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## **The Department of Defense Should Assess the Security Risks of Climate Change *Policies***

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The Pentagon is perhaps the most influential lobby on Capitol Hill and has the respect of many on the center-right who hold the likes of Greenpeace, Al Gore, and the United Nations in low regard. What's more, if "even the generals are worried" and climate change is officially deemed a national security threat, then proponents of cap-and-trade get to wave the flag and depict their opponents as venal, partisan, or unpatriotic. So it's not surprising that global warming activists for years have sought to institutionalize climate change concerns in Department of Defense (DOD) intelligence assessments, program planning, and budgeting.

They have made some headway, though the Department is still far from a hotbed of climate alarm. DOD's *Quadrennial Defense Review Report* (QDR) calls climate change a "key issue" that will play a "significant role in shaping the future security environment."<sup>1</sup> On the other hand, at a recent briefing on the QDR at the Woodrow Wilson International Center for Scholars,<sup>2</sup> a top-ranking DOD official pointedly declined to define climate change as a "national security threat," calling it instead an "instability accelerant"—a factor that could exacerbate conditions conducive to conflict within and among nations. Angst, hyperbole, and cheerleading for cap-and-trade were conspicuously absent.<sup>3</sup> Nonetheless, the Wilson Center briefing lacked balance. Panelists discussed the security risks associated with climate change while seeming completely oblivious to the potential of various climate change *policies* to damage U.S. security interests. Similarly, the QDR says nothing about the security risks of climate policies.

This paper aims to inject some badly needed balance into discussions of climate change and national security. First, it takes a skeptical look at the claim that climate is an important "threat multiplier" or, as the QDR puts it, an "accelerant of instability and conflict."<sup>4</sup> Second, it outlines several ways in which climate policies can adversely affect U.S. national security.

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**Risk v. Risk: Taboo at DOD?** Regulatory interventions in the marketplace are somewhat like military interventions—they can sometimes solve problems but can also produce serious unintended (though not necessarily unforeseen) consequences. Similarly, even the best medical therapies can have harmful side effects. Politicians, however, tend to inhabit a make-believe world in which good intentions guarantee good results. Military professionals know better. Qualified by training and temperament to discern the perils of ill-advised “solutions,” they are in a unique position to point out pitfalls which politicians prefer to ignore. Unfortunately, the QDR fails in this regard.

In testimony before a joint hearing of the House Select Committee on Intelligence and the House Committee on Energy Independence and Global Warming, National Intelligence Council Deputy Director Dr. Thomas Fingar recognized that, with regard to climate change, there are risks of action as well as of inaction:

Government, business, and public efforts to develop mitigation and adaptation strategies to deal with climate change—from policies to reduce greenhouse gases to plans to reduce exposure to climate change or capitalize on potential impacts—may affect U.S. national security interests even more than the physical impacts of climate change itself.<sup>5</sup>

However, Fingar did not explain this comment either in the text of his remarks or during the Q&A period. Aside from this one instance—which drew heavy fire from Chairman Ed Markey (D-Mass.)—I am unaware of any discussion by a U.S. Government official of the security risks of climate change policies. This is unfortunate. What is not discussed is seldom thought about, and selective, one-sided risk assessments can lead to perilous policies that do more harm than good.

**Instability Accelerant: A Skeptical Perspective.** The *Quadrennial Defense Review* cautions that climate change can weaken fragile governments by increasing the frequency and severity of environmental stresses such as droughts, floods, and disease. Although climate change undoubtedly has this potential, the risks have been highly exaggerated.

One of the principal ways in which climate change supposedly undermines stability is by intensifying droughts and water shortages, thus leading to crop failure, famine, and armed conflict. Yet real-world evidence doesn't support this gloomy prediction. Wendy Barnaby, editor of *People & Science*, the journal of the British Science Association, wrote a fascinating essay in *Nature* magazine on this topic.<sup>6</sup> She had been researching a book on the “coming century of water wars.” She assumed that water scarcity is already a significant source of conflict—a pervasive problem just waiting to be “threat multiplied” by climate change.

But as Barnaby dug into her topic, she discovered that cooperation rather than conflict is the dominant response to shared water resources. Of 1,831 interactions over international fresh water resources spanning five decades, she could not find a single declared war—not even in the conflict-ridden, water-scarce Middle East. Egypt and Jordan have gone to war with Israel several times, but never over water. Rather than fight about water, they cooperate and import “virtual water” in the form of grain. Irrigated agriculture consumes far more water than people consume for personal use. By importing grain, Mideast nations free up scarce water supplies for drinking and bathing. More virtual water flows into the Mideast each year embedded in grain than flows

down the Nile to Egyptian farmers. Barnaby concludes her essay by rejecting the fashionable notion that water wars are inevitable in a warming world.<sup>7</sup>

The most pessimistic (and influential) assessment of the impact of global warming on developing countries is the British government's *Stern Review of the Economics of Climate Change*.<sup>8</sup> The *Stern Review* is famous for the assertion that climate change damages could "rise as high as 20 percent of GDP or more." This estimate is an outlier in the climate economics literature.<sup>9</sup> However, for the sake of argument, let us assume that the *Stern Review*'s gloomy assessment is correct. Even then, climate change would likely be a bit player in the fate of nations.

As economist Indur Goklany shows,<sup>10</sup> even if we accept the *Stern Review*'s 95th-percentile GDP loss estimates under the warmest scenario presented by the United Nations Intergovernmental Panel on Climate Change, developing countries' net welfare (after accounting for climate change) would increase from \$900 per capita in 1990 to \$61,500 in 2100 and \$86,200 in 2200 (all in 1990 U.S. dollars). For perspective, Goklany notes that, in 2006, GDP per capita was \$19,300 for industrialized countries, \$30,100 for the United States, and \$1,500 for developing countries. In addition to being wealthier, future generations are bound to develop superior technologies in such critical endeavors as agriculture, medicine, water resource management, disaster preparedness, and emergency response.<sup>11</sup> Thus, regardless of climate change, it is very likely that global welfare will improve dramatically over the next two centuries, and developing countries' adaptive capacity will far surpass that of industrial countries today. Therefore, climate change is unlikely to become an important instability accelerant in the decades ahead.

**Neglected Security Risks of Climate Policy.** Turning now to the other side of the risk ledger, we find that climate change policies can have significant detrimental impacts on international stability and U.S. national security.

**Gas Pains.** Frederick the Great said, "An army, like a serpent, travels on its belly." However, for the past 100 years or so, armed forces have traveled on their fuel tanks. In the Afghan and Iraq wars, U.S. strategy plays to our comparative advantage in mobile forces. Today's U.S. Army is the most fuel-intensive in history, and the Defense Department is the nation's largest consumer of fossil fuels.<sup>12</sup> Therefore, it should interest DOD that cap-and-trade programs are *designed to make fossil fuels more costly*.<sup>13</sup>

The Heritage Foundation estimates that the Waxman-Markey cap-and-trade bill would increase motor fuel prices by 58 percent or \$1.38 per gallon by 2030.<sup>14</sup> Moreover, a recent Harvard University study finds that Waxman-Markey would not raise gasoline prices enough to significantly reduce carbon dioxide (CO<sub>2</sub>) emissions from the transport sector. The study's authors recommend that, in addition to the economy-wide carbon price associated with cap-and-trade, policy makers should adopt new motor fuels taxes to increase gasoline prices to between \$7 and \$9 a gallon.<sup>15</sup>

Cap-and-trade and new gas taxes are not the only climate-related measures that could inflate motor fuel prices. Consider this smorgasbord of additional policies advocated by climate activists to restrict access to carbon-based fuels and petroleum products:

- Moratoria on oil and gas exploration in the North Sea,<sup>16</sup> the Arctic,<sup>17</sup> and the U.S. Pacific Coast.<sup>18</sup>
- Carbon tariffs<sup>19</sup> or low-carbon fuel standards<sup>20</sup> that cut off imports of Canadian tar-sands oil.
- Clean Air Act New Source Performance Standards (NSPS) for CO<sub>2</sub> emissions that discourage investments to expand refining capacity.<sup>21</sup>
- Windfall profits taxes<sup>22</sup> that deter U.S. oil companies from developing new supply sources.
- Prohibitions on the development of oil from Rocky Mountain shale.<sup>23</sup>

Enacting cap-and-trade, European-level gas taxes, and the rest of the green policy wish list as global demand rebounds could produce a major energy crunch. In addition to the economy-wide effects, rising fuel costs could compel DOD to make cuts elsewhere in its budget. Which operations and programs would take a hit, and how might the cutbacks affect U.S. security interests? Someone at DOD should be asking these questions.

***A Strong Defense Requires a Strong Economy.*** Economic strength is the foundation of military strength, and affordable energy is vital to economic growth. Cap-and-trade policies can chill job creation and growth because they are designed to make energy more costly. DOD should look at the range of credible estimates of the economic impacts of various climate policies and assess the potential effects on tax revenues and funding for DOD budgets. For example, the Heritage Foundation estimates that Waxman-Markey would reduce cumulative GDP by \$9.4 trillion from 2012 to 2030 and reduce net employment by 1.9 million in 2012 and 2.5 million in 2035.<sup>24</sup> Similarly, the National Association of Manufacturers/American Council for Capital Formation estimates that, in 2030, Waxman-Markey would lower annual GDP by \$419 billion to \$571 billion and reduce net employment by 1.79 million to 2.44 million.<sup>25</sup>

Litigation-driven CO<sub>2</sub> regulation under the Clean Air Act (CAA) poses its own set of risks. As the Environmental Protection Agency (EPA) acknowledges, regulating CO<sub>2</sub> from new motor vehicles under the agency's new greenhouse gas emission standards rule<sup>26</sup> could compel EPA to impose preconstruction permitting requirements on tens of thousands of previously non-regulated small businesses, and operating permit requirements on millions.<sup>27</sup> This could stifle new construction and impede business investment generally in the midst of the worst downturn since the Great Depression.

In addition, EPA's endangerment finding,<sup>28</sup> which compelled the agency to regulate vehicular CO<sub>2</sub> emissions, also commits it to establish National Ambient Air Quality Standards (NAAQS) for CO<sub>2</sub> set below current atmospheric levels. This could be very disruptive economically. Not even a global depression lasting many decades would be sufficient to lower global CO<sub>2</sub> concentrations, yet the CAA requires states to attain "primary" or health-based NAAQS within five or at most 10 years, or face sanctions such as loss of highway funds.<sup>29</sup>

America cannot lead the world with a crippled economy. With the national debt at record levels and growing,<sup>30</sup> entitlement spending spinning out of control,<sup>31</sup> and California tottering on bankruptcy,<sup>32</sup> economic failure is a real threat. To paraphrase one of the DOD panelists at the

Wilson Center briefing, climate policies could push the U.S. economy past the “tipping point” at which failure occurs.

***Climate Policy: The Real Threat-Multiplier.*** Global warming movement’s top priority is to stop construction of new coal-fired power plants<sup>33</sup> in order to reduce global emissions by 50 percent or more by 2050.<sup>34</sup> Yet, banning new coal plants in developing countries could condemn large segments of humanity—the 1.6 billion people who lack access to electricity—to decades of deadly poverty.<sup>35</sup>

Approximately 90 percent of the growth in global emissions for the remainder of this century is projected to occur in developing countries.<sup>36</sup> Absent breakthroughs that dramatically lower the cost of zero-emission energy, there is no way to achieve the 50 percent global emissions reduction target without suppressing energy consumption and economic growth in the world’s poorest countries. Needless to say, thwarting developing countries’ aspirations for a better life would not promote stability and peace.

Even if developing countries successfully resist pressure to ban coal plants, they might still be harmed by the spillover effects of industrial-country climate policies. Climate policies that chill growth in industrial countries would reduce imports from, and investment in, developing countries.

There is also the problem of opportunity cost. Resources invested to combat climate change (totaling potentially trillions of dollars) are not available to combat more urgent threats to global welfare such as hunger, malnutrition, waterborne disease, malaria, HIV/AIDS, and indoor air pollution. Yet, each dollar invested to address those threats would save more lives than the same dollar invested in climate change mitigation.<sup>37</sup> Because resources are finite, bad investments tend to crowd out good ones. Even if climate policies did no positive harm, they could still undermine U.S. security interests by displacing investments that more effectively enhance human welfare and thereby promote stability in developing countries.

***Trade War, U.S-China Conflict.*** China, India, and other developing countries reject binding limits on their emissions. What would be required to make them join the carbon-constrained club? One option is outright bribery.<sup>38</sup> At the Copenhagen climate summit, President Obama pledged to work with other industrial countries to provide \$100 billion annually in climate assistance to developing countries by 2020.<sup>39</sup> However, U.S. taxpayers may take a dim view of subsidizing Chinese industry. Besides, although China and India would be only too happy to take our money, they have not indicated they would return the favor by capping their emissions.

If carrots do not work, the other option is sticks. Ten U.S. Senators,<sup>40</sup> French President Nicolas Sarkozy,<sup>41</sup> and others<sup>42</sup> advocate carbon tariffs against major developing countries that refuse to curb emissions. If we go down that path, we will likely butt heads with China and other important trade partners. Beijing has already threatened to retaliate against carbon tariffs with trade sanctions of its own.<sup>43</sup> In all likelihood we would get a trade war, not compliance. Trade wars do not usually lead to shooting wars, but an era of trade conflict with China would not be in the U.S. national interest. China, for example, could become less amenable (or more

obstructionist) in areas where we seek their cooperation, such as sharing intelligence on terrorist activities<sup>44</sup> and restraining North Korea and Iran's nuclear ambitions.<sup>45</sup>

***Proliferation Risk.*** Increased proliferation risk is a potential consequence of the global warming crusade. Here is why. If developing countries are denied access to coal-based electricity, how are they going to produce base-load power? Politically-correct renewable energy sources like wind and solar are too intermittent to provide base-load power—which needs to be available 24 hours a day, seven days a week, 365 days a year. Coal is generally the least expensive fuel for base-load. That is why China and India are chiefly fueling their development with coal.<sup>46</sup> Remove coal from the equation, however, and demand for nuclear is bound to grow.

Indeed, it is difficult to imagine developing countries consenting to a moratorium on new coal power plants unless industrial countries agree to share nuclear technology with them, and pay for it to boot. Or they might obtain fissile materials from China, North Korea, Iran, or Russia. Demand for nuclear technology could be massive under a global ban on coal-based power. To give a sense of the potential size of this market, it would take 250 nuclear reactors to meet India's projected electricity demand growth through 2030 without incremental new coal generation.<sup>47</sup>

***Europe's Dependence on Russian Gas.*** Climate policies increase Europe's vulnerability to Russian energy extortion, eroding Europe's reliability as a strategic partner of the United States. In January 2009, in the midst of a very cold winter, Russia halted gas exports to Ukraine, thereby cutting off nearly all Russian gas shipments to Europe.<sup>48</sup> Although Russia claimed it was simply trying to resolve a longstanding dispute with Ukraine over gas prices and debts, the cutoff may also have been punishment for Ukraine's pursuit of NATO membership,<sup>49</sup> and a warning to NATO to not admit Ukraine.

Europe's dependence on Russian gas partly stems from the European Union's global warming policy. As the U.S. Energy Information Administration notes: "Many nations in OECD Europe have made commitments to reduce carbon dioxide emissions, bolstering the incentive for governments to encourage natural gas use in place of other fossil fuels."<sup>50</sup> If Europe's deeds ever match its rhetoric, and European countries ban new coal plants instead of building them,<sup>51</sup> they will become even more dependent on Moscow to keep their lights on and their houses warm.

***Biofueling Disaster.*** The *Quadrennial Defense Review* reports that the Navy plans to deploy a new "green" carrier strike group powered partly by biofuels.<sup>52</sup> Yet "saving the planet" with biofuels could significantly reduce the land area available for food crop production. Biofuel subsidies and mandates contributed to surging grain prices and hunger in developing countries in 2008.<sup>53</sup> Higher food prices, partly due to climate-related biofuel policies, increased the population in developing countries living in "absolute poverty" (defined as subsisting on less than \$1.25 per day) by 130-155 million people during 2005-2007.<sup>54</sup> In 2008, food riots broke out in over a dozen countries and toppled the government in Haiti<sup>55</sup>—the very sort of instability we are supposed to fear from climate change.

In a widely cited paper,<sup>56</sup> Princeton researchers Stephen Pacala and Robert Socolow estimate that the world would have to consume 34 million barrels a day of ethanol instead of gasoline to

avoid 1 gigaton of CO<sub>2</sub> emissions per year. They further estimate that producing that much ethanol would require 250 million hectares of high-yield plantations by 2054, “an area equal to about one-sixth of the world’s current cropland.” *One-sixth of the world’s current cropland!* This represents a much bigger decline in global food production than is anticipated from high-end warming scenarios.<sup>57</sup> The world is not well fed now, and the food and feed demands on farmlands are expected to

<sup>58</sup> The potential for disaster is obvious.

**Conclusion.** As experience shows, the Department of Defense should be skeptical of alarmist assessments of climate change risk. For example, a 2003 study sponsored by the Department of Defense, *Imagining the Unthinkable: An Abrupt Climate Change Scenario and Its Implications for United States National Security*,<sup>59</sup> launched the debate on climate change as a national security threat. It assumed that “abrupt climate change”—a warming-induced collapse of the Gulf Stream ushering in a new ice age—could occur “as soon as 2010.” By 2006, however, scientists who had raised this concern acknowledged that it was a “false alarm.”<sup>60</sup> DOD should be skeptical of—it should apply military intelligence to—assessments of climate change risk, however credible the source appears to be.

This goes in spades for claims about climate policy. Climate campaigners tout their proposals as cures for everything—from global warming to energy dependence to high jobless rates to the alleged spiritual crisis of a world in search of a “generational mission” (Al Gore’s phrase).<sup>61</sup> They never acknowledge the potential for harmful side effects. One of the panelists at the Wilson Center briefing rightly noted that DOD should avoid exaggeration to safeguard its credibility. For the same reason, it should avoid lending credibility to climate snake oil salesmen. For its own threat assessments, the Pentagon should look at all relevant climate-related risks—that is, not only the risks of climate change, but also the risks of climate change policies.

## Notes

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<sup>2</sup> Amanda J. Dory, Deputy Assistant Secretary of Defense for Strategy, Office of the Secretary of Defense, “U.S. Department of Defense Climate Change and Energy in Defense Doctrine: The QDR and UK Defense Green Paper,” presentation at the Woodrow Wilson International Center for Scholars, March 11, 2010.

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<sup>4</sup> QDR, p. 85.

<sup>5</sup> Dr. Thomas Fingar, Deputy Director of National Intelligence Analysis, Testimony on the National Intelligence Assessment on the National Security Implications of Climate Change, House Permanent Select Committee on Intelligence, House Select Committee on Energy Independence and Global Warming, June 25, 2008, p. 7, <http://globalwarming.house.gov/tools/2q08materials/files/0069.pdf>.

<sup>6</sup> Wendy Barnaby, “Do nations go to war over water?” *Nature* Vol. 458 No. 7236, pp. 282-283, March 19, 2009, <http://www.nature.com/nature/journal/v458/n7236/full/458282a.html>.

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<sup>8</sup> HM Treasury, *Stern Review of the Economics of Climate Change, Final Report*, November 2006, [http://www.hm-treasury.gov.uk/stern\\_review\\_report.htm](http://www.hm-treasury.gov.uk/stern_review_report.htm).

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<sup>11</sup> Indur Goklany, “Trapped Between the Falling Sky and the Rising Seas: The Imagined Terrors of the Impacts of Climate Change,” December 13, 2009 Draft, Social Science Research Network, [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1548711](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1548711).

<sup>12</sup> Jessica Leber, “Pentagon: Riding a wave of culture change, DOD strives to trim energy demand,” *ClimateWire* 07/20/2009, <http://www.eenews.net/public/climatewire/2009/07/20/1>; See also Robert Bryce, “Gas Pains,” *The Atlantic*, May 2005, <http://www.theatlantic.com/magazine/archive/2005/05/gas-pains/3897/>.

<sup>13</sup> Peter Orszag, Director Congressional Budget Office, “Testimony on Implications of a Cap-and-Trade Program for Carbon Dioxide Emissions,” Senate Committee on Finance, April, 24, 2008, p. 2, [http://www.cbo.gov/ftpdocs/91xx/doc9134/04-24-Cap\\_Trade\\_Testimony.pdf](http://www.cbo.gov/ftpdocs/91xx/doc9134/04-24-Cap_Trade_Testimony.pdf).

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<sup>15</sup> W. Ross Morrow, Kelly Sims Gallagher, Gustavo Collantes, and Henry Lee, *Analysis of Policies to Reduce Oil Consumption and Greenhouse Gases from the Transport Sector*, Harvard Kennedy School, Belfer Center for Science and International Affairs, February 2010, <http://belfercenter.ksg.harvard.edu/files/Policies%20to%20Reduce%20Oil%20Consumption%20and%20Greenhouse%20Gas%20Emissions%20from%20Transportation.pdf>.

<sup>16</sup> “Norwegian bishop’s proposal for oil moratorium runs into some flak,” *Ecumenical News International*, February 23, 2009, <http://eni.ch/featured/article.php?id=2759>.

<sup>17</sup> Center for Biological Diversity, “Oil and Gas,” March 10, 2010, [http://www.biologicaldiversity.org/programs/public\\_lands/energy/dirty\\_energy\\_development/oil\\_and\\_gas/index.html](http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/oil_and_gas/index.html).

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<sup>22</sup> Public Citizen, press release, “Public Citizen Calls for Windfall Profits Taxes on Obscene Oil Profits, Says Funds Should Be Used for Alternative Energy Programs,” <http://www.citizen.org/publications/publicationredirect.cfm?ID=7425>.

<sup>23</sup> Natural Resources Defense Council, press release, “Energy Meltdown: Bush Administration and Oil Shale,” July 22, 2008, <http://www.nrdc.org/media/2008/080722a.asp>.

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