



Food Security and Climate Change

New Frontiers in International Security

By Tom Daschle and Michael Werz April 12, 2016

In 2010, President Barack Obama’s National Security Strategy, or NSS—the periodic planning document that assesses the risks facing the country and outlines the United States’ response—for the first time recognized climate change as a security threat. The document noted that, “The danger from climate change is real, urgent and severe,” arguing that “[t]he change wrought by a warming planet will lead to new conflicts over refugees and resources.”¹ The framing of the threat was exceptionally strong for the carefully worded NSS document; previous strategy documents in 2006 and 2002 mentioned climate change only briefly in the context of spending on new technology and natural disasters.²

The 2010 acknowledgment of new, nontraditional threats linked to climate change marked a turning point in the security community’s thinking about these issues. Over the past six years, analysts have accelerated their study of how these changes may affect international institutional architecture and shape geopolitical power.³ However, the international community still finds itself in largely uncharted waters, which requires new analytical approaches, data and mapping tools, and academic studies. But already, this nascent field points to the need to fundamentally rethink how our foreign and security policies intersect with access to water, agricultural production, food markets, transportation networks, and development projects.

This shift in emphasis reflects a new, more fluid international security architecture—one freed from the constraints and structure of the Cold War. Today, the stability offered by a bipolar stalemate between East and West is gone, and we live in a world with few global mechanisms capable of providing order. The more delicate and multidimensional regional arrangements of today have lower thresholds for serious disruption. As a result, the crisis scenarios facing the international community have become more fractured and complex; it is no longer enough to patch together a response aimed at preserving the balance of power.

In this context, climate change, human mobility, water scarcity, and demographic dynamics can become serious local and regional challenges and create instability far beyond any one region. The United Nations has said that climate change is projected to increase displacement;⁴ the worst-case projections of climate disruption point to up to 150 million displaced people by the second half of this century.⁵ If not properly addressed, these factors could endanger basic livelihoods and exacerbate threats to political stability. Increasingly, rural disruption and natural threats to urban areas linked to climate change—such as rising seawater levels, water scarcity, unpredictable weather patterns, and the loss of agricultural land—will cause more people to relocate, and not only as refugees fleeing from conflict zones.⁶ Wider access to information could be an additional driver of these movements, especially when populations anticipate environmental changes that may undermine their livelihoods. Warmer temperatures, changing rainfall patterns, and more intense storms will create more frequent and complex crises.⁷

These circumstances have the potential to threaten the entire multilateral governance system if not taken seriously. National governments in the worst-affected areas—such as sub-Saharan Africa, the Middle East and North Africa, and South Asia—already lack the governmental capacity to respond to major disruptions; these regions risk being overwhelmed as the stress on rural livelihoods and food price shocks or disruptions take their toll. Likewise, the capacity of developed countries and international aid organizations to respond could be outpaced by concurrent crises driven by shifting environmental conditions linked to climate change. This nexus demands policy solutions that cut across levels of governance and unite traditionally distinct fields such as diplomacy, development, and security. Effective responses will require the United States and the international community to finally break from the narrower Cold War-era understanding of security.

The U.S. Department of Defense’s 2010 Quadrennial Defense Review, or QDR—a defense-specific overview of threats and capabilities—identified climate change as an “accelerant of instability or conflict.” The QDR argued that, “climate change will contribute to food and water scarcity, will increase the spread of disease, and may spur or exacerbate mass migration.”⁸ At the same time, the U.S. Department of State’s inaugural Quadrennial Diplomacy and Development Review, or QDDR—first prepared in 2010 to elevate U.S. diplomacy and development capabilities within the foreign policy planning process—recommended that the United States focus its development efforts in six areas, including climate change. The State Department and the U.S. Agency for International Development argued that climate change could “constrain our own economic well-being and may result in conflicts over resources, migrant and refugee flows, drought and famine, and catastrophic natural disasters.”⁹

The executive branch clearly has acknowledged the problem. But the effort to design policy solutions still faces uncertainty about the exact causal relationship between climate disruption, extreme weather, migratory decisions, and conflict. It is difficult to draw a direct line from a specific climate incident to a decision to migrate or the emergence of a particular conflict; short-term displacements after natural disasters are the notable exception. But the evidence is strong that climate disruptions affect livelihoods and economic well-being at the local and national levels, contribute to decisions to migrate, and strain states' capacity to respond.¹⁰ The interrelationships between these factors indicate that addressing them in isolation is no longer sufficient.

Another new frontier in our foreign and security policy planning is the challenge of providing food security—defined as reliable access to sufficient and affordable food—in a rapidly changing world. It is a challenge that is shaping the trajectory of global affairs and that may determine our ability to create a more peaceful, stable world in the decades ahead.

Much progress has been made to significantly reduce hunger levels in recent decades. Twenty years ago, the member states of the World Food Summit in Rome pledged their “common and national commitment to achieving food security for all and to an ongoing effort to eradicate hunger in all countries, with an immediate view to reducing the number of undernourished people to half their present level no later than 2015.”¹¹ The global community fell short of that goal, but the effort still yielded substantial results. Despite rapid population growth in the developing world, almost 170 million fewer people are undernourished today than a decade ago. Despite this progress, however, almost 800 million people are still suffering hunger. In 2015, the Food and Agriculture Organization of the United Nations pointed out that in recent years, “progress has been hindered by slower and less inclusive economic growth as well as political instability in some developing regions, such as Central Africa and western Asia.”¹²

Our progress combating hunger is fragile because the world is rapidly changing in profound ways. To better anticipate long-term strategies and possible solutions, in November 2015, the Center for American Progress and the World Wildlife Fund brought together policymakers, agricultural and environmental experts, and business leaders from India, Europe, China, the United States, Brazil, and Africa. At this gathering in Washington, D.C., participants—including the authors—were presented with a scenario—set in the years 2020 to 2030—in which pressure on the global food system was mounting.¹³ They were asked to represent major food-producing and food-consuming countries and to design simplified policies on climate, agriculture, and foreign and security policy in response to the crisis. As the game proceeded through the future scenario, a number of policy observations came to light that have ramifications for current policy debates.

First, as the simulated decade wore on, food security and climate change became more than a matter of humanitarian or environmental concern. Instead, they increasingly touched upon core national security interests and the stability of entire regions, particularly South Asia and sub-Saharan Africa.

Second, the food crisis scenario felt all too realistic. It was similar to the challenges the world faced in the past decade, particularly in 2011: Staple prices dramatically increased after a series of weather events around the world reduced harvests in a number of key food-producing countries.¹⁴ Yet basic awareness of the core components of food security—yields, access, market dynamics, and subsidies—and the potential policy responses were limited among traditional security and governance policymakers. Likewise, the agricultural and environmental communities were often poorly versed on the budgetary or political limitations of government responses and dismissive of security or diplomatic concerns. The simulation demonstrated how essential it is that food and climate challenges are brought into the thinking and planning processes of foreign and security policymakers.

Finally, the exercise was a reminder that we have to rethink the way our multilateral institutions, such as the United Nations and the World Bank, deal with these complex issues, as they risk being overwhelmed by the scale of the challenge. Opinion was divided over whether existing institutions could be reformed or recalibrated to address the challenge or if a new institutional architecture should be developed.¹⁵

Addressing these concerns will not be easy, but it is necessary. Last year, real-world food insecurity bore a significant resemblance to what the future exercise modeled. Erratic weather conditions, such as hotter temperatures and unpredictable rain patterns—likely a result of climate change—altered food supply chains in the United States and around the world. Food security became embroiled with traditional notions of security and geopolitics.¹⁶ Russia used agricultural markets as a punitive tool of foreign policy.¹⁷ In Yemen and South Sudan, among other places, conflict prevented effective food distribution.¹⁸ Indeed, Yemen is a particularly devastating example of conflict contributing to food insecurity. Last year, more than 40 percent of Yemen's population was classified as food insecure, half of them severely so. The United Nations estimates that “80% of [Yemen's] population is in dire need of food, water and other aid,” and that civilians' starvation is now being used as a deliberate method of warfare.¹⁹ In Syria, armed militias and the regime used starvation as a military tactic.²⁰ And in Iraq, the Islamic State sought to control grain silos and hold civilian populations ransom for their next meal.²¹ These crises illustrate how food insecurity is increasingly contributing to and being exacerbated by complex crises that combine climatic, socio-political, religious, and security stressors.

The causality around food security and climate stressors runs in both directions—food insecurity can contribute to instability and violence, just as surely as instability and violence can lead to food insecurity. In Syria, both are true. Between 2006 and 2011, more than 60 percent of Syrian territory endured the worst long-term drought in recorded history. The country’s total water resources were cut in half, with disastrous implications for rural areas. The primary northeastern wheat-growing region suffered 75 percent crop failure and 85 percent losses in livestock.²² The United Nations estimated that 800,000 Syrians lost their livelihood as a result of these droughts: 1 million Syrians were declared food insecure, and 3 million were driven into extreme poverty.²³ This profound climate and food crisis led to large-scale migration: In 2010 alone, 50,000 Syrian families moved to cities from rural areas and, in 2011, an estimated 200,000 rural Syrians left rural areas for cities. Syria’s urban centers were ill-equipped to deal with this influx, with poor infrastructure and their own endemic water shortages and high levels of unemployment.²⁴

The disaffection with the government—which was unable to respond effectively to the social and health needs of migrants—brought diverse ethnic and religious groups into close contact under trying circumstances and contributed to the protests which, following President Bashar al-Assad’s brutal repression, morphed into civil war.²⁵ Climate change and food insecurity did not by themselves cause the rebellion, but they contributed to the circumstances that gave rise to it. And similar stressors will likely drive the next major upheaval, whether in the Middle East or elsewhere.

Unless the United States invests the time needed to unravel the complexity of these dynamics, we will not be ready for the next crisis—or the many others sure to follow. But these are not just future challenges. These are trends that are already contributing to human suffering and the erosion of state structures. Without a sound academic foundation, we will continue to lose arguments calling for proactive efforts to address root causes and prevent conflicts and will instead react to crises after the fact.

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Endnotes

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- 25 For a compelling case that the consequences of climate change are stressors that can ignite a volatile mix of underlying causes of social unrest, see Werrell, Femia, and Slaughter, "The Arab Spring and Climate Change."