

**Statement of Vice Admiral Lee F. Gunn, USN (Ret.)
President, American Security Project**

**Before the U.S. Senate Committee on Foreign Relations Hearing on “Climate Change and
Global Security: Challenges, Threats, and Global Opportunities”**

**Tuesday, July 21, 2009
419 Dirksen Senate Office Building**

Mr. Chairman, Senator Lugar, members of the committee, thank you for the opportunity to appear before you today to share my assessment of the national security risks facing the United States because of changes expected in the Earth’s climate.

I’d like to say a few words now and submit a lengthier statement for the record.

Mr. Chairman, this committee’s attention to the national security implications of climate change adds an important piece to the public debate—a piece that, in my opinion, has been missing for too long.

Addressing the consequences of changes in the Earth’s climate is not simply about saving polar bears or preserving the beauty of mountain glaciers. Climate change is a threat to our national security. Taking it head on is about preserving our way of life.

I know that there remain some who are still not convinced by the science of climate change. I am convinced. Many remain to be persuaded by science that humans are at least contributing in important ways to the warming of the globe. I am not in that group either. But leaving aside the merits of the science, permit me to offer this observation from my 35 years of service in the United States Navy: threats and risks never present themselves with 100% certainty. By the time they achieve that level, as General Gordon Sullivan, former Army Chief of Staff, has observed, something bad will have happened on the battlefield.

Mr. Chairman, members of the committee, something bad is happening already in our climate. Something worse will happen if we don’t act with urgency—as a nation and as a global community—to meet this threat.

The consequences of climate change will be found, and are being found now around the world. New climate conditions will lead to further human migrations and create more climate refugees, including those who cross our own borders. The stress of changes in the environment will increasingly weaken marginal states. Failing states will incubate extremism.

In South Asia, the melting of Himalayan glaciers jeopardizes fresh water supplies for more than one billion human beings. In North America, agriculture could be disrupted by increases in temperatures and shifting weather patterns that limit rainfall. Globally, major urban centers could be threatened by rising sea levels.

Malaria and other tropical diseases are moving into new areas and outbreaks are increasing in frequency as the planet warms and weather patterns change. As America debates climate change, its effects threaten to undo the good work in fighting malaria which has benefited from this committee’s leadership.

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All of this is just the foretaste of a bitter cup from which we can expect to drink should we fail to address, urgently, the threat posed by climate change to our national security.

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I am here today as the President of the American Security Project—a bipartisan initiative that, more than a year ago, identified climate change as one of four principal national security challenges in the 21st century.

But the American Security Project is not the only group of national security thinkers and operators concerned with the threat posed by climate change. Since retiring from the Navy, I have served as President of the Institute for Public Research at CNA. CNA is a not for profit analysis and solutions institution heavily involved in helping leaders understand and deal with complex operational and public policy issues.

In 2007, CNA organized a Military Advisory Board composed of 11 retired generals and admirals (Admiral McGinn has reported/will report on that Board's views) who concluded unanimously that climate change poses a serious threat to America's national security. They saw changes in the Earth's climate as a "threat multiplier" for instability in some of the most volatile regions of the world, while also adding to tensions in regions whose stability we now take for granted.

In 2008, the final National Defense Strategy of the Bush administration recognized climate change among key trends that will shape U.S. defense policy in the years ahead. Additionally, the National Intelligence Council completed its own assessment last year of the threat posed by climate change.

The national security community is rightly worried about climate change because of the magnitude of its expected impacts around the globe, even in our own country.

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Mr. Chairman, Senator Lugar, it is easy to get lost in abstraction when we talk about climate change and national security. I'd like to reduce this to specific and practical defense implications. A changing and uncertain climate will, in my view, demand we adapt to new conditions affecting:

- Why we apply our nation's power (in all its forms), around the world,
- How and where specifically our military is likely to have to fight,
- The issues driving alliance relationships (and whom are we likely to find on our side on the battlefield).

Why we Apply Power

Climate change will force changes in "why" the United States fights, gives aid, supports governments, provides assistance, and anticipates natural and manmade disasters. It will do so because climate change threatens unrest and extremism as competition for dwindling resources, especially water, spreads. Weak or poorly functioning governments will lose credibility and the support of their citizens. Under these conditions, extremists will increasingly find willing recruits.

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In particular, climate change will certainly expand the number of humanitarian relief and disaster assistance operations facing the international community. America's men and women in uniform will be called on increasingly to help in these operations directly and to support the operations of legitimate governments and non-governmental organizations alike.

How We Fight

Climate change will force change in how we operate our forces around the world; changes will effect ground operations and logistics as well as operations at sea and in the air. Sea level rise threatens large investments in U.S. facilities around the world. Desertification and shifts in the availability of water can change logistic patterns drastically for all our forces.

The British Indian Ocean Territory, the island of Diego Garcia is a critical staging facility for U.S. and British naval and air forces operating in the Middle East and Central Asia. It sits just a few feet above sea-level at its highest point. Rising sea levels may swamp Diego Garcia and deny the United States this critical operating hub for its armed forces. There are myriad other examples of contingencies for which our national security team must prepare.

These challenges are not insurmountable. But they will be expensive to address and have to be thought through carefully lest they impact readiness. In any case, confronting changes in the military's operating environment and mission set may lead to somewhat different decisions about U.S. force structure, in my opinion. Consider that it takes 20 or more years to build a new aircraft for the U.S. Air Force or Navy and that Navy ships are designed to last 30 to 50 years. With these extended time-frames, a basing structure secure from threats posed by climate as well as more traditional foes is a real national security consideration. We must anticipate new and revised missions for our military forces and factor those into our calculations of the consequences of climate change for America's national security.

Alliances

The Arctic is a prime example of how alliances will be forced to adapt to the realities of climate change. Just a few years ago, the scientific community was predicting that the Arctic wouldn't be ice-free until the middle of this century. Now the predictions put that date at 2013; just four years from now.

In the Arctic, the loss of sea-ice has caused concern in the U.S. Navy for nearly a decade. What naval planners know is that loss of sea-ice at the North Pole has the potential to increase commercial and military activity by other powers. As if we needed any evidence of this, look no further than the 2007 expedition by Russia to plant its flag in the sea-bed at the North Pole. Not surprisingly, Canada, Norway, Denmark, and the United States—all nations bordering on the arctic—responded critically to Russia's actions.

New climate conditions, new geographic realities, changes in economic and commercial circumstances, and pressures of migrating populations; all will test old alliances. Some changes may create new international friendships that will depend on America's ability to help smooth the turmoil associated with those changes. Supporting other nations' successes will continue to be an important part of our military's role in U.S. national security.

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Mr. Chairman, Senator Lugar, we at the American Security Project have also thought about the regional impacts of climate change on our security. I would like to submit some of our ideas about the security implications of those regional effects as part of my written statement for the record.

I would like to close with one final thought:

Climate change poses a clear and present danger to the United States of America. But if we respond appropriately, I believe we will enhance our security, not simply by averting the worst climate change impacts, but by spurring a new energy revolution.

It is for all of these reasons, taken in their totality, that the American Security Project will be launching a major initiative in the coming months to analyze and educate the public about the national security implications of these threats. We will be convening national security and climate change experts from around the country, we'll be talking to corporate leaders who see the business case for action, and we will be working hard to continue the work you've already begun to educate the general public on the dire consequences of inaction.

This spring a second CNA Military Advisory Board (covered more completely by one of its esteemed members, Admiral McGinn) reported on a year-long consideration of energy and security issues. The report, entitled "*Powering America's Defense: Energy and the Risks to National Security*," suggests strongly that national security, linked to energy security and economic growth, which undergird all of our nation's power, can be achieved by taking action now to avert the worst consequences of climate change.

The imperative, then, is for leadership and action on a global scale. The United States must act. The United States must lead.