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Committee on Foreign Affairs
“How Climate Change Threatens U.S. National Security”
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Thank you, Chairman Engel, Ranking Member McCaul, and distinguished Members of the Committee, for the opportunity to testify today on the critical impact of climate change on national security. My views are based on over thirty-five years of uniformed service to our Nation in the United States Navy, as a former Assistant Secretary of the Navy for Energy, Installations and Environment, and as a senior executive deeply familiar with issues of energy, the environment and their impact on our economy.

I understand that today the committee is focused on the threats posed by climate change, and I will, as well. But I also want to emphasize the criticality of American leadership on the global stage and the essential role our nation must play if the world is to meet this challenge.

With respect to the current Administration, let me begin by citing a few of its highly respected national security officials and military officers:

The Director of National Intelligence and former Republican Senator Dan Coats delivered a Worldwide Threats Assessment this year that asserted: *“Global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond. Climate hazards such as extreme weather, higher temperatures, droughts, floods, wildfires, storms, sea level rise, soil degradation, and acidifying oceans are intensifying, threatening infrastructure, health, and water and food security. Irreversible damage to ecosystems and habitats will undermine the economic benefits they provide, worsened by air, soil, water, and marine pollution.”*

The current Chairman of the Joint Chiefs, General Dunford said recently, *“When I look at climate change, it’s in the category of sources of conflict around the world and things we have to respond to. So it can be great devastation requiring humanitarian assistance/ disaster relief, which the U.S. military certainly conducts routinely. In fact, I can’t think of a year since I’ve been on active duty that we haven’t conducted at least one operation in the Pacific along those lines due to extreme weather in the Pacific. And then, when you look at source of conflict – shortages of water, and those kind of things – those are all sources of conflict. So, it is very much something that we take into account in our planning as we anticipate when, where and how we may be engaged in the future and what capabilities we should have.”*

Finally, former Secretary of Defense Jim Mattis stated that “the effects of a changing climate — such as increased maritime access to the Arctic, rising sea levels, desertification, among others — impact our security situation.” He added, “Climate change can be a driver of instability and the Department of Defense must pay attention to potential adverse impacts generated by this phenomenon,” adding that “...climate change is impacting stability in areas of the world where our troops are operating today.”

In his mind, this is more than just a Department of Defense challenge. He noted that “climate change is a challenge that requires a broader, whole-of government response.” I wholeheartedly agree and believe this committee has an important role to play in ensuring it gets the whole-of-government response it deserves.

These distinguished leaders have taken a solemn oath to protect the nation. They are great and patriotic Americans providing their deeply experienced opinions on the implications of a serious global security issue.

In that light, I was deeply concerned when media reports indicated that members of the National Security Council staff were seeking to establish a panel to conduct adversarial reviews of such military and intelligence professionals and their well-researched assessments that clearly point to the national security implications of climate change.¹ I was proud to join 57 colleagues – former military and national security professionals – in urging the President to reject this proposal. Our letter stated:

“...we are deeply concerned by reports that National Security Council officials are considering forming a committee to dispute and undermine military and intelligence judgments on the threat posed by climate change. This includes second-guessing the scientific sources used to assess the threat, such as the rigorously peer-reviewed National Climate Assessment, and applying that to national security policy. Imposing a political test on reports issued by the science agencies, and forcing a blind spot onto the national security assessments that depend on them, will erode our national security.”²

In the past year, military commanders have testified to Congress about the impacts of climate change. The Commander of EUCOM pointed to the High North as the Arctic ice recedes.³ He has updated his plans as China moves to exert influence and Russia has begun to move weapons systems into the region to exert influence over the new Northern trade route. The Commander of INDOPACOM spoke about the demands on U.S. forces responding to extreme weather events in the Pacific. The Commander of

¹ Eilperin, Juliet and Missy Ryan. “White House readies panel to assess if climate change poses a national security threat.” The Washington Post. February 20, 2019

² “Letter to the President of the United States.” The Center for Climate and Security and the American Security Project. March 5, 2019. Accessed at: www.climateandsecurity.org/letter-to-the-president-of-the-united-states-nsc-climate-panel/

³ General Curtis M. Scaparrotti, USA. Oral Testimony on United States European Command in review of the Defense Authorization Request for Fiscal Year 2020 and the Future Years Defense Program. U.S. Senate Committee on Armed Services. March 5, 2019.

Africa Command noted the shrinking of the Sahel and his observation that we will see increased conflict over shrinking resources.⁴

As military professionals, we were trained to make decisions in situations sometimes defined by ambiguous information and little concrete knowledge of the enemy intent. We based our decisions on trends, experience, and judgment, because waiting for 100% certainty during a crisis can be disastrous, especially one with the huge national security consequences of climate change. In this case, however, the information, analysis and trends about climate change are clear. Observable climate data and scientific metrics continue to show that the global environment is changing. Even for those few who still might find the science opaque or unconvincing, it doesn't take a science degree to see that the Arctic ice is melting rapidly or that the sea level is rising.

As Assistant Secretary of the Navy, I oversaw all Navy and Marine Corps installations, and I can tell you that our base commanders know that we don't have the luxury of waiting to be inundated before shoring up our facilities. Our commanders are working to reduce the risk of current investments by incorporating resilience and placing new facilities away from risk. They know that what used to be considered once in a lifetime storms are now happening annually. Our planning is changing, and it makes more sense to invest in risk reduction and mitigation factors now than to wait for adverse mission impacts and to pay for enormously expensive repairs after the fact.

The Department of Defense, across both Democratic and Republican Administrations, has made efforts to prepare for this risk as has Congress. In the last two years, the previous Congress passed a large number of measures in the National Defense Authorization Act focused on improving resilience to climate change and on planning for future challenges – particularly in the Arctic.⁵ In the military security space, Congress has, on a bipartisan basis, moved past old debates on whether there is a problem and has begun planning to ensure we are ready to meet the significant climate change challenge that is before us now and that we will continue to confront for the foreseeable future.

While climate's role in conflict is complex and intertwined with the broader geopolitical considerations, it is nonetheless clear. I have studied this issue for years, both as a member of the Advisory Board of the Center for Climate and Security and previously as a member of the CNA Military Advisory Board.

While serving as a member of the Military Advisory Board back in 2007, we concluded that climate change poses a "serious threat to America's national security", acting as a "threat multiplier for instability" in some of the world's most volatile regions, adding

⁴ Werrell and Femia. "UPDATE: Chronology of U.S. Military Statements and Actions on Climate Change and Security: 2017-2019." The Center for Climate and Security. February 16, 2019. Accessed at: www.climateandsecurity.org/2019/02/16/update-chronology-of-u-s-military-statements-and-actions-on-climate-change-and-security-2017-2019/

⁵ Conger, John. "U.S. Congress Addresses Climate Change and Security in the Latest Defense Bill." The Center for Climate and Security. August 13, 2018.

tension to stable regions, worsening terrorism and likely dragging the United States into conflicts over water and other critical resource shortages.⁶ This echoes the same conclusions that have been consistently drawn by the US Defense and Intelligence Communities. On the most basic level, climate change has the potential to create and amplify sustained natural and humanitarian disasters on a scale and at a frequency far beyond those we see today. The consequences of these disasters will add additional stress to political stability where societal demands for the essentials of life exceed the capacity of governments to absorb these stresses. In too many cases and for the reasons noted below, fragile societies and governments will fail, creating chaotic security environments across the spectrum of conflict.

Climate change is different from traditional military threats; it is not like having a specific enemy, a rapid and well-defined response timeline, or a clearly located crisis region to which we must take action. Rather, climate change has the potential to create more frequent, intense and widespread natural and humanitarian disasters due to extreme weather events like flooding, drought, sea level rise that can lead to the spread of diseases, crop failure and the consequent migration of large populations. These climate-driven severe weather events will magnify existing tensions in critical regions, overwhelm fragile political, economic and social structures, causing them to fracture and potentially fail. The predictable result: much greater frequency and intensity of regional conflict and direct threats to U.S. interests and national security. That's why in [2016](#), a number of senior military and national security leaders concluded that the effects of climate change presented a "strategically-significant risk to U.S. national security and international security."

As one example, climate change didn't directly cause the Syrian civil war. But by causing prolonged and extreme drought conditions in a land whose reliance on rain-fed agriculture made it vulnerable, significant internal displacement ensued. Added to existing economic, religious and ethnic tensions, this drought-caused population displacement ultimately contributed to a violent and prolonged civil war that rapidly expanded to envelop the entire region.⁷

In the Lake Chad region of Africa, we see American troops deployed to counter the influence of Boko Haram. At the same time, however, the economic displacement that has resulted from the receding of Lake Chad and loss of surrounding vegetation, driven in large part by a changing climate, is creating a stressed population that is highly vulnerable to terrorist recruitment. This contributed to the inclusion of a climate and security provision in a UN Security Council resolution on Lake Chad in 2017.⁸

In Venezuela, where glaciers are receding at an alarming rate, one of the many causes of protest of the current Maduro government is the failure to manage water shortages

⁶ National Security and the Threat of Climate Change. CNA. Report. 2007.

⁷ Femia, Francesco and Caitlin Werrell. "Syria: Climate Change, Drought and Social Unrest." The Center for Climate and Security." February 2012; and Kelley, Colin P et al. "Climate Change in the Fertile Crescent and implications of the recent Syrian drought." Proceedings of the National Academy of Sciences of the United States of America.

⁸ Un Security Council. Resolution 2349 (2017). March 31, 2017

with a resulting loss of hydro energy resources in the face of the worst drought in 40 years.⁹

In Pakistan, internal tensions over the allocation of water resources already exist. How are these going to be exacerbated if India, which already uses threats to block the flow of water, makes cross border incursions to secure water resources, and more conflict arises? What impact will loss of Himalayan glaciers and annual increases in drought have across the entire South Asian population of billions? Just as we have been concerned about the fate of chemical weapons in Syria when it devolved into chaos, what can be done to ensure Pakistan and its nuclear weapons don't follow a similar path if climate-exacerbated stresses make the country even more fragile? Instability in nuclear-armed nations and the potential for regional war is one of most serious climate-related challenges facing the global community.

More broadly and happening across the globe, consider the challenge of international migration -- already a daunting and complex issue in the Americas and in Europe. With the stressors of climate change things are not going to get better. [The British government's Foresight report](#) on environmental threats makes plain what a warming world will deliver. "There will be different migration patterns in the future because of environmental change," it reads. And why should that surprise us? In the wake of Hurricane Katrina, 250,000 people shifted from New Orleans to Texas as a result of the floods.

My intent today is not to tell you that we can stop climate stresses from impacting global events or stoking instability. That instability is already happening. However, if we're aware of these serious climate change factors, we can take prudent steps that reduce risk and put us in a much better position to protect American and allied interests.

In the whole of government approach to address the problem that former Secretary Mattis described, scientists are studying climate models and working to more accurately project the future environment; the intelligence community is assessing the risks and implications of those changes; and the military is adapting to this new world and considering how to adjust our Services' defense capabilities and capacities to operate in the new environment. The State Department must increase U.S. leadership and undertake efforts to engage the international community to support frameworks that decrease tensions and promote stability, to build capacity and resilience, to address food and water insecurity through targeted assistance, to respond to international humanitarian disasters, to work closely with our partners to address this challenge.

However, our future is yet to be written. The choices we make today will decide the security environment that comes decades hence, and that is why it is so important to embrace the challenge to reduce the intensity of climate risks by bringing down carbon emissions. The announcement that the United States will withdraw from the Paris Agreement is not only contrary to our historic ability to rise to meet any challenge, but it

⁹ Chemnick, Jean. "Where Climate Change Fits into Venezuela's Ongoing Crisis." February 18, 2019.

also represents an abdication of American leadership on the world stage. Allies and alliances matter, and the withdrawal from this accord – one which carries paramount importance to us and to our partners – serves to greatly erode American credibility and to create distance between us.

Moreover, our withdrawal creates an opening for other nations to marginalize the United States. China, in particular, is engaging fragile nations by validating their concerns and providing assistance. It is expanding its influence by promoting the Paris Agreement.

For too long as a nation, we've ignored global climate change, a threat that is already happening -- one that is statistically more likely to happen and with more dire consequences-- than war with North Korea. For this and for the many other compelling reasons I have outlined, the importance of this Committee and the Congress opening a serious discussion on climate and national security and climate change cannot be overstated. These discussions must lead to effective and timely action. If we're serious about dealing with migration, containing instability and preventing conflict and humanitarian crises, responding to adverse Russian and Chinese influence, and maintaining healthy economic growth and trade, then we must lead and meet the challenge of global climate change.

As in the many past serious challenges that the United States has successfully faced, the future is ours to make. We have the knowledge; we now need the will to act on it. Our future economy, national security and very quality of life as Americans await our decisions.