



● ● National Intelligence Director Dan Coats and directors of the FBI, CIA and Defense Intelligence Agency testify on Climate Threat. Photo courtesy of DoD

Climate defence – The US must lead the fight against Earth’s only shared foe ● ●

With pressure from international climate partnerships increasing and worldwide national disasters growing ever more serious, the role of assuring national stability increasingly falls upon our armed forces. In early 2019, a seminal report was released from the Pentagon illustrating the dire vulnerability the US military faces from climate change, and the urgent need to adapt. At this critical time, the Department of Defence’s sustainability overhaul has the potential to lead the way for other militaries to follow suit.

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A house divided: The Trump administration’s climate indecision - In January 2019, the Pentagon released a report outlining the effects of climate change on national security, described as “an assessment of the significant vulnerabilities from climate-related events to identify high risks to mission effectiveness.”

The landmark report analysed the vulnerability of 79 military installations to five projected climate disasters: “Recurrent flooding, drought, desertification, wildfires, and thawing permafrost.” Almost all were threatened by at least one of the hazards analysed or were projected to be threatened in the next 20 years, presenting the potential for national and global security to be crippled both suddenly by freak events, and slowly over time.

Additionally, a 2011 report by the US Navy quoted that just

a three-foot sea level rise, which the scientific community now considers inevitable, will endanger 128 Department of Defence (DoD) installations, valued collectively at around US\$100 billion. Other scientists predict as much as an 8-11-foot sea level increase by the end of the century, which would flood almost every defensive installation in America.

A 2018 - Armed Forces Appropriations bill produced by Congress even confirmed that a Marshall Islands Air Force radar installation worth US\$1 billion would be entirely submerged by the sea within two decades. This is to say nothing of the more common operational inconveniences climate change will introduce for the military, introducing a plethora of new risks and costs to missions great and small.

These dire concerns are being echoed across the Republican-dominated Congress and throughout federal research groups inside the Trump administration such as the US Global Change Research Program and NASA, whilst the President himself continues to make light of global warming - which he infamously claimed to be a Chinese ruse to undermine the US economy in November 2012, a stance he has yet to formally clarify.

President Trump has in fact opted to remove climate change from the national security strategy and disband the federal advisory panel on climate change, which has divided the administration down two markedly different paths at a crucial juncture.

The climate report goes on to state that a host of architectural and planning bodies within the DoD have been restructured to “strengthen climate considerations” preparing contingencies for a variety of short-term climate events, besides a slew of international research initiatives to understand climate threats. The report represents an assessment of a series of developing problems, rather than a list of realistic solutions.

There can be no doubt that the danger of our deteriorating

climate is more than climate change deniers claim it to be. Climate change is nothing less than an existential threat, one that militaries must be prepared to respond to.

The age of disaster: A new kind of war

The DoD's climate report claims climate change is "likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond." The *Global Environmental Change: Human and Policy Dimensions* journal agrees, claiming that droughts caused by climate change would cause areas like the Middle East to destabilise into renewed conflict over dwindling water supplies, fuelling further refugee migration.

This sentiment was further discussed at a meeting of the United Nations Security Council in January 2019, when Rosemary DiCarlo, UN Political Affairs Chief, stated that "major armies and businesses have long recognized the need to prepare for climate-related risks, rightfully assessing climate change as a threat multiplier."

A very clear militarised threat is present, made more hostile by an inhospitable world, but these enemies are symptoms of something more dangerous. The forces reshaping our planet represent a very different kind of arsenal.

Researchers from the Energy and Climate Intelligence Unit, a non-profit research group studying global sustainability, analysed 59 studies published before the 2015 United Nations Climate Change Conference. 41 of those studies demonstrated that climate change events had extended events of extreme weather and amplified their intensity. Events such as storms, droughts, and wildfires, all of which destroy infrastructure, sever communications and take lives, are measurably increasing in destructive power, further increasing the cost of weathering them.

For years, analysts have warned that the nature of living on a planet with increasingly serious natural disasters could lead to a reality of cyclical catastrophes comparable to a war of its

own. One which we cannot attack, but only defend against.

A 2016 Institute for Policy Studies report entitled *Combat vs Climate* quoted that the US spends 28 times more on national security than climate security. It is important to defend against the potential enemies of tomorrow, but perhaps it is more urgent to defend against the certain enemies of the present and immediate future by fortifying for the natural disasters we have already seen ravage our nations, which appear to be growing in strength.

An army's footprint: Learning to tread lightly for a post-fossil fuel future

The US military is thought to be the largest institutional user of fossil fuels on Earth. However, since they're exempt from publishing their emissions, there are no publicly available statistics to quote. The Paris Agreement in 2015 revoked that exemption, but the DoD has yet to show anything.

According to the Guardian, US officials have informally stated "[The US military] has no provisions covering military compliance [to publish emission statistics] one way or another."

From what figures have been made public, we can confirm that the US emits over 70 million tonnes of CO₂ per year, although that number omits overseas bases, equipment, vehicles and tactical fleets, among other assets. Pollution at these magnitudes arguably does more to destabilise our world, the US included, as climate change increases instability, ultimately creating the kinds of threats military spending aims to confront.

Of course, the Pentagon's No. 1 priority is improving mission effectiveness, and reliance on fossil fuels is a less than optimal reality. For years, senior military officials have preached the virtues of green alternatives.

In 2005, then Secretary of Defence Jim Mattis wrote a report entitled *Future Fuels* in which he pleaded for the Pentagon to "unleash us from the tether of fuel" and invest heavily in renewable alternatives, which did not go unheard. Between 2011



and 2015, the DoD nearly tripled the number of renewable energy projects on its bases and remains committed to the mandate put into force during the Bush administration to draw at least 25 percent of all energy renewably.

In addition to base efficiency, American defence technology is also a global leader in green vehicle systems. Using hybrid-electric technology, the USS Makin Island is projected to save US\$250 million in fuel annually, as the US Navy continues to invest in advanced biofuel. Land operations aren't neglected either, with new hybrid Humvees capable of managing 90 percent fuel efficiency and a silent engine with its own obvious tactical advantages.

Despite these remarkable efforts, the US military's efforts remain centred on maintaining an overwhelming standard of national defence and continued intervention in the Middle East, the demands of which constitute a staggering environmental footprint.

Progress on detaching from oil dependence has been made, but there is no reason to grow complacent.

The path ahead: Victory in a brighter world

The DoD's 2019 climate report describes climate change rightly as a 'global issue' and quotes General Dunford, Chairman of the Joint Chiefs of Staff, who said that: "When I look at climate change, it's in the category of sources of conflict around the world and things we'd have to respond to. So, it can be great devastation requiring humanitarian assistance - disaster relief - which the US military certainly conducts routinely."

The United States Agency for International Development regularly conducts humanitarian aid and disaster relief initiatives, and that the ongoing DoD's humanitarian assistance program works to support "sustainable public health capacity-building, disaster preparedness, risk reduction, and relief response...and thus also climate resiliency."

Often, conversations of climate responsibility are accompanied by finger-pointing, as foreign nations are accused of being more culpable of pollution than others. Regardless of whether this is the case or not, the DoD recognises the importance of acting in the face of a growing catastrophe. Proactive steps are needed now to install climate countermeasures around critical infrastructure to speed the

process of climate adaptation and defend against the rapid changes our planet is poised to undergo.

In the last few months, military assets in the US have been heavily leveraged to better support wildfire management, evacuation of disaster areas, and the repair of national infrastructure in missions that servicemen will no doubt only become more familiar with in the future.

Our militaries uniquely possess the agility, manpower, communications network and rugged technology to respond to these threats, which the DoD fully intends to utilize. The permanent role our military forces will play in our oncoming war with an increasingly inhospitable climate, but we can be certain it will not be a passive one.

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● ● Hurricane Irma on Sint Maarten (Caribbean Netherlands) September 2017, Ministry of Defence Netherlands



● ● US Army Service Members return to the US Virgin Islands. Photo courtesy of US Army