



# BACKGROUND

*Published by the Truman National Security Project*

## Climate Change: A New Threat to National Security

Frankie Sturm, Truman National Security Project

10 September 2009

### Advisory Board:

Madeleine K. Albright  
*Principal*  
*The Albright Group LLC*

Coit D. Blacker  
*Director & Senior Fellow,*  
*Freeman Spogli Institute,*  
*Stanford University*

Kurt M. Campbell  
*Former CEO & Co-Founder*  
*Center for a New*  
*American Security*

Gregory Craig  
*Partner, formerly of Williams*  
*and Connolly LLP*

Leslie H. Gelb  
*President Emeritus*  
*Council on Foreign Relations*

William Marshall  
*President*  
*Progressive Policy Institute*

William J. Perry  
*Senior Fellow*  
*Hoover Institution*

John D. Podesta  
*President and CEO*  
*Center for American Progress*

Wendy R. Sherman  
*Former Principal*  
*The Albright Group LLC*

Anne-Marie Slaughter  
*Former Dean*  
*Woodrow Wilson School*  
*Princeton University*

### CEO:

Rachel Kleinfeld

Climate Change presents a national security threat that could undermine American interests at home and abroad. The effects of climate change are already degrading naval bases, drying up water resources, prompting mass migration, and setting the stage for new outbreaks of old diseases. In the words of CNA's Military Advisory Board, this makes climate change a "threat multiplier" that exacerbates existing security problems, deepening their impact.<sup>1</sup>

The US military and other institutions responsible for ensuring US security are putting the pieces in place to deal with these consequences. The National Intelligence Council has issued two reports detailing the threat of climate change; the Pentagon is seriously considering the issue in its 2010 Quadrennial Defense Review, as will the State Department in its Quadrennial Diplomacy and Development Review. The consensus among security professionals is clear – climate change is real, and it is a real problem.<sup>2</sup>

While some suggest we need more research before we begin to act, former Army Chief of Staff General Gordon Sullivan has a different take:

*"Climate change is occurring at a much faster pace than the scientists previously thought. Military professionals are accustomed to making decisions during times of uncertainty. Even if you don't have complete information, you still need to take action. Waiting for 100 percent certainty during a crisis can be disastrous."*<sup>3</sup>

General Sullivan's remark underscores the

*"The consensus among security professionals is clear – climate change is real, and it is a real problem."*

importance of acting now to combat climate change. This requires Congress to pass a finalized version of the American Clean Energy and Security Act before the Copenhagen Climate Conference in December. Ideally, final legislation will make fewer concessions to the coal industry than the current bill – but any step in the right direction is a step worth taking.

Effectively averting this significant threat also requires a serious effort to move America to a new energy posture by investing in research, development, and commercialization of clean energy technologies. As illustrated below, the magnitude of the threat is such that this new energy effort requires us to muster the same level of resources we devoted to the Apollo Program that put a man on the moon, or the Manhattan Project that allowed us to beat Nazi Germany in the creation of nuclear weapons.<sup>4</sup>

### From Science to Security

From natural disasters abroad that require action by the US military and increased immigration from Latin America, to severe weather events that devastate American towns and refugee movements that create international tension and require US mediation, climate change will cause security threats and draw on US security resources. Here are the main ways it affects us.

*The Truman Doctrine*

*“Climate change will provide the conditions that will extend the war on terror.”*

**Admiral T. Joseph Lopez, Former Commander-in-Chief, U.S. Naval Forces Europe and Allied Forces, Southern Europe**

*“We will pay for this one way or another. We will pay to reduce greenhouse gas emissions today, and we’ll have to take an economic hit of some kind. 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.”* **General Anthony Zinni, Former Commander-in-Chief U.S. Central Command**

*“The more instability increases, the more pressure there will be to use our military. That’s the issue with climate change.”* **General Robert Magnus, Former Assistant Commandant of the U.S. Marine Corps**

*“Energy and climate change are two of the key strategic trends affecting national security.”* **Kathleen Hicks, Deputy Under Secretary of Defense for Strategy, Plans, and Forces**

## **Climate Change Will Hit the US Homeland**

**Vulnerable Coastlines.** Our eastern and Gulf coastlines are exceptionally vulnerable to strong storms, as we witnessed with Hurricane Katrina, which cost nearly 2,000 lives and more than \$80 billion in damages. Due to climate change, hurricanes are expected to grow more powerful and more frequent, threatening coastal cities, nuclear power plants, and military installations such as Pascagoula Naval Base in Mississippi.<sup>5</sup>

**Mass migration.** As freshwater supplies dwindle in the Americas and crops fail, the US will face increasing migratory pressures from its southern neighbors. Anywhere between 7 million to 77 million people in Latin America could soon be faced with a shortage of water.<sup>6</sup> Millions of migrants are already attracted to the US because they want to make a better living. These migratory pressures will increase as it becomes a matter of survival.

**Drought.** Climate change causes drought, which threatens to dry up the Ogallala aquifer. This freshwater source supplies 70%-90% of the irrigation water used by major grain producing states such as Texas, Nebraska, and Kansas.<sup>7</sup> The dust-bowl effect, which we saw in the 1930s, would be longer and deeper this time, affecting the long-term health of US agriculture.

**Heat Waves.** Heat can be a killer, even in industrial nations. Climate change means that events such as Europe’s 2003 heat wave, which killed 35,000, will become more prevalent.<sup>8</sup> In the US, warming temperatures have prompted the National Arbor Day Foundation to upgrade all American climate zones.<sup>9</sup> If temperatures continue their upward trajectory, there is every reason to believe that heat will kill in the US as it did in Europe.

**Disease.** Changing weather patterns are spreading the conditions in which deadly diseases thrive. The World Health Organization estimates that modest climate changes between the mid-1970s and 2000 caused an annual loss of over 150,000 lives

throughout the world.<sup>10</sup> As the recent outbreak of swine flu proves, we cannot assume that deadly diseases will simply stop at our borders. Diseases that are expected to proliferate as temperatures increase include malaria, dengue fever, cholera, and West Nile Virus.<sup>11</sup> There is no reason to believe America will be spared these afflictions.

**Wild Fires.** The frequency of wildfires in the US has increased since the 1980s. The wildfire season was 78 days longer from 1987-2003 than it was from 1970-1986.<sup>12</sup> Climate change is credited with causing higher temperatures and drier weather – which exacerbates even man-made fires, such as those that just devastated California.

## **The US Military as a First Responder to Natural Disasters**

When Indonesia was hit by a massive tsunami in 2004, the US military responded with logistical aid, ships, planes, and helicopters. Costing \$5 million per day, only the US military had the capacity to respond so quickly to a disaster of such magnitude.<sup>13</sup> By 2005, more than 300 million people around the world were affected by climate-related disasters such as the tsunami in Indonesia – up from 70 million in 1980.<sup>14</sup> As the intensity and frequency of such disasters increase, the demand for the United States to respond will increase in turn. This will seriously tax US resources.

From hurricanes in the Caribbean to cyclones in Southeast Asia, it will not be feasible for the US to respond to every disaster. But in many cases it will be important that we do. Indonesia is the world’s most populous Muslim country. American efforts after the tsunami dramatically improved the image of the US in the eyes of Indonesians, a major accomplishment in the fight against Islamic extremism. However, the ability of the US to respond to future disasters will shrink in proportion to the increase in storms that climate change is likely to cause. Our capacity to extend a helping hand will diminish, while anger over our inability – which some will interpret as refusal – will erode worldwide confidence in American leadership.

*“A Yellow ribbon on a car or truck is a wonderful message... I’d like to see the American people take it several steps further. If you say a yellow ribbon is ‘talk,’ then being energy efficient is the ‘walk’.*”

*“We have less than ten years to change our fossil fuel dependency course in significant ways. Our nation’s security depends on the swift, serious, and thoughtful response to the inter-linked challenges of energy security and climate change.”* **Vice Admiral Dennis McGinn, Former Deputy Chief, Naval Warfare Requirements and Programs**

*“We judge global climate change will have wide-ranging implications for US national security interests over the next 20 years.”* **National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030**

*“Climate change is not simply about saving polar bears and preserving the beauty of glaciers. It’s about national security.”* **Retired Navy Vice Admiral Lee F. Gunn, president of the American Security Project**

**According to the CNA Military Advisory Board, Climate Change is likely to:**

- Destabilize governments
- Lead to mass migration and refugee crises
- Increase volatility over water resources
- Degrade military equipment
- Create havens for extremists
- Spread infectious diseases
- Threaten bases via rising sea levels
- Spark a naval race in the Arctic

**Rising Seas Create Refugee Populations where Extremists can Hide**

India recently constructed a 2,500-mile wall on its border with Bangladesh, partly in order to stem the tide of expected “climate refugees” – individuals who flee rising sea levels or tropical storms.<sup>15</sup> By 2050 as many as 200 million people may become permanent climate refugees, moving within and across borders in search of sustenance.<sup>16</sup> But this is not only a problem for nations like India. It is a problem for the United States.

Bangladesh’s population is projected to grow to 240 million in a few decades. Rising sea levels are already forcing people from their homes, while Cyclone Aila made 750,000 Bangladeshis homeless in May 2009.<sup>17</sup> At the same time, Islamic extremism has become a growing force in Bangladesh. Jihadists found safe haven there after the US invasion of Afghanistan, and intelligence analysts have identified it as a potential new base of operations for terrorist organizations.<sup>18</sup> If climate change prompts mass migration, it would provide terrorists with a pool of recruits and a fluid population in which to hide.

**Water and Food Shortages Likely to Spark Resource Wars**

Millions rely on mountain glaciers for fresh-water supplies, but many of these glaciers are likely to disappear within the next few decades.<sup>19</sup> Water shortages are already creating tensions between nations in the Middle East, while one out of five people in the Asia-Pacific lack access to safe drinking water.<sup>20</sup> As these trends continue, conflict over water resources could increase in turn. Competition over food also increases the likelihood of conflict. Drought in Darfur

reduced grazing and farm land, leading to conflicts between nomads and farmers. Compounded by ethnic and religious differences, the resource conflict has erupted into a genocide that has claimed at least 300,000 lives. The 1994 genocide in Rwanda – which killed 800,000 – was also exacerbated by conflicts over agricultural resources.

Al Qaeda and other extremist groups are already looking to exploit food shortages and instability in the Horn of Africa, while 36 countries with a combined population of 1.4 billion people could face shortages of water and cropland by 2025.<sup>21</sup> We know that terrorists will exploit conflict to advance their agenda, just as we know that the outbreak of a “resource war” could require action by the US military. This makes the global availability of water and food of paramount concern to US security.

**Why We Need to Act Now**

We can manage the effects of climate change if we can keep the rise in global average temperatures below 2 degrees Celsius.<sup>22</sup> But many scientists are predicting that temperatures will increase by 4-5 degrees, creating tipping points and interaction effects that will be hard – if not impossible – to slow.<sup>23</sup> Commitments from industrialized countries to cut carbon emissions based on the 2 degree figure are already inadequate. Actions are not keeping pace with the gravity of the problem.

To combat climate change, the US needs to cut down on carbon and ramp up renewable energy. Congress and the Obama administration took a first step in this direction through the “Stimulus Package,” which allocated \$71 billion for energy efficiency and renewable energy, as well as another

\$20 billion in tax incentives for investments in these technologies.<sup>24</sup>

### America's Next Step

The next step is for Congress to pass the American Energy and Security Act before the Copenhagen Climate Conference in December. The bill as it is currently written is imperfect, as it grants too many concessions to coal interests. A serious effort to curb climate change would require us to use fewer carbon emitting resources such as coal, and Congress still has the opportunity to make that fix. But any bill that moves the ball forward will allow the US to negotiate tougher concessions from other polluting nations, such as China and India. And time is of the essence.

The National Intelligence Council says that on "security issues like climate change, US leadership will be widely perceived as critical to leveraging divisive views to find solutions."<sup>25</sup> India's Environment Minister has already stated that his and other developing nations would have to follow suit if America limited its own carbon emissions.<sup>26</sup> Given the magnitude of the threat, Congress must exercise American leadership before December.

The final step is to move America to a fundamentally new energy posture. Between the threat of climate change and the imperative to reduce our dependence on fossil fuels – the use of which produces climate change – and the nations that produce them, the US needs to commit itself to a generational effort to make clean energy technology a reality.

Faced with major security threats in the past, America responded with resources equal to the challenge, such as creating the Manhattan Project that allowed the US to harness nuclear power before Nazi Germany, or the Apollo Program that propelled us to victory in the space race. Today, the US is threatened by the one-two punch of climate change and dependence on fossil fuels – much of which come from unfriendly nations.

The US must innovate its way out of these challenges by investing in basic research and commercialization of clean energy technologies.<sup>27</sup> Whatever action the 111<sup>th</sup> Congress takes will set America's energy course for many years to come. It is up to those of us who recognize the remarkable security threat presented by climate change and dependence on fossil fuels to make sure the actions of Congress meet America's needs.

### End Notes

- 1.) CNA Corporation, *National Security and the Threat of Climate Change*, 2007; 2.) National Intelligence Council (NIC), "National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030," 2008; NIC, "Global Trends 2025: A Transformed World," 2008; Broder, "Climate Change Seen as Threat to U.S. Security," *New York Times*, 8 August 2009; 3.) CNA Corporation, *Ibid.*; 4.) Greenberg and Weber, *Generation WE*, Pachatusan 2008; 5.) Farris, "The Major Hurricanes of 2005: a Few Facts," US Department of the Interior; Nathan and Landy, "The Role of the Federal Government in Megadisasters," Rockefeller Institute of Government, 27 August 2009; CNA Corporation, *Ibid.*; 6.) NIC, "National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030," 2008; 7.) Brown, *Plan B 2.0 Rescuing a Planet Under Stress and a Civilization in Trouble*, Norton & Co. 2006; 8.) Bhattacharya, "European heatwave caused 35,000 deaths," *New Scientist*, 10 October 2003; 9.) Fahrenthold, "Washington Warming to Southern Plants," *Washington Post*, 20 December 2006; 10.) Oxfam International, *Ibid.*; 11.) Oxfam International, *Ibid.*; Struck, "Climate Change Drives Disease To New Territory," *Washington Post*, 5 May 2006; 12.) Oxfam International, *Suffering the Science*, 2009; 13.) "Going the Distance: The U.S. Tsunami Relief Effort 2005," U.S. State Department, 2005; 14.) Oxfam International, *Ibid.*; 15.) Prasad, "India builds a 2,500-mile barrier to rival the Great Wall of China," *Times Online*, 28 December 2005; 16.) "Stern Review on the Economics of Climate Change," 30 October 2006; 17.) Oxfam International, *Ibid.*; 18.) Podesta & Ogdin, "G8 Must Consider the Security Risks of Global Warming," *Nikkei*, 30 June 2008; 19.) CNA Corporation, *Ibid.*; 20.) CNA Corporation, *Ibid.*; Mata Press Service, "Water Shortage in Asia," *Asian Pacific Post*; 21.) NIC, "Global Trends 2025: A Transformed World," 2008; 22.) NIC, "Global Trends 2025: A Transformed World," 2008; 23.) Oxfam International, *Ibid.*; 24.) "Securing America's Future," Center for American Progress Report, 25 August 2009; 25.) NIC, "Global Trends 2025: A Transformed World," 2008; 26.) "India Urges Rich Countries to Call Its Climate Change 'Bluff,'" *Bloomberg News*, 26 August 2009; Greenberg and Weber, *Ibid.*; Running quotes and CNA grey box from CNA Corporation, *Ibid.*; (NIC), "National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030," 2008; Sheppard, "National Security emphasis could inspire more report for climate change bill, says former Sen. John Warner," *Grist*, 22 July 2009; Sen. Warner, Testimony to Senate Committee on Environment and Public Works, 30 July 2009.

This Paper Can be Found at

[www.trumanproject.org](http://www.trumanproject.org)

By signing up as member you can receive this paper on a regular basis upon its release. Published by:

#### Truman National Security Project

1420 K Street NW, Suite 250  
Washington, DC 20005  
Telephone: 202-216-9723  
[info@trumanproject.org](mailto:info@trumanproject.org)

Nothing written here is to be construed as necessarily reflecting the views of the Truman National Security Project or an attempt to aid or hinder the passage of any bill before Congress.