

TESTIMONY OF SHERRI GOODMAN
BEFORE THE
COMMITTEE ON ENERGY & COMMERCE
SUBCOMMITTEE ON ENERGY & AIR QUALITY
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Chairman Boucher, Ranking Member Upton, distinguished members; I appreciate the opportunity to testify before the Energy & Air Quality Subcommittee of the House Committee on Energy & Commerce on the critical and timely subject of the national security implications of climate change.

I am Sherri Goodman, General Counsel of CNA, a non-profit analysis and solutions organization. I have been privileged to work with some of our nation's finest military leaders over the last several years in their role as members of the Military Advisory Board (MAB), to which I am the Executive Director. The MAB was established to provide advice on a CNA report, "*National Security and the Threat of Climate Change*," that examined the national security implications of climate change. Our Military Advisory Board consisted of some of the most respected Generals and Admirals of recent times, including a former Army Chief of Staff, and former Combatant Commanders of both Pacific and Central Commands for the U.S. Armed Forces. I have previously worked with many of these military leaders during the eight years I served as Deputy Undersecretary of Defense (Environmental Security).

I am also a member of the Council on Foreign Relations Task Force: *Confronting Climate Change: A Strategy for U.S. Foreign Policy*.

The Military Advisory Board developed a series of findings and recommendations as part of the CNA report. These findings and recommendations are relevant to the committee's inquiry into the costs and risks of inaction on climate change.

Mr. Chairman, I request my statement and the 2007 CNA Report be entered into the record.

Climate Change is a Risk to America's National Security

The CNA Military Advisory Board concluded that global climate change is and will be a significant threat to our national security and in a larger sense to life on earth as we know it.

The potential destabilizing impacts of climate change include: reduced access to fresh water; impaired food production, health catastrophes – especially from vector- and food-borne diseases; and land loss, flooding and the displacement of major populations.

What are the potential security consequences of these destabilizing effects? Overall, they increase the potential for failed states and the growth of terrorism; mass migrations will lead to greater regional and global tensions; and tensions over resources, particularly water, are almost certain to escalate.

Let me review briefly the MAB's findings and recommendations.

The four findings of the Military Advisory Board are:

- **First, projected climate change poses a serious threat to America's national security.** The predicted effects of climate change over the coming decades include extreme weather events, drought, flooding, sea level rise, retreating glaciers, habitat shifts, and the increased spread of life-threatening diseases. As we noted in our report, "These conditions have the potential to disrupt our way of life and to force changes in the way we keep ourselves safe and secure."

During the Cold War, our nation spent billions of dollars to protect Americans from the threat of nuclear attack by the Soviet Union. While the probability of such an attack was low, the consequence was so catastrophic that Americans judged deterrence of this threat a good national investment. While it may be difficult to know the probability of catastrophic climate effects, from possible tipping points, their potential consequences are such that prudent action is warranted today to reduce the chance of such events occurring. Unlike most traditional security threats that involve a single entity acting in specific ways and points in time, climate change does not have a human face and has the potential to result in multiple chronic conditions, occurring globally within the same time frame. These potential threats to the nation's security require careful study and prudent planning – to counter and mitigate potential systemic failures.

As noted by General Sullivan, Chairman of the Military Advisory Board, "As a military leader you do not seek a hundred percent certainty, because frankly we never have it. If you wait until you have 100 percent certainty something bad is going to happen on the battlefield."

- **Second, climate change acts as a threat multiplier for instability in some of the most volatile regions of the world.** Many governments in Asia, Africa, and the Middle East are already on edge in terms of their ability to provide basic needs: food, water, shelter, and stability. Projected climate change will exacerbate the problems in these regions and add to the problems of effective governance. Economic and environmental conditions in already fragile areas will further erode as food

production declines, diseases increase, clean water becomes increasingly scarce, and people move in search of more sustainable resources.

- **Third, projected climate change will add to tensions even in stable regions of the world.** Developed nations, including the U.S. and countries in Europe, may experience increases in immigrants and refugees as drought increases and food production declines in Africa and Latin America. Pandemics and the spread of infectious diseases, caused by extreme weather events and natural disasters, as the U.S. experienced with Hurricane Katrina, may lead to increased domestic missions for a number of U.S. agencies, including state and local governments, the Department of Homeland Security, and our already stretched military, including our Guard and Reserve forces. Deployment of these forces comes at a cost to the American taxpayer.
- **And, fourth, climate change, national security and energy dependence are a related set of global challenges.** As President Bush noted, now over a year ago in his 2007 State of the Union address, dependence on foreign oil leaves us more vulnerable to hostile regimes and terrorists, and clean domestic energy alternatives help us confront the serious challenge of global climate change. Because the issues are linked, solutions to one affect the others. The path to mitigating the worst security consequences of climate change involves reducing global greenhouse gas emissions. There is a relationship between carbon emissions and our national security. The more we can reduce our reliance on fossil fuels, especially those imported from countries that would do American harm, the more we can reduce the security costs America may pay later.

The recommendations of the Military Advisory Board stress the need to take prudent actions to address climate change today to reduce the national security threats and costs that could confront us in the future.

The five recommendations of the Military Advisory Board are:

- **First, the national security consequences of climate change should be fully integrated into national security and national defense strategies.**
- **Second, the U.S. should commit to a stronger national and international role to help stabilize climate changes at levels that will avoid significant disruption to global security and stability.**
- **Third, the U.S. should commit to global partnerships that help less developed nations build the capacity and resiliency to better manage climate impacts.**
- **Fourth, the Department of Defense (DoD) should enhance its operational capability by accelerating the adoption of improved business processes and**

innovative technologies that result in improved U.S. combat power through energy efficiency.

- **And, fifth, DoD should conduct an assessment of the impact on U.S. military installations worldwide of rising sea levels, extreme weather events, and other possible climate change impacts over the next 30 to 40 years.**

In the last year, the debate on climate change in the United States has shifted from “Whether it is happening” to “What should we do about it?” In Congress, this debate has taken the form of deliberations on various “cap and trade” bills, and energy legislation. In the national security community, action has been taken to implement many of the recommendations of the CNA report:

- One of the first steps we recommended, based on our study, was that the intelligence community conduct an intelligence estimate of the national security consequences of climate change. Just this week, the National Intelligence Council has issued its first National Intelligence Assessment of the National Security Implications of Climate Change.
- Congress directed, as part of the FY08 Defense Authorization bill, that the national security implications of climate change be included the President’s National Security Strategy and in DoD’s National Defense Strategy.
- As part of the Senate’s leading climate change legislation, cosponsored by Senator Lieberman and Senator Warner – Senator Warner cited the persuasive case made by CNA’s Military Advisory Board, and their concern for the security costs and risks of climate change.
- Based on our fifth recommendation, the Defense Department’s Strategic Environmental Research and Development Program has requested evaluations of the impact of sea level rise and ecological risks to military installations and their critical missions.

Mr. Chairman, the threats posed by climate change can best be addressed by the very qualities that make America a great nation: leadership, innovation for smart solutions, and global engagement.

U.S. Leadership is Essential

As I have traveled over the past year to discuss the report, there have been many occasions where members of the audience have revealed to me their sense of cautious optimism, wondering if the voices of our Military Advisory Board would finally be enough to move the U.S. government into action. While many of our allies have begun to pay serious attention to climate change, they are still waiting for the U.S., knowing that

U.S. leadership is essential. While other major countries, such as China and India, should be part of the solution, they need to know that the U.S. is determined to act to create a more sustainable future. We must lead in the fight against global climate change if we are to retain our standing as a global power in the 21st century.

One of the clearest signs of leadership the U.S. could take would be to begin the transition to lower carbon energy sources and more emphasis on energy productivity and efficiency as a key element of Sustainable Energy for the 21st century. Taking action now will create opportunity for the U.S. economy, in growing green sector jobs, and in American leadership in innovation and sustainable security.

Adopt Sustainable Energy strategies and policies

Numerous Department of Defense studies, including a recent report of the Defense Science Board, have found that our military's combat forces would be more capable and less vulnerable by significantly reducing fuel demand. As General Mattis, who is now Commander of U.S. Joint Forces Command, stated while commanding the First Marine Division during Operation Iraqi Freedom: "Unleash us from the tether of fuel."

Transporting fuel to the front of the battlefield takes its toll in human lives. Soldiers must transport fuel to the front in vulnerable road-bound convoys. Numerous DoD studies have concluded that high fuel demand by combat forces detracts from combat capability, makes our forces more vulnerable, diverts combat assets from offense to supply line protection, and increases operating costs. Nowhere are these problems more evident than in Iraq, where millions of gallons of fuel is moved through dangerous territory everyday, requiring protection by armored combat vehicles and attack helicopters.

The human and economic cost of delivering fuel to combat forces is significant. Energy efficient technologies, energy conservation practices and renewable energy sources can all reduce the costs of American lives on the battlefield.

In addition, the Defense Department is almost completely dependent on electricity from the national grid to power critical missions at fixed installations. The national electric grid is fragile and can be easily disrupted, as happened in the Northeast Blackout of 2003, caused by trees falling onto power lines in Ohio. It affected 50 million people in eight states and Canada, took days to restore and caused a financial loss in the U.S. estimated to be between \$4 billion and \$10 billion. As extreme weather events become more common, so do the threats to our national electricity supply.

One approach discussed in the CNA report to securing power to DoD installations for critical missions involves a combination of aggressively applying energy efficiency technologies to reduce the critical load and deploying renewable energy sources. By investing now in these types of technologies and improved operational processes, DoD would become an early adopter of innovative technologies that would help transform the grid, reduce our load, and expand the use of renewable energy.

Reduce Risk Now Through Constructive Global Engagement

The risks posed by climate change present an opportunity for U.S. global leadership through constructive engagement with fragile and affected nations around the world. Climate change also creates the opportunity to advance the much needed integration of the national security, sustainable development and foreign assistance communities to harness the full potential of all elements of U.S. national power. In many dimensions of U.S. global engagement, from trade and agricultural policies, to foreign assistance, humanitarian relief, and disaster response, infusing climate resilience and sustainable approaches will benefit both the U.S. and reduce climate risks in the future.

As we know, U.S. forces are often deployed as the global “911” force. For example, the U.S. military helped deliver relief to the victims of the 2005 Indian Ocean tsunami because it is the only institution capable of rapidly delivering personnel and material anywhere in the world on relatively short notice. U.S. agencies, civilian and military, in partnership with non-governmental organizations and the private sector, can engage before disaster strikes to build capacity and resilience to reduce climate threats in the future, gain support for America’s strategic interests, and build a more sustainable tomorrow.

General Zinni, former Commander of U.S. Central Command, and member of the Military Advisory Board, provides an appropriate final comment on the costs of inaction:

“We will pay for this one way or another. We will pay to reduce greenhouse gas emissions today...or we will pay the price later in military terms. And that will involve human lives. There will be a human toll. There is no way out of this that does not have real costs attached to it. That has to hit home.”

Thank you for the opportunity to appear before the Subcommittee.