

The Threat at Home: Climate Change and Military Infrastructure

The Department of Defense (DoD) has recognized the risks posed by climate change for decades – both through the threat it poses to its installations and through the new missions it will create or influence. A January 2019 report by the DoD found that more than two-thirds of the military’s operationally critical installations are threatened by climate change. As a warmer world sparks wildfires, droughts, floods, hurricanes and other natural threats, the military sees that its infrastructure is increasingly at risk.

The threats are broad in scope and touch military installations in every climate zone and every part of the world. Coastal Virginia bases face flooding while Alaskan bases are undermined by the thawing of the permafrost. Island bases in locations such as Key West, FL are facing sea level rise while bases in the western U.S. are challenged by drought and expanded wildfire activity. Extreme weather is a growing threat everywhere. As a result, there has been bipartisan support for military resilience measures, and Congress passed legislation in 2017 to declare climate change to be “a direct threat to the national security of the United States.”

It is time to translate those words into deeds. Just as the military plans for contingencies or modernizes its capabilities to meet other threats, consideration of climate risks to military infrastructure must become a routine part of doing business to reduce risks to military and civilian personnel, to minimize impact on military infrastructure, and to protect high-value military assets.

America has rightly prioritized the safety and strength of our military. Climate change presents a new and growing threat to our national security that must be taken seriously.

The Challenge

It is no simple thing to address the climate change threat to military infrastructure because neither climate change nor the military is one-dimensional. The threats vary widely as do the assets that need protecting.

For example, the Defense Department’s 2019 study assessed 79 installations within the United States that it deemed mission critical, and concluded that 53 of the 79 faced current threats from flooding; 43 of the 79 face current threats from drought; and 36 of the 79 faced current threats from wildfires.

Rising sea levels threaten coastal installations, drive increasing flooding that disrupts operations, and increase the impacts of storms. Norfolk Naval Station, the largest Navy base in the world, is flooding multiple times a year already. Drought strains resources, imposes constraints on training, and can lead to wildfires that force base evacuations and damage key infrastructure.

Most dangerous in the near term is the threat from extreme weather – with impacts that can disable an entire base. Hurricane Michael and its category 5 winds devastated Tyndall Air Force Base in October 2018, and repair costs are expected to approach [\\$5 billion](#). Hurricane Florence dropped more than 25 inches of rain on Camp Lejeune in North Carolina, with recovery costs of \$3.6 billion, and at Offutt Air Force Base, home of Strategic Command, record flooding of the Missouri River overwhelmed levies and flooded the base.

Finally, DoD bases are reliant on civilian infrastructure in the surrounding area for electricity, water, wastewater, transportation arteries, communications and more. When the neighboring civilian community is impacted by climate change, that impacts the base.

The Opportunity

By modernizing military installations, we can meet the demands of 21st century national security. A clear-eyed assessment of the threats posed will allow our military to be properly prepared for emerging climate threats, able to withstand impacts that could otherwise jeopardize operations. These investments would not only protect military missions, but would lower the cost of recovery from future extreme weather events.

Recapitalization of our military bases and surrounding civilian infrastructure to protect military infrastructure would have collateral benefits on local communities and families, bringing them increased resiliency to climate change as well.

The Solution

Climate threats must be made a key consideration of military planning and strategy. The Department of Defense must incorporate climate considerations into planning and decision-making for its infrastructure, readiness, and operations at both the local level and across the enterprise. It is critical that the military take these considerations into account, lest it be left with a blind spot that would leave it vulnerable to these impacts in the future. Moreover, climate-informed planning should be backed by strong investment that supports infrastructure recapitalization where necessary. As the risks of climate change intensify, so too must our efforts. The changes that our installations are confronting are poised to accelerate, not to slow down. Military efforts to adapt and to become more resilient must accelerate as well.

Finally, as DoD looks to future threats, it must be prepared to leverage its research and development enterprise, to explore new resilience technologies and to be prepared for new kinds of operations that may require new solutions.

The Role for Congress

Congress has focused on this issue in recent years, requiring Defense Department assessment of military vulnerabilities to climate change, expanding authorities such as the Defense Access Roads program to allow investments due to climate impacts, and directing changes to construction requirements, such as requiring higher construction in flood plains, to accommodate for climate impacts. It should maintain this focus, while expanding efforts to protect America's military and prepare it for the climate changes to come.

Sound federal policy on military infrastructure and climate change should include:

- Ensuring the reconstruction of bases damaged by extreme weather is informed by and resilient to climate threats, informing both the construction requirements, location of replacement buildings, and resilience measures to protect new construction.
- Mandating routine, thorough assessment of climate vulnerabilities at each base, identifying specific threats and providing recommendations to improve resiliency and confront challenges.



- Increasing funding for installation resiliency that will protect military personnel, infrastructure, and assets.
- Support innovation that focuses on R&D of cutting-edge resilience technologies.
- Fund programs that invest in projects outside an installation's boundaries that provide resilience benefits to the base itself.