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NATIONAL SECURITY AND THE THREAT OF CLIMATE CHANGE

FINDINGS AND RECOMMENDATIONS

This report is intended to advance a more rigorous national and international dialogue on the impacts of climate change on national security. We undertook this analysis for the primary purpose of presenting the problem and identifying first-order solutions. We therefore keep this list of findings and recommendations intentionally brief. We hope it will stimulate further discussion by the public and a more in-depth analysis by those whose job it is to plan for our national security.

FINDINGS

Finding 1:

Projected climate change poses a serious threat to America's national security.

Potential threats to the nation's security require careful study and prudent planning—to counter and mitigate potential detrimental outcomes. Based on the evidence presented, the Military Advisory Board concluded that it is appropriate to focus on the serious consequences to our national security that are likely from unmitigated climate change. In already-weakened states, extreme weather events, drought, flooding, sea level rise, retreating glaciers, and the rapid spread of life-threatening diseases will themselves have likely effects: increased migrations, further weakened and failed states, expanded ungoverned spaces, exacerbated underlying conditions that terrorist groups seek to exploit, and increased internal conflicts. In developed countries, these conditions threaten to disrupt economic trade and introduce new security challenges, such as increased spread of infectious disease and increased immigration.

Overall, climate change has the potential to disrupt our way of life and force changes in how we keep ourselves safe and secure by adding a new hostile and stressing factor into the national and international security environment.

Finding 2:

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. Unlike most conventional security threats that involve a single entity acting in specific ways at different points in time, climate change has the potential to result in multiple chronic conditions, occurring globally within the same time frame. Economic and environmental conditions in these already fragile areas will further erode as food production declines, diseases increase, clean water becomes increasingly scarce, and populations migrate in search of resources. Weakened and failing governments, with an already thin margin for survival, foster the conditions for internal conflict, extremism, and movement toward increased authoritarianism and radical ideologies. The U.S. may be drawn more frequently into these situations to help to provide relief, rescue, and logistics, or to stabilize conditions before conflicts arise.

Because climate change also has the potential to create natural and humanitarian disasters on a scale far beyond those we see today, its consequences will likely foster political instability

where societal demands exceed the capacity of governments to cope. As a result, the U.S. may also be called upon to undertake stability and reconstruction efforts once a conflict has begun.

Finding 3:

Projected climate change will add to tensions even in stable regions of the world.

Developed nations, including the U.S. and Europe, may experience increases in immigrants and refugees as drought increases and food production declines in Africa and Latin America. Pandemic disease caused by the spread of infectious diseases and extreme weather events and natural disasters, as the U.S. experienced with Hurricane Katrina, may lead to increased domestic missions for U.S. military personnel—lowering troop availability for other missions and putting further stress on our already stretched military, including our Guard and Reserve forces.

Our current National Security Strategy, released in 2002 and updated in 2006, refers to globalization and other factors that have changed the security landscape. It cites, among other factors, “environmental destruction, whether caused by human behavior or cataclysmic mega-disasters such as floods, hurricanes, earthquakes or tsunamis. Problems of this scope may overwhelm the capacity of local authorities to respond, and may even overtax national militaries, requiring a larger international response. These challenges are not traditional national security concerns, such as the conflict of arms or ideologies. But if left unaddressed they can threaten national security.”

In addition to acknowledging the national security implications of extreme weather and other environmental factors, the National Security Strategy indicates that the U.S. may have to intervene militarily, though it clearly

states that dealing with the effects of these events should not be the role of the U.S. military alone.

Despite the language in our current National Security Strategy, there is insufficient planning and preparation on the operational level for future environmental impacts. However, such planning can readily be undertaken by the U.S. military in cooperation with the appropriate civilian agencies, including the State Department, the United States Agency for International Development, and the intelligence community.

Finding 4:

Climate change, national security, and energy dependence are a related set of global challenges.

As President Bush noted in his 2007 State of the Union speech, 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. Technologies that improve energy efficiency also reduce carbon intensity and carbon emissions.

RECOMMENDATIONS

Recommendation 1:

The national security consequences of climate change should be fully integrated into national security and national defense strategies.

As military leaders, we know we cannot wait for certainty. Failing to act because a warning isn't precise is unacceptable. Numerous parts of the U.S. government conduct analyses of various aspects of our national security situation covering different time frames and at varying levels of detail. These analyses should consider the consequences of climate change.

The intelligence community should incorporate climate consequences into its National Intelligence Estimate. The National Security Strategy should directly address the threat of climate change to our national security interests. It also should include an assessment of the national security risks of climate change and direct the U.S. government to take appropriate preventive efforts now.

The National Security Strategy and the National Defense Strategy should include appropriate guidance to military planners to assess risks to current and future missions of projected climate change, guidance for updating defense plans based on these assessments, and the capabilities needed to reduce future impacts. This guidance should include appropriate revisions to defense plans, including working with allies and partners, to incorporate climate mitigation strategies, capacity building, and relevant research and development.

The next Quadrennial Defense Review should examine the capabilities of the U.S. military to respond to the consequences of climate change, in particular, preparedness for natural disasters from extreme weather events, pandemic disease events, and other missions the

U.S. military may be asked to support both at home and abroad. The capability of the National Guard and Reserve to support these missions in the U.S. deserve special attention, as they are already stretched by current military operations.

The U.S. should evaluate the capacity of the military and other institutions to respond to the consequences of climate change. All levels of government—federal, state, and local—will need to be involved in these efforts to provide capacity and resiliency to respond and adapt.

Scientific agencies such as the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA) and the United States Geologic Survey (USGS) should also be brought into the planning processes. The defense and intelligence communities should conduct research on global climate and monitor global climate signals to understand their national security implications. Critical security-relevant knowledge about climate change has come from the partnership between environmental scientists and the defense and intelligence communities. That partnership, vibrant in the 1990s, should be revived.

Recommendation 2:

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.

All agencies involved with climate science, treaty negotiations, energy research, economic policy, and national security should participate in an interagency process to develop a deliberate policy to reduce future risk to national security

from climate change. Actions fall into two main categories: mitigating climate change to the extent possible by setting targets for long-term reductions in greenhouse gas emissions and adapting to those effects that cannot be mitigated. Since this is a global problem, it requires a global solution with multiple relevant instruments of government contributing.

While it is beyond the scope of this study to recommend specific solutions, the path to mitigating the worst security consequences of climate change involves reducing global greenhouse gas emissions. Achieving this outcome will also require cooperation and action by many agencies of government.

Recommendation 3:

The U.S. should commit to global partnerships that help less developed nations build the capacity and resiliency to better manage climate impacts.

Some of the nations predicted to be most affected by climate change are those with the least capacity to adapt or cope. This is especially true in Africa, which is becoming an increasingly important source of U.S. oil and gas imports. Already suffering tension and stress resulting from weak governance and thin margins of survival due to food and water shortages, Africa would be yet further challenged by climate change. The proposal by DoD to establish a new Africa Command reflects Africa's emerging strategic importance to the U.S., and with humanitarian catastrophes already occurring, a worsening of conditions could prompt further U.S. military engagement. As a result, the U.S. should focus on enhancing the capacity of weak African governments to better cope with societal needs and to resist the overtures of well-funded extremists to provide schools, hospitals, health care, and food.

The U.S. should target its engagement efforts, through regional military commanders

and other U.S. officials, toward building capacity to mitigate destabilizing climate impacts. For example, regional commanders have routinely used such engagement tools as cooperation on disaster preparedness to help other nations develop their own ability to conduct these efforts.

Cooperative engagement has the potential to reduce the likelihood of war fighting. As Gen. Anthony C. (Tony) Zinni (Ret.) has said: "When I was commander of CENTCOM, I had two missions: engagement and war fighting: If I do engagement well, I won't have to do war fighting." The U.S. cannot do this alone; nor should the military be the sole provider of such cooperative efforts. But the U.S. can lead by working in cooperation with other nations. Such efforts promote greater regional cooperation, confidence building and the capacity of all elements of national influence to contribute to making nations resilient to the impacts of climate change.

Recommendation 4:

The Department of Defense 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.

DoD should require more efficient combat systems and should include the actual cost of delivering fuel when evaluating the advantages of investments in efficiency. Numerous DoD studies dating from the 2001 Defense Science Board report "More Capable Warfighting Through Reduced Fuel Burden" have concluded that high fuel demand by combat forces detracts from our 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 every day 2.4 million gallons of fuel is moved through dangerous territory, requiring protection by armored combat vehicles and attack helicopters.

Deploying technologies that make our forces more efficient also reduces greenhouse gas emissions. DoD should invest in technologies that will provide combat power more efficiently. The resulting technologies would make a significant contribution to the vision President Bush expressed in his State of the Union when he said, "America is on the verge of technological breakthroughs that ... will help us to confront the serious challenge of global climate change."

Recommendation 5:

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.

As part of prudent planning, DoD should assess the impact of rising sea levels, extreme weather events, drought, and other climate impacts on its infrastructure so its installations and facilities can be made more resilient.

Numerous military bases, both in the U.S. and overseas, will be affected by rising sea levels and increased storm intensity. Since World War II, the number of overseas bases has diminished, and since the Base Realignment and Closure process began the number of stateside bases has also declined. This makes those that remain more critical for training and readiness, and many of them are susceptible to the effects of climate change. For example, the British Indian Ocean Territory island of Diego Garcia, an atoll in the southern Indian Ocean, is a major logistics hub for U.S. and British forces in the

Middle East. It is also only a few feet above sea level at its highest point. The consequences of the losing places like Diego Garcia are not insurmountable, but are significant and would require advance military planning. The Kwajalein is a low-lying atoll, critical for space operations and missile tests. Guam is the U.S. gateway to Asia and could be moderately or severely affected by rising sea levels. Loss of some forward bases would require us to have longer range lift and strike capabilities and possibly increase our military's energy needs.

Military bases on the eastern coast of the U.S. are vulnerable to hurricanes and other extreme weather events. In 1992, Hurricane Andrew virtually destroyed Homestead Air Force Base in Florida. In 2004 Hurricane Ivan knocked out Naval Air Station Pensacola for almost a year. Most U.S. Navy and Coast Guard bases are located on the coast, as are most U.S. Marine Corps locations. The Army and Air Force also operate bases in low-lying or coastal areas. One meter of sea level rise would inundate much of Norfolk, Virginia, the major East Coast hub for the U.S. Navy. As key installations are degraded, so is the readiness of our forces.