Laboratory Energy & Homeland Security External Advisory Board, and the University Corporation for Atmospheric Research (UCAR). She is a life member of the Council on Foreign Relations and served on its Arctic Task Force in 2016.

A graduate of Amherst College, she has degrees from Harvard Law School and Harvard Kennedy School. She received an honorary doctorate in Humane Letters from Amherst College in 2018.

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wilsoncenter.org/person/sherri-goodman

Dr. Scott Moore

Panel 1



Director of China Programs and Strategic Initiatives, University of Pennsylvania

Scott Moore is a researcher and policymaker focused on emerging environmental and technological challenges. Dr. Moore is currently Director of China Programs and Strategic Initiatives in the Office of the Provost at the University of Pennsylvania, where he works with faculty across the university to design and conduct research on emerging challenges facing China and the world, including climate change, artificial intelligence, and gene editing. Dr. Moore's own research focuses on environmental politics and policy, especially water resources, and he is also a Lecturer in Political Science and Senior Fellow of the Water Center at Penn. Dr. Moore was previously a Young Professional and Water Resources Management Specialist with the World Bank Group's Water Global Practice. Previously, Dr. Moore served as Environment, Science, Technology, and Health Officer for China at the U.S. Department of State. In that capacity, he was responsible for developing and coordinating all aspects of U.S.-China environmental cooperation, and worked extensively on the Paris Agreement on climate change as well as ocean conservation and civil space cooperation.

Dr. Moore's research and commentary has appeared in a variety of leading scholarly journals and media outlets, including *Nature*, *Foreign Affairs*, *The China Quarterly*, and *The New York Times*. His first book, *Subnational Hydropolitics: Conflict, Cooperation, and Institution-Building in Shared River Basins* (Oxford University Press, 2018), examines how climate change and other pressures affect the likelihood of conflict over water within countries. Dr. Moore holds master's and doctoral degrees from Oxford University and an undergraduate degree from Princeton.

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Twitter: [@water_futures](https://twitter.com/water_futures)

Dr. Nigel Gould-Davies

Panel 1



Editor, *Strategic Survey* and Senior Fellow, Russia and Eurasia, International Institute for Strategic Studies; Former U.K. Ambassador to Belarus

Dr. Nigel Gould-Davies is the Editor of *Strategic Survey* and Senior Fellow for Russia and Eurasia at the International Institute for Strategic Studies. He taught at Oxford University before joining the British Foreign Office, where his roles included head of the Economic Department in Moscow and Ambassador to Belarus. From 2010-14 he was head of Policy and Corporate Affairs for B.G. Group in Central and Southeast Asia. He is the author of *"Tectonic Politics: Global Risk in an Age of Transformation"* (Brookings, 2019), and has written widely on Russian/post-Soviet affairs and international relations. He holds a B.A. and M.Phil. from Oxford University, and a Ph.D. in Political Science from Harvard University.

From October 2021 he will be based at the Woodrow Wilson Center in Washington DC.

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[iiss.org](https://www.iiss.org) | nigel.gould-davies@iiss.org | Twitter: [@Nigelgd1](https://twitter.com/Nigelgd1)

Panel 2: The Impacts of the Changing Climate on Fragile States Around the World

Moderator:

Dr. Annalise Blum

Panel 2



AAAS Science and Technology Policy Fellow, Office of the Secretary of Defense (Policy), Stability and Humanitarian Affairs

Dr. Annalise Blum is a hydrologist who specializes in national and environmental security policy. Currently, Dr. Blum is serving as a Policy Fellow in support of Stability and Humanitarian Affairs in the Office of the Under Secretary of Defense for Policy through the American Association for the Advancement of Science. In this role, Dr. Blum leads RECESS (Resource Competition, Environmental Security, and Stability), a group which is guiding DoD strategic thinking on the national security impacts of environmental change. She also is a Lecturer in Environmental Sciences and Policy at Johns Hopkins University. Over the last decade, Dr. Blum has led multi-disciplinary research focused on water security in the United States, Africa, South America, and Asia. Previously, she has worked at the National Academy of Sciences, the American Meteorological Society, the U.S. Geological Survey, and the Harvard Kennedy School of Government. She holds a PhD from Tufts University, an M.S. from the University of North Carolina at Chapel Hill, and a B.S. with distinction and honors from Stanford University.

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annaliseblum.com | Twitter: [@annaliseblum](https://twitter.com/annaliseblum)

Panelists:

Dr. Joshua Busby

Panel 2



Associate Professor, LBJ School of Public Affairs, University of Texas-Austin

Joshua Busby is an Associate Professor of Public Affairs and a Distinguished Scholar at the Robert S. Strauss Center for International Security and Law. He originally joined the LBJ School faculty in fall 2006 as a Postdoctoral Fellow and Lecturer. In 2016, Dr. Busby also joined the Chicago Council on Global Affairs as a non-resident fellow. In 2018, he joined the Center for Climate & Security as a Senior Research Fellow. Prior to coming to U.T., Dr. Busby was a research fellow at the Center for Globalization and

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Governance at Princeton's Woodrow Wilson School (2005-2006), the Belfer Center for Science and International Affairs at Harvard's JFK School (2004-2005), and the Foreign Policy Studies program at the Brookings Institution (2003-2004). He defended his dissertation with distinction in summer 2004 from Georgetown University, where he also earned his M.A. in 2002. He has published two books on social movements for Cambridge University Press and is currently completed a book manuscript on climate and security, also for Cambridge. Dr. Busby has published extensively on climate and security for academic outlets and think tanks. He was a lead researcher on one Department of Defense funded research grant on climate change and security in Africa and principal investigator for another on climate security in Asia. He has also consulted on the topic for USAID and the United Nations Environment Programme.

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Twitter: [@busbyj2](#)

Dr. Marcus D. King

Panel 2



Associate Professor and Director, MA in International Affairs, Elliott School of International Affairs, George Washington University

Dr. Marcus DuBois King is John O. Rankin Associate Professor at George Washington University's Elliott School of International Affairs. Dr. King directs the school's Master of Arts program, the largest of its kind. Dr. King joined the Elliott School from the energy and environmental research staff of CNA (Center for Naval Analyses). Previously, Dr. King held appointments in the offices of the U.S. Secretaries of Energy and Defense where he represented the United States in the negotiation of treaties including the Kyoto Protocol. His research focuses on the security implications of environmental scarcity. In his recent edited volume, *Water and Conflict in the Middle East*, he explores the role of water in the Middle East's current economic, political and environmental transformations. King serves as a Senior Fellow at the Center for Climate and Security and Vice Chairman of the Council on Strategic Risks. He holds a Ph.D. from the Fletcher School of Law and Diplomacy.

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LinkedIn: [marcus-king-51235b2](#)

Vice-Admiral (ret.) Ben Bekkering

Panel 2



International Military Council on Climate and Security; Former Netherlands Permanent Military Representative to NATO and the EU

Ben Bekkering retired from the Royal Netherlands Navy in 2019, after 40 rewarding years. This culminated in three commands, of a frigate, an amphibious ship and one of NATO's standing naval groups. Staff jobs ashore were mostly in the field of Plans & Policy. He thoroughly enjoyed his exchange jobs with the U.S. Navy and the Royal Navy.

When in command HNLMS JOHAN DE WITT, he participated in the E.U. counter piracy operation ATALANTA in 2010. He returned to the waters off Somalia two years later, when in command of Task Force 508, NATO's contribution to the international counter piracy effort. On both occasions he moved from the high seas into the coastal waters to deter pirates from deploying and seek support of the local communities.

In his last appointments, he acted as Deputy Commander of the Navy and Permanent Military Representative to NATO and the E.U. in Brussels, a time marked by a return to strategic competition alongside emerging new threats, such as the use of cyberspace.

In his initial training he studied Operational Analysis at the Delft Technical University. Later on he studied Public Administration at the Leiden University, but the path to a degree was cut short as sea duty called.

Since retirement, Ben Bekkering has advised the Netherlands Ministry of Defence on cyber governance and a new structure of the Defence Staff. He also works with Netherlands industry and research on how to position in the European landscape of capability development. In addition, he is the Chairman of the Karel Doorman Fund, a benevolent fund supporting (former) naval personnel in times of need.

✉ benbekkering@gmail.com | Twitter: [@benbekkering1](https://twitter.com/benbekkering1) | LinkedIn: [ben bekkering](https://www.linkedin.com/in/benbekkering)

Panel 3: Domestic Security Implications: Operations within the Homeland

Moderator:

Dr. Rebecca Pincus

Panel 3



Assistant Professor, Strategic and Operational Research Department, Center for Naval Warfare Studies, U.S. Naval War College

Rebecca Pincus is Assistant Professor in the Strategic and Operational Research Department (SORD) in the Center for Naval Warfare Studies at the U.S. Naval War College. She is currently on detail as Arctic Strategy Advisor at OSD(P). She previously served as primary investigator (PI) at the U.S. Coast Guard's Center for Arctic Study and Policy, located at the U.S. Coast Guard Academy.



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Panelists:

Mr. Stephen D. Austin

Panel 3



Assistant Chief of Army Reserve

Stephen D. Austin was selected for the Senior Executive Service in June 2007. He became the Assistant Chief of Army Reserve (ACAR) on 4 October 2015. He serves as the primary advisor to the Chief of Army Reserve within Headquarters, Department of the Army. He represents the Army Reserve in the formulation and synchronization of policy and strategy at the National, Departmental, and Service levels. He provides oversight to the Chief, Army Reserve's staff and directs the development of policy, resourcing, and plans for generating, sustaining, and integrating Army Reserve force capabilities in support of the nation.

Prior to assuming this position, he was the Chief Financial Officer and Director, Resource Management and Materiel (CFO/DRM/M) for the Army Reserve.

Before coming to the Army Reserve Steve held various positions within the Government, to include: the Department of Commerce Director of Program Evaluation and Risk Management and Senior Advisor to the Department of Commerce Chief Financial Officer / Assistant Secretary of Administration; as well as the Director of Program Analysis and Evaluation (PA&E) for the National Oceanic and Atmospheric Administration (NOAA) leading the annual development of the \$25 billion five year Program across six National Services/Line Offices.

Steve is a graduate of the U.S. Military Academy and has master's degrees from the University of Illinois, the U.S. Naval War College, and the National Defense University.

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usar.army.mil

Admiral (ret.) Paul Zukunft

Panel 3



Former Commandant of the U.S. Coast Guard

Admiral Zukunft served as the 25th Commandant of the U.S. Coast Guard from 2014 to 2018. During his tenure as Commandant he forged a strategy-driven approach to forge alliances among partner nations in Central and South America and across federal, state, local and tribal entities to combat transnational criminal organizations trafficking illicit drugs; initiate combined operations and establish an Arctic Coast Guard Forum comprised of the 8 Arctic Council nations to address the prescient issues as sea ice retreats in the Arctic domain; revitalize diversity across the work force; share best practices across the military, federal and commercial maritime sectors to advance cyber security; and facilitate more than \$4.6 trillion in U.S. maritime commerce on an annual basis.

This strategic approach combined with 4 consecutive years of clean financial audit opinions (and the only Armed Service to do so) culminated in the highest ever appropriation for the Coast Guard to modernize its fleet and upgrade aging infrastructure.

Paul's 41 years of active duty service and 8 commands to include three Coast Guard cutters spanned the globe and the Service has emerged as the gold standard for promoting maritime safety and security.

In 2010, Paul served as the Federal On-Scene Coordinator during the Deepwater Horizon oil spill - the largest spill in U.S. history, where he directed over 47,000 first responders, a flotilla of more than 6,700 vessels and over 120 aircraft.

Paul is a 1977 graduate of the U.S. Coast Guard Academy and has master's degrees from Webster University in management and the U.S. Naval War College in international affairs and strategic studies. He is a graduate of the executive seminar at the Asia Pacific Center for Strategic Studies and Harvard's Kennedy School of Government National Preparedness Leadership seminar.

Paul currently serves on the Climate and Security Advisory Board at the Wilson Center; the board of the Honolulu Council of the Navy League; the Military Affairs Council for the Honolulu Chamber of Commerce; and along with his wife, Fran, as the military ambassadors for the United through Reading program. He is also president of "Paul Zukunft - Worldwide Maritime Consulting, LLC" and is a frequent speaker among the policy shaping think tanks on matters pertaining to the Arctic, climate change and maritime safety and security.

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Panel 4: Department of Defense Budget and Infrastructure Considerations

Moderator:

Dr. David L. Alderson

Panel 4



Professor of Operations Research and Director of the Center for Infrastructure Defense at the Naval Postgraduate School

Dr. David Alderson is a Professor in the Operations Research Department and serves as Founding Director for the [Center for Infrastructure Defense](#) at the Naval Postgraduate School (NPS). He is also a member of the NPS Cyber Academic Group, which has academic oversight of interdisciplinary cyber curricula on campus.



Dr. Alderson's research focuses on the function and operation of critical infrastructures, with particular emphasis on how to invest limited resources to ensure efficient and resilient performance in the face of accidents, failures, natural disasters, or deliberate attacks. His research explores tradeoffs between efficiency, complexity, and fragility in a wide variety of public and private cyber-physical systems.

Dr. Alderson has been the Principal Investigator of sponsored research projects for the Navy, Army, Air Force, Marine Corps, and Coast Guard.

Dr. Alderson received his doctorate from Stanford University and his undergraduate degree from Princeton University. He has held research positions at the California Institute of Technology (Caltech), the University of California Los Angeles, the Xerox Palo Alto Research Center (PARC), and the Santa Fe Institute. He has extensive industry experience and has worked for several venture-back startup companies. His early career was spent developing technology at Goldman Sachs & Co. in New York City.

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Panelists:

Hon. John Conger

Panel 4



Director, Center for Climate and Security; Former Principal Deputy Undersecretary of Defense (Comptroller)

John Conger is Director of the Center for Climate and Security, chair of the Climate and Security Advisory Group, and a senior U.S. Advisor to the International Military Council on Climate and Security.

Formerly, Mr. Conger served in senior positions at the Department of Defense, including Principal Deputy Under Secretary of Defense (Comptroller) and Acting

Assistant Secretary of Defense (Energy, Installations and Environment). In the latter role, Mr. Conger oversaw a portfolio that included base closure, energy security, climate change, and management of nearly a trillion dollars of real property. Previously, Mr. Conger spent more than a decade on Capitol Hill in multiple personal office and committee staff roles.

He has a B.S. and an M.S. in Aeronautics and Astronautics from the Massachusetts Institute of Technology and an M.A. in Science, Technology and Public Policy from the George Washington University. He is also President of Conger Strategies and Solutions, LLC.

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climateandsecurity.org

Hon. W. Jordan Gillis

Panel 4



Assistant Secretary of Defense for Sustainment

Mr. W. Jordan Gillis is the Assistant Secretary of Defense for Sustainment. He serves as the principal staff assistant and advisor to the Under Secretary of Defense for Acquisition and Sustainment, Deputy Secretary of Defense, and Secretary of Defense on sustainment in the Department of Defense, and is the principal logistics official within the senior management. Mr. Gillis provides oversight of logistics policies, practices, and efficiencies to enable readiness across the Department of Defense and manages over \$170 billion in logistics operations. Mr. Gillis provides budgetary, policy, and management oversight of the Department of Defense's real property portfolio that consists of 28 million acres, over 500 installations, and more than 500,000 buildings and structures valued at \$1 trillion dollars. He is responsible for the Department's planning, programs, and capacity to provide mission assurance through military construction, facilities investment, environmental restoration and compliance, installation and operational energy resilience, and occupational safety programs. Mr. Gillis holds a Bachelor's degree from Duke University and Master of Business Administration from Emory University.

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acq.osd.mil/log

Rear Admiral (ret.) Ann C. Phillips

Panel 4



Special Assistant to the Governor for Coastal Adaptation and Protection for the Commonwealth of Virginia

Ann C. Phillips is the Special Assistant to the Governor for Coastal Adaptation and Protection for the State of Virginia.

Prior to joining the administration, she worked to address sea level rise and climate impact on national security at the regional, national and international level, and chaired the Infrastructure Working Group for the Old Dominion University-convened



Hampton Roads Sea Level Rise Preparedness and Resilience Intergovernmental Pilot Planning Project.

Preceding her work on climate impact and sea level rise, Ann served nearly 31 years on active duty in the U.S. Navy as a Surface Warfare Officer. She had the honor to commission and command USS MUSTIN (DDG 89) and to command Destroyer Squadron 28. Her final Flag command was as Commander, Expeditionary Strike Group TWO, including all the Amphibious Expeditionary Forces on the East Coast of the United States.

Ann holds a Bachelor of Arts from the University of North Carolina at Chapel Hill, a Master of Business Administration from The College of William & Mary, Mason School of Business, and is a graduate of the USNWC College of Distance Education.

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naturalresources.virginia.gov/initiatives/resilience--coastal-adaptation

Ms. Joan D. B. VanDervort

Panel 4



Former Deputy Director, Ranges, Sea & Airspace, Office of the Deputy Assistant Secretary of Defense (Readiness)

Joan VanDervort has over 28 years of professional experience working with the Department of Defense across a broad spectrum of issues from climate change and energy security to environmental requirements impacting military training capabilities. Before retiring from the federal government, she served as the Deputy Director for Ranges, Sea, and Airspace within the Office of the Deputy

Assistant Secretary of Defense for Readiness where her portfolio included oversight of DoD's Sustainable Range Initiative, the Department's comprehensive plan to address training and Readiness impacts caused by limitations to military lands, sea, and airspace across the Services. Before taking her position with Office of the Secretary of Defense, Ms VanDervort served as the program lead and senior advisor on environmental, energy, and climate change issues impacting training capability for the Directorate of Army Training, G-3/7. She also served as the Army's Integrated Training Area Management Program Manager responsible for the long-term sustainability of over 7 million acres of training land on 82 installations, worldwide. She currently serves on the Advisory Board for the Center for Climate and Security and is a member of the International Military Council on Climate and Security.

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jdbvandervort@gmail.com

Panel 5: Blue Competition: U.S. & International Efforts to Develop a Blue Economy

Moderator:

Prof. Kathleen Walsh

Panel 5



Associate Professor, National Security Affairs Dept.; Director, Oceanography and Maritime Security Group (OMSG), U.S. Naval War College



Kathleen (Kate) Walsh is Professor of National Security Affairs at the U.S. Naval War College where she has taught U.S. national security policy decision-making since 2006. Her research focuses on China and the Asia-Pacific region, particularly security and technology issues, with a focus over several years on the Blue Economy and development of maritime innovation clusters. She is author of a volume on China and the Blue Economy: Winning the Great Blue Game (forthcoming) and of numerous chapters, journal articles, reports, and testimonies on Chinese technology and innovation strategies and policies and their implications for U.S. national security. Among her publications are: "China's National Security Strategy," in Comparative National Security Strategies (Palo Alto: Stanford University Press, 2013); and "China's Emerging Defense Innovation System: Making the Wheels Turn" in Forging China's Military Might: A New Framework for Assessing Innovation (Baltimore: Johns Hopkins University, 2013). Walsh is an affiliate of NWC's China Maritime Studies Institute (CMSI) and member of the National Committee on US-China Relations, among other professional associations. Prof. Walsh has an M.A. in international security policy from Columbia University's School of Public and International Affairs and a B.A. in international affairs from George Washington University's Elliott School of International Affairs.

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kathleen.walsh@usnwc.edu

Panelists:

Rear Admiral (ret.) Tim Gallaudet, Ph.D.

Panel 5



Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administration, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce

Rear Admiral Gallaudet, Ph.D., USN Ret. is the Assistant Secretary of Commerce for Oceans and Atmosphere and Deputy Administrator of NOAA. Before joining NOAA, he served for 32 years in the U.S. Navy, completing his service in 2017 as the Oceanographer of the Navy. In his current position, Rear Admiral Gallaudet leads NOAA's Blue Economy activities that advance marine transportation, sustainable seafood, ocean exploration and mapping, marine tourism and recreation, and coastal resilience. He also directs NOAA's support to the Administration's Indo-Pacific

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

Strategy, oversees NOAA's Arctic research, operations, and engagement, and is leading the execution of the NOAA science and technology strategies for Artificial Intelligence, Unmanned Systems, 'Omics, Cloud, and Citizen Science. Rear Admiral Gallaudet has a Bachelor's Degree from the U.S. Naval Academy and a Master's and Doctorate Degree from Scripps Institution of Oceanography, all in oceanography.

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Twitter: [@GallaudetTim](#) | Facebook: [tim.gallaudet](#) |
LinkedIn: [timothy-gallaudet-b18185149](#)

Rear Admiral (ret.) Jon White

Panel 5



President & CEO, Consortium for Ocean Leadership; Former Oceanographer and Navigator of the Navy

Jon White was instated as President & CEO of the Consortium for Ocean Leadership in January 2016. The Consortium represents over 90 member organizations from academia, industry, and the non-profit sector and advances ocean science and technology through discovery, understanding, and action. Prior to this, White had a distinguished 32-year career as an oceanography and meteorology officer in the U.S. Navy, retiring at the rank of Rear Admiral.

White had numerous assignments at sea and ashore during his Navy career, culminating in his assignment as Oceanographer and Navigator of the Navy from 2012-2015. This position included leadership of the Navy's Task Force Climate Change and appointment as the Navy Deputy to the National Oceanic and Atmospheric Administration (NOAA), as well as extensive federal and international representation of the Navy on matters pertinent to his position.

White's passion for the ocean and the Navy began at a very early age as he grew up along Florida's Gulf Coast, living next door to a Navy diver. He earned a Bachelor of Science degree in Oceanographic Technology from the Florida Institute of Technology, and a Master of Science degree in oceanography and meteorology from the U.S. Naval Postgraduate School.

✕ [oceanleadership.org](#) | Twitter: [@OceanLeadership](#) | [jwhite@oceanleadership.org](#)

Dr. Larry Mayer

Panel 5



Professor and Director of The Center for Coastal and Ocean Mapping at the University of New Hampshire | Chair, U.S. National Committee for the Decade of Ocean Science

Larry Mayer is a Professor and Director of The Center for Coastal and Ocean Mapping at the University of New Hampshire. He is currently the Chair of the National Academies of Science's Oceans Studies Board, a U.S. Arctic Research Commissioner, on the State Dept.'s Extended Continental Shelf Task Force, and Vice Chair of the Board of the Ocean Exploration Trust. He received an Honorary Doctorate from the

Stockholm University, was elected to the National Academy of Engineering in 2018 and as a foreign member of the Royal Swedish Academy of Sciences in 2019. In 2020 Larry became the first recipient of the Walter Munk Medal from The Oceanography Society. Larry's current research deals with sonar imaging and remote characterization of the seafloor as well as advanced applications of 3-D visualization to ocean mapping problems and applications of mapping to Law of the Sea issues, particularly in the Arctic.

- ✧ Center for Coastal and Ocean Mapping Joint Hydrographic Center (ccom.unh.edu)
U.S. National Committee for the Decade (nationalacademies.org/oceandecadeus)
U.N. Decade of Ocean Science for Sustainable Development (oceandecade.org)

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

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