NPS RESEARCH PRIORITY: CLIMATE CHANGE IMPACTS ON OPERATIONS

AT A GLANCE

WHAT IS IT?
Identifying and understanding the impact**s** of climate change on Naval operations is a persistent challenge. Many impacts will reduce capabilities. Understanding, projecting, and predicting impacts is especially important for strategic and operational planning.

WHY DOES IT MATTER?
DoD recognizes that climate change is and will continue to be a threat to national security. The impacts of climate change also contribute to destabilizing effects abroad and underscore the imperative to adapt systems, energy sources and training.

WHAT IS NPS' ROLE?
The Climate and Security Network serves as a hub for this interdisciplinary work at NPS, advancing research to better understand impacts on operations. The Center for Infrastructure Defense contributes research to support the continued operation of critical military and civilian infrastructure in the face of climate-driven impacts.

POINTS OF CONTACT:
Ms. Kristen Fletcher
Lead, Climate & Security Network
Energy Academic Group
kristen.fletcher@nps.edu

Dr. David Alderson
Center for Infrastructure Defense
dlalders@nps.edu

NPS is conducting research and education related to climate change impacts on operations.

- **Climate Change Impacts on Naval Operations:** NPS faculty are leading research to identify impacts of climate change on operations, including changes in winds and waves, clouds, temperatures, extreme weather and ocean acidity.
- **Framework to Assist in Mission Planning:** NPS researchers are developing a framework for characterizing how the changing climate may impact platforms, systems, operations, areas of responsibility, and warfare areas. This will assist the DoN in integrating impacts information into strategic and operational planning and improving mission outcomes and post-mission analyses in a rapidly changing climate and operating environment.
- **Climate Impacts on Installations:** Extreme storms, sea level rise, and many other climate changes can damage coastal installations. NPS resilience assessments for installations have addressed how to deal with a range of climate impacts, such as flooding, drought and wildfires. This research supports critical readiness infrastructure and resilience, both inside and outside the fence line.
- **Integrating Analysis into Mission:** NPS is conducing and sharing research to increase understanding of climate change impacts on mission execution and to shape solutions. This includes logistics analysis research to improve the effectiveness of Humanitarian Assistance and Disaster Response operations and increase installation resilience.
- **Climate Impact Curriculum and Training:** NPS research is integrated into curriculum and training both within NPS courses and in the Navy's Climate-Informed Decision-Making work under *Climate Action 2030*.

The impacts of climate change on operations do not discriminate. They affect multiple platforms and installations, both inside and outside the fence line.