

World Wildlife Fund - WWF - Worldwildlife.org

Impacts of Climate Change, Resource Scarcity and Foreign Policy

Two foreign policy experts discuss the connections

Issue: Winter 2014

Author: David Rothkopf and Claire Casey

Standing before the West Point Class of 2014 this spring, President Obama pointed to climate change as the “creeping national security crisis that will help shape your time in uniform.” He spoke of refugee flows, natural disasters and resource competition, and his intention to work towards a new global emissions framework.

And with new US power plant regulations announced—as well as hints from China that it will for the first time consider binding emissions targets—there is real hope that just such a framework can be delivered at the 2015 United Nations Conference of the Parties on climate change in Paris. But what would that look like and what could it mean for national security?

Here are three things we know:



1. Holding global warming to 2°C will require a massive

policy shift

Since the mid-1990s, the climate community has considered 2 degrees Celsius (2°C or 3.6°F) of warming to be the absolute limit we can reach and still avoid catastrophic climate change. Although rooted in science, 2°C was always more of a political goal (a clear number that governments around the world could and would commit to). But as the US government works towards a global climate accord, staying within the 2°C limit looks increasingly difficult.

Nowhere is this clearer than in the most recent reports from the Intergovernmental Panel on Climate Change (IPCC). For the first time ever, the reports include a mitigation scenario, intended to provide policy makers with a view of how the worst impacts of climate change could be avoided. But if one takes a closer look at the modeling that supports that pathway, the lion's share of the emissions reductions are found in just two solutions: the widespread commercial use of Carbon Capture and Sequestration (CCS) and a mind-boggling growth in biofuels production and use.

“The Intergovernmental Panel on Climate Change [was established in 1988] to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.”

Intergovernmental Panel on Climate Change (IPCC)

However, both approaches would require unprecedented investment and global coordination in the development, commercialization and scaling of new technologies. Today, there is just over half the number of active large-scale CCS pilot projects as there were just three years ago in the US and Europe. And without major innovation and advancement, the necessary increase in biofuels production to achieve the IPCC's mitigation scenario—a whopping 865% by 2050—would require 37% of available arable land. The IPCC itself acknowledges that biofuels expansion involves serious risks. A massive shift to farm-grown fuel could trigger the conversion of forests and other carbon-storing ecosystems to farmland. Even more importantly, it could intensify competition with the food supply for already stressed land and water systems.

It's unclear if the political will exists to take the bold action required. Looking to Paris, the Obama administration needs the courage to aggressively pursue an ambitious national target for greenhouse emissions reductions embedded in an agreement that recognizes that avoiding catastrophic climate change will require a fundamental retooling of the US and global energy economy. It also means having clear eyes about what's to come, even in an optimistic scenario.

2. We're entering a period of shifting resources, scarcity and unprecedented global security challenges

Even with aggressive, coordinated global action to mitigate climate change, we are undoubtedly entering an era of political, social and economic disruption and conflict. The security community faces manifold challenges: securing our own defense infrastructure and readiness, responding to increasingly frequent and severe humanitarian crises caused by extreme weather, and—perhaps the most challenging—the destabilization associated with resource competition and mass migration.

One needs to look no further than the Arab Spring to get a sense of what's to come. While those uprisings and the fracturing of the compact between citizens and state were caused by a lack of economic opportunity and political rights, the catalyst was a dramatic rise in food prices. Droughts in Argentina, China, Russia and Ukraine, and storms in Australia, Brazil and Canada in 2010 drove up global food commodity prices, with an outsize impact on the Middle East, where more than 50% of food is imported. With the exception of Tunisia, which appears to be moving forward on a hopeful path, the outlook is bleak, with Libya in turmoil, Syria in full-scale civil war now spilling over into Iraq, and Egypt having ousted its first elected government.

Feedback

Already, the UN estimates that 40% of countries are in "water stress zones," defined as using more than 20% of their fresh water supply each year.

Linked to both our food and energy supply, water scarcity is perhaps the most complex and pressing issue. A US National Intelligence Council assessment estimates that by 2030 demand for food will be up 25%, fresh water 40% and energy 50%. Already, the UN estimates that 40% of countries are in "water stress zones," defined as using more than 20% of their fresh water supply each year. And many of these countries are already among the most vulnerable to crisis. Inadequate government responses to droughts or floods open the door for terrorist groups to provide assistance—as was seen in Somalia in 2011-2012 and Pakistan in 2010. Desertification with attendant negative impacts on rural livelihoods in northern Mali has been cited as a contributing factor to a jihadist uprising that has left Al Qaeda in the Islamic Maghreb in control of part of the country.

Sea level rise also presents a security risk—not just to our coastlines, cities and military installations, but also as a driver of mass migration. A 1.5-foot rise in sea levels, which is predicted even in an optimistic mitigation scenario, would displace 72 million people over this century. This is expected to be particularly severe in Asia, where population growth has been concentrated in low-lying coastal areas. Climate refugees—whether from sea level rise, desertification or extreme poverty associated with changing weather patterns—will require an increasing international response. And this will likely hit our own borders as well.

Studies of the impact of climate change on Central and South America predict significant impacts on regional agricultural productivity, highlighting the particularly sensitive coffee sector, which today employs 1.4 million people in Guatemala, El Salvador, Honduras and Nicaragua. This will likely create growing pressure on our southern border, which is already so inundated that President Obama described it as an "urgent humanitarian situation" and committed \$2 billion in new funding to safely care for detained immigrants.

3. We're aware of, but woefully unprepared for, what's coming

"As greenhouse gas emissions increase, sea levels are rising, average global temperatures are increasing, and severe weather patterns are accelerating... The pressures caused by climate change will influence resource competition while placing additional burdens on economies, societies, and governance institutions around the world."

2014

Quadrennial Defense Review

The defense community appreciates the very real security threats associated with the adverse impacts of climate change. The 2014 Quadrennial Defense Review identifies the effects of climate change as "threat multipliers that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence." The US Pacific Command has made disaster relief a centerpiece of its joint exercises with allies, and Admiral Samuel J. Locklear has testified before Congress on the threat posed by climate change to the region.

This makes sense. The security community has traditionally been better than others at forward planning and scenario development—at imagining the unimaginable. But the military can only respond to threats once they emerge—what is required now is to get all the tools of foreign policy working together to improve the resiliency of countries to climate change. Today, no one agency or department of the US government has the lead for international climate change and security. There is no formal mechanism for meaningful coordination across balkanized actors to identify risks, assess potential tools, and define strategic priorities.

While climate change adaptation funding has been increasing, both the US and EU are so far largely abdicating their

Feedback

global leadership on this issue: they have limited their responses primarily to disaster relief and reconstruction, to exporting regulatory frameworks, and to providing modest development assistance for renewable energy and infrastructure hardening. But the real security challenges to come require new approaches and frameworks.

Climate refugees—whether from sea level rise, desertification or extreme poverty associated with changing weather patterns—will require an international response. And this will likely hit our own borders as well.

One example would be an increased focus on promoting best practices in natural resource governance as a central part of development assistance, starting with water. This is not just an issue of resolving conflicts between countries, like the recent tension between Ethiopia and Egypt over rights to the Nile, but of resolving conflicts within countries, where effective mechanisms are needed to sustainably manage water consumption by competing sectors (energy, agriculture, industry), as well as citizens. Another new approach would be to address some of the domestic policies that increase vulnerability to climate change—for instance agricultural subsidies that negatively impact local food security in developing countries.

How to move forward? It certainly won't be through legislative channels in the near term—this spring, the US Congress passed an amendment to the National Defense Authorization Act that would prohibit any funds from being spent on responding to the threats and needs outlined in the National Climate Assessment.

The urgency of this issue calls for the creation of a new executive body charged with coordinating all the resources and tools available to reduce our strategic vulnerabilities. Climate security needs to be elevated to a top national security priority, and moved from rhetoric to action.

Claire Casey is managing director at Garten Rothkopf.

David Rothkopf is CEO of Garten Rothkopf and editor of the Foreign Policy Group/Foreign Policy magazine.

In Pursuit of Prosperity



© Edel Rodriguez

It's clear: the stresses and conflicts created by resource scarcity have far-reaching impacts for our planet and the prosperity of billions. Food, fibers and fresh water come from nature. Businesses rely on the natural materials that are, or make up, the goods they sell. Local communities depend on reliable water, crops and fish. Sustainable access to natural resources is essential to all of our lives.

But despite extraordinary efforts to conserve our natural resources, we are witnessing widespread deforestation, overfishing, accelerating losses of biodiversity, and the depletion of aquifers. We're also seeing sea level rise and more frequent and harsher weather phenomena such as droughts, floods and hurricanes. The impacts are enduring and severe.

To turn the tide, World Wildlife Fund is tackling those issues head on.

At the December, 2015 global climate talks in Paris, heads of state from around the world will focus on climate change; the year leading up to that event offers a rare window for action. March, 2015 serves as a deadline for nations to announce new commitments to cut carbon pollution at home, and to move decisively toward 100% clean energy. US leadership, in particular, is vital to encouraging other countries to act. Together with thousands of partners, WWF will call for strong action. Find out more at [about what WWF is doing to fight climate change](#).

This year, we also launched the In Pursuit of Prosperity initiative, which aspires to make environmental sustainability a central tenet of the way the US works with other nations. A diverse set of voices is beginning to set the stage for a robust discussion about the merits of strategies to tackle the problem. This magazine features the perspective of two of America's leading foreign policy experts; *In Pursuit of Prosperity* (Routledge, 2014) features many more.

Edited by WWF Senior Policy Advisor David Reed, the book examines critical challenges to US prosperity and national security, and includes chapters on the strategic balancing act facing India, water scarcity along the US-Mexico border and emerging challenges for Russia and the US in the Arctic. Authors include former ambassadors, US State Department

officials and conservationists, in addition to policy experts from institutions including the Woodrow Wilson Center and the Center for Strategic and International Studies.

Only by coming together to raise the profile and gravity of these issues will we accelerate our transition to a US foreign policy that is more responsive to rapidly changing global environmental conditions, resource scarcity, ecosystem degradation and the accompanying economic challenges.

Learn more about WWF's "In Pursuit of Prosperity" initiative.

In This Story:

In Pursuit of Prosperity
Effects of Climate Change

Explore More



[Return to the Table of Contents](#)

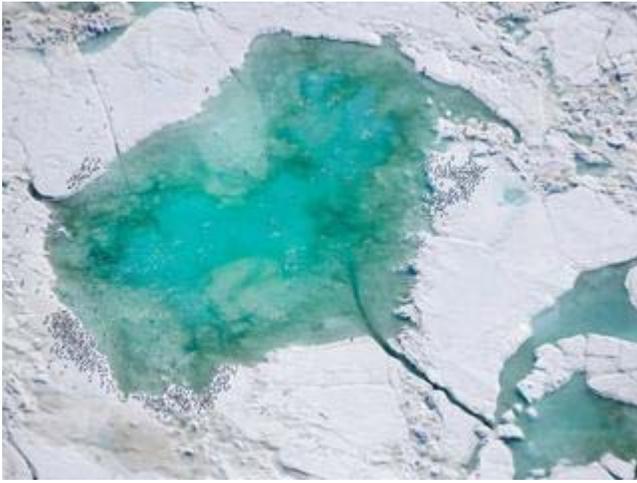
[Explore more magazine material](#)



[View the magazine archive](#)

[Discover past issues of World Wildlife](#)

[Feedback](#)



Support WWF

For \$10/month, receive World Wildlife in print

About

World Wildlife magazine provides an inspiring, in-depth look at the connections between animals, people and our planet. Published quarterly by WWF, the magazine helps make you a part of our efforts to solve some of the most pressing issues facing the natural world.

Support

appsupport@wwfus.org

Editor

editor@wwfus.org

World Wildlife Fund

1250 24th Street, N.W.
Washington, DC 20037

Feedback