THE ROBERT S. STRAUSS CENTER™
FOR INTERNATIONAL SECURITY AND LAW

CLIMATE CHANGE
AND AFRICAN
POLITICAL STABILITY

Climate Change and Development

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About the Strauss Center

The Robert S. Strauss Center for International Security and Law at The University of Texas at Austin is a nonpartisan research center that engages the best minds in academia, government, and the private sector to develop unique, policy-relevant solutions to complex global challenges.

About the CCAPS Program

The Climate Change and African Political Stability (CCAPS) program conducts research in three core areas, seeking to investigate where and how climate change poses threats to stability in Africa, identify strategies to support accountable and effective governance in Africa, and evaluate the effectiveness of international aid to help African societies adapt to climate change. The CCAPS program is a collaborative research program among the University of Texas at Austin, the College of William and Mary, Trinity College Dublin, the University of Denver, and the University of North Texas.

The CCAPS program is funded by the U.S. Department of Defense's Minerva Initiative, a university-based, social science research program focused on areas of strategic importance to national security policy. Through quantitative analysis, GIS mapping, case studies, and field interviews, the program seeks to produce research that provides practical guidance for policy makers and enriches the body of scholarly literature in this field. The CCAPS team seeks to engage Africa policy communities in the United States, Africa, and elsewhere as a critical part of its research.

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Background

What do we know about climate change and its impact on development in poor countries?

The most recent report of the International Panel on Climate Change identifies several common threats that climate change poses to developing countries.[1] According to expert communities of scientists and development practitioners, climate change is contributing to more frequent and intense weather events, including floods, droughts, heat waves, landslides, forest and brush fires, cyclones, and dust storms. In more agrarian societies, steadily rising temperatures and significant changes in rainfall patterns due to El Niño and La Niña effects are causing shifts in the onset and duration of rainy seasons, thus increasing the probability and intensity of droughts and floods. This creates serious risks for sustainable livelihoods and socioeconomic growth, particularly in lesser developed countries where the majority of agricultural or livestock production is undertaken by smallholder farmers and nomadic herders. In turn, floods and droughts incite or exacerbate food insecurity[2] and the spread of infectious diseases such as cholera and dengue fever. Warming temperatures in higher altitudes can lead to malaria outbreaks in areas once unaffected. Rising sea levels threaten densely populated coastal areas, which are increasingly vulnerable to climate-related disasters. In some instances, rising sea levels pose an existential threat to small island states.

Poor and marginalized communities are especially vulnerable to the effects of climate change. They are more likely to live in places more susceptible to the risks of climate-related hazards, such as low-lying coastal areas and informal settlements. Lack of secure assets, property rights, and social and financial protection, including insurance, can mean the poor, especially women, often experience greater vulnerability in the face of climate change-related disasters. For example, in Sub-Saharan Africa, women are the primary agricultural producers and account for nearly 80 percent of the household food production and nearly all child and elderly care.[3] Yet women often lack property rights and access to credit and other services, making them particularly vulnerable to both acute (sudden-onset or temporary) food insecurity and slow-onset, climate-related issues such as malnutrition and exposure of household members to climate-related malnutrition and diseases.

Poverty, development, and climate change are thus intimately linked. In the international development community, there is a concerted effort to identify and address the threats that climate change poses to sustainable socio-economic development through increased research, analysis, and direct interventions to address climate-related hazards. This is often referred to as climate-resilient development. Such development work encompasses a wide range of activities, including aid explicitly oriented around adaptation or mitigation work. Examples include reforestation, developing meteorological capacity and early warning systems, and climate-proofing water, agricultural, and transportation systems.

Adaptation: "Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory, autonomous and planned adaptation."[4]

Mitigation: "An anthropogenic intervention to reduce the anthropogenic forcing of the climate system; it includes strategies to reduce greenhouse gas sources and emissions and enhancing greenhouse gas sinks."[5]

Vulnerability: "[T]he degree to which a system is susceptible to, or unable to cope with, the adverse effects of climate change including climate variability. Vulnerability is a function of the character, magnitude and rate of climate variation to which a system is exposed, its sensitivity and its adaptive capacity."[6]

Climate and Disaster Resilient Development: "A set of institutional arrangements, processes and instruments that help identify the risks from disasters, climate extremes, graduate and long-term climatic changes, and their associated impacts, and the design of measures to reduce, transfer and prepare for such risks. Climate and disaster resilient development combines development benefits with reduction in vulnerability over the short and longer term, using a development planning, multi-sectoral and multi-stakeholder approach."[7]

[1] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fifth Assessment of the Intergovernmental Panel on Climate Change*, eds. C.B. Field et al. (Cambridge: Cambridge University Press, 2013).

[2] A. Jalloh et al., eds., *West African Agriculture and Climate Change: A Comprehensive Analysis* (Washington: International Food Policy Research Institute, 2013).

[3] L. Schalatek and S. Nakhooda, *Gender and Climate Finance,* Climate Finance Fundamentals No. 10 (Washington: Overseas Development Institute and the Heinrich Böll Stiftung Foundation, 2013).

[4] IPCC, *Glossary of Terms Used in the IPCC Fourth Assessment Report: WG II* (Cambridge: Cambridge University Press, 2007).

[5] Ibid.

[6] Ibid.

[7] World Bank, *Building Resilience: Integrating Climate and Disaster Risk into Development - the World Bank Group Experience* (Washington: World Bank, 2013), 3.

Why is Africa the continent most vulnerable to climate change in the world today?

Sub-Saharan Africa is the region with the lowest carbon dioxide emissions in the world (0.8 metric tons per capita), yet is also the region most vulnerable to climate change.[8] Beyond weather-related exposure and other ecological factors, Sub-Saharan Africa's extreme poverty drives this climate change vulnerability. According to the 2013 World Development Indicators, the gross national income (GNI) per capita averages around $1,600 across the entire region, with large populations in many countries falling well below the absolute poverty line of $1.25 per day. This extreme poverty is exacerbated by weaknesses in governance and social safety net systems, as well as widespread conflict, which altogether undermine the ability of communities to cope with climate-related shocks and related cycles of chronic and acute food insecurity.

Ecologically, over 40 percent of the African continent is classified as drylands, with increased desertification particularly around the Sahel. These areas are prone to water scarcity, unpredictable rainfall patterns, and persistent occurrences of drought that undermine agricultural productivity, even as demographic trends point to a booming population, particularly in urban areas. In North Africa and the neighboring Middle East, the IPCC (2007) predicts that climate change will reduce rainfall by up to 30 percent by 2050, resulting in severe water scarcity and increased dependency on food imports in the wake of rapid population growth.[9] Climate change is in turn a risk multiplier in ways that directly affect the security and stability of African countries. Climate-related events, such as large-scale floods, landslides, and droughts, are often cited as contributors to conflicts over arable land and scarce resources, such as water and livestock. Though a causal link between resource scarcity and conflict has not been proven, there is growing evidence that conflict is more prevalent in the conditions that produce resource scarcity, namely those with extremely low and high levels of precipitation (drought and flood).[10] Africa has also witnessed considerable forced migration as a result of climate-related events, exacerbating already dire crises of internal displacement and cross-border refugee flows. These crises, in turn, could easily devolve into complex emergencies within and on the borders of fragile states, sparking wider regional insecurity.

Why is aid for adaptation and mitigation important for addressing climate change vulnerability in Africa?

Many of the poorest countries in the world are highly dependent on international development aid and lack access to sufficient private sector capital to meet investment needs in mitigation and adaptation. For example, in 2012 in Liberia, well before the Ebola outbreak in 2014, aid represented 36.1 percent of gross national income. With a GNI per capita barely over $400 and a poverty headcount at nearly 64 percent of the population,[11] addressing climate change through extensive adaptation and mitigation programs remains well beyond the reach of the Liberian government.

There have been several attempts to estimate the economic costs of climate change adaptation in Africa. In 2009, African Development Bank President Donald Kaberuka argued that the world's advanced industrialized countries should commit $40 billion per year in new money to help Africa address the consequences of global warming, an amount equivalent to the estimated three percent loss of gross domestic product (GDP) each year due to climate change.[12] The UNFCCC in 2010 reaffirmed that by 2030 the costs of climate change across Africa could be the equivalent of 1.5 to 3 percent of GDP each year.[13] Current estimates of adaptation costs alone in Africa range from the $40 billion annually by 2020[14] to $86 billion per year by 2015.[15] Globally the World Bank predicts that climate change financing to developing countries will require anywhere between $37 to 50 billion per year up to 2030. One World Bank report estimates that this could rise to $75 to 100 billion per year by 2050.[16]

[8] IPCC, 2013.

[9] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Synthesis Report: Contribution of Working Group I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, ed. R.K. Pachauri and A. Reisinger (Geneva, Switzerland: IPCC, 2007).

[10] Clionadh Raleigh and Dominic Kniveton, "Come Rain or Shine: An Analysis of Conflict and Variability in East Africa," *Journal of Peace Research* 49, 1 (2012): 51-64; and Cullen S. Hendrix and Idean Salehyan, "Climate change, rainfall, and social conflict in Africa," *Journal of Peace Research* 49, 1 (2012): 35-50.

[11] The World Bank, *World Development Indicators*, 2013.

[12] African Development Bank, "COP15-Climate Change Conference: An Opportunity for Africa," 2009, www.afdb.org/en/news-and-events/article/cop15-climate-change-conference-an-opportunity-for-africa-6671.

[13] UNFCCC, *Synthesis Report on Efforts Undertaken to Assess the Costs and Benefits of Adaptation Options, and Views on Lessons Learned, Good Practices, Gaps and Needs*, 2010.

[14] World Bank, *The Costs to Developing Countries of Adapting to Climate Change: New Methods and Estimates. The Global Report of the Economics of Adaptation to Climate Change Study* (Washington: World Bank, 2009).

[15] United Nations Development Program, *Mapping Climate Change: Vulnerability and Impact Scenarios: A Guidebook for Sub-National Planners* (New York: UNDP, 2010).

[16] World Bank, *The Costs to Developing Countries of Adapting to Climate Change: New Methods and Estimates. The Global Report of the Economics of Adaptation to Climate Change Study* (Washington: World Bank, 2009).

Critically, the 2009 Copenhagen Accords assert that climate finance must be "new and additional" to current levels of official development assistance (ODA). ODA in 2013 totaled $135 billion, according to the Organisation for Economic Co-operation and Development,[17] of which approximately $40 billion went to Africa. Despite differences in cost estimates, there is one clear point of consensus: current international development aid flows are insufficient to meet both the traditional needs of poverty alleviation and the emerging needs driven by climate change.

Despite these high costs of addressing climate change, many African countries have started to pay serious attention to climate change issues, as evident in the growth of National Adaptation Plans of Actions (NAPAs) and Nationally Appropriate Mitigation Actions (NAMAs). These national planning instruments identify sectors and regions within countries that are at highest risk to climate change threats and recommend courses of action to reduce these threats and build resilience. Yet domestic institutional capacity and resources for climate change work are few and far between, leaving least developed countries especially dependent on international sources of climate finance. International funds to date have been more focused on mitigation projects, and financing tends to be absorbed primarily by middle income or emerging markets economies. Least developed countries' ability to access new climate funds continues to be hindered by the complexity of rules and regulations in international climate finance mechanisms.

What are some of the primary sources of funds for climate change adaptation and mitigation programs?

To date, there are several global, multilateral, bilateral, and country trust funds that have been established to provide finance for climate change mitigation and adaptation programs in developing countries. These funds are tracked by the Climate Funds Update,[18] administered by the Overseas Development Institute and the Heinrich Böll Stiftung Foundation. Some examples of sources of climate change funds include:

UN-REDD / REDD+: Established in 2008, this global fund targets reductions in emissions from deforestation and degradation. It is administered through the United Nations Development Program, United Nations Environment Program, and the UN's Food and Agriculture Organization.

Climate Investment Funds (CIFs): Established in 2008, the CIFs are administered by the World Bank in partnership with other multilateral development banks. The CIFs include the Clean Technology Fund, Strategic Climate Fund, Pilot Program for Climate Resilience, the Forest Investment Program, and the Scaling-Up Renewable Energy Program for Low Income Countries.

Forest Carbon Partnership Facility: Established by the World Bank, this fund leverages carbon-market revenues to sponsor projects to reduce deforestation and degradation. Similar funds include the AFDB-administered Congo Basin Forest Fund; the Amazon Fund administered by Brazilian National Development Bank and funded by Norway; and the Forest Investment Program.

Global Environmental Facility (GEF): Established in 1991, the GEF is the financial mechanism for several international conventions related to climate change impacts, providing funds and technical assistance for biodiversity, desertification, transboundary water management, and renewable energy projects, among others. Since 1991, the GEF has provided $13.5 billion in grants and $65 billion in co-financing for projects in developing countries. The GEF administers the Least Developed Countries Fund and the Special Climate Change Fund.

Green Climate Fund (GCF): First proposed in 2009 in Copenhagen at COP 15, GCF is intended to be a central operating entity for the financial mechanism of the UNFCCC and designed to ensure that the goal of $100 billion per year in international climate finance is met, although the GCF to date lacks pledged funds and commitment from the private sector to meet its financial targets.

Adaptation Fund: Derived from a 2-percent levy on the sale of emission credits from the Clean Development Mechanism, this Kyoto Protocol Fund supports adaptation projects that meet the needs of the most vulnerable. Overall financing, however, is very small. In the past three years, the Adaptation Fund has dedicated only $232 million to projects in 40 developing countries.

[17] Organisation for Economic Co-operation and Development (OECD), *Integrating Climate Change Adaptation into Development Cooperation: Policy Guidance* (Paris: OECD, 2009).
[18] See www.climatefundsupdate.org.

How do we identify and track which activities within development aid programs help countries mitigate or adapt to climate change? Is the international community providing sufficient finance to help African countries invest in adaptation and mitigation?

The international community has sought to track the amounts of development aid contributing to climate change mitigation and adaptation through fairly simplistic reporting guidelines included in the OECD's Creditor Reporting System. Data on climate aid comes primarily via two reporting mechanisms: The Rio Convention's *Mitigation Marker* that tracks mitigation finance and *Adaptation Marker* that tracks adaptation finance.

Both the Mitigation and Adaptation markers belie the complexity of discerning what development activities directly or indirectly facilitate mitigation and adaptation. In particular, tracking development aid for climate change *adaptation* is an inherently tricky task. On the one hand, development programs may explicitly target adaptation as a prime objective of interventions. For example, programs will seek to integrate components that "climate proof" existing development activities by adding in precise activities that address the threat of climate change – such as including climate change risk analysis – and specific safeguard measures to make new infrastructure projects—such as road construction—more resilient to climate-related weather events. Likewise, development programs may be designed to be "climate smart" by including educational or capacity-building elements to traditional interventions that directly address issues related to climate change.

The vast majority of aid programs also include activities that may not be explicitly motivated by climate change concerns or actively use the language of climate change to frame a development problem or solution. These development programs nonetheless engage in tasks that have a direct or indirect impact on reducing societies' vulnerability and increasing their resilience to climate change. In these cases, the adaptation activity is implicit or "mainstreamed" into the development program. New tracking standards developed by the multilateral development banks include means of measuring these less visible co-benefits, even when adaptation is not an explicit goal of a development intervention.

Taking into account these mainstreamed activities, estimates of the adaptation co-benefits derived via traditional development programs indicate that climate aid is a growth sector in development work. Nonetheless, methods of robustly reporting and monitoring climate finance remain nascent, despite strong international commitments to new and additional financing for adaptation. This leaves serious gaps in our knowledge about how much climate aid actually exists and how much is reaching developing countries that remain highly vulnerable to the myriad threats of climate change.

How does climate change fit into the U.S. global development agenda?

Climate change has become a prominent element of the U.S. global development agenda since the 2009 UNFCCC Conference of the Parties in Copenhagen. The agenda was developed in President Obama's Global Development and Climate Change Policy, the Quadrennial Diplomacy and Development Review, and USAID Forward.[19]

The U.S. Agency for International Development (USAID), the leading U.S. development aid agency, adopted a Climate Change Strategy in 2012. The strategy paper identified climate change as one of the seven Core Development Objectives for the agency. USAID targets three specific areas of aid investments in clean energy and sustainable land and resources management, enhancement of people's resilience and livelihoods, and the mainstreaming of climate change adaptation and mitigation issues throughout USAID's other development programs, policies and operations. The climate change strategy also has strong resonance for USAID's Feed the Future initiative.

Similar agendas have been integrated into other U.S. agencies that provide official development assistance, including the Millennium Challenge Corporation and the U.S. Department of State. The numerous U.S. federal agencies that provide climate change assistance largely coordinate their strategies through the White House Council on Environmental Quality.

How do development, defense, and diplomatic communities describe the development implications of climate change?

"What countries do today to prepare for climate change – and the degree to which the poorest countries are supported – will, to a large extent, determine how many people go hungry over the next two decades. And how far and fast countries cut their emissions will determine whether our food systems can continue to support us in the second half of the century."

~ Oxfam[20]

[19] U.S. White House, *President Obama's Development Policy and The Global Climate Change Initiative* (Washington: U.S. White House, 2010); U.S. Department of State, *The Quadrennial Diplomacy and Development Review: Leading Through Civilian Power* (Washington: U.S. State Department, 2010); United States Agency for International Development, *USAID Forward* (Washington: USAID, 2010).

[20] Oxfam, "Hot and Hungry – How to Stop Climate Change Derailing the Fight Against Hunger," Oxfam Media Briefing, March 25, 2014, www.unep.org/pdf/UNEP_Sahel_EN.pdf.

"Competition between communities and countries for scarce resources – especially water – is increasing, exacerbating old security dilemmas and creating new ones – . Environmental refugees are reshaping the human geography of the planet, a trend that will only increase as deserts advance, forests are felled, and sea levels rise."

~ Ban-Ki Moon, Secretary General of the United Nations[21]

"Fighting climate change can't be the frosting on the cake of development, it needs to be baked into the recipe."

~ Robert Zoellick, former U.S Trade Representative and former President of the World Bank Group[22]

"Climate change will have the greatest impact on the poorest and most marginalized populations, who commonly live in the highest-risk areas (for example, 72% of the African urban population live in informal settlements). They are also the ones with the least ability to recover from recurrent, low-intensity events, which can have crippling and cumulative effects on livelihoods. The impacts of climate change on poverty are expected to be regressive and differential, affecting most significantly the urban poor (new food consumers) and highly vulnerable countries in sub-Saharan Africa and South Asia…. Many of these countries are also those with the least capacity to prepare for, and absorb, the effects of climate events."

~ The World Bank[23]

"Preventing new conflicts also requires coordination to confront the causes of conflict, including food insecurity and famine and, obviously, poverty. Africa has 60 percent of the world's arable land. Just think about that. That is a tremendous opportunity for the future, not just to feed Africa's people, but to feed the world. The United States wants to help Africa seize this opportunity by making investments in agribusiness and in crops with greater yields and greater resistance to extreme weather – . But it is no exaggeration to say that the greatest risk to African agriculture, and even to our way of life, not just in Africa but on this planet, comes from the potential ravages of climate change."

~ U.S. Secretary of State John Kerry[24]

"A recent example of – a nonstate actor enabled by the impacts of climate change is Al Qaeda in the Islamic Maghreb (AQIM) in Mali. The crises in and around the landlocked West African nation in 2012-2014 were shaped by an intersection of three salient trends: desertification and food insecurity exacerbated by climate change; an ongoing rebellion by Tuareg nomadic herdsmen in northern Mali; and weak government institutions that could not address the marginalization of the Tuareg and their increasing clashed with sedentary agriculturalists tribes in the southern and center areas of the country – . While climate change alone did not cause the conflict, it certainly added environmental stressors to the once-coexistent relationship between the Arab Tuareg and non-Arab Muslim ethnic groups in central and southern Mali. In fact, the recent Malian conflict fits a pattern of other such conflicts in Africa's Sahel region, including Darfur, South Sudan, Niger and Nigeria. Climate Change—particularly drought and desertification—have impacted the region for hundreds of years; yet the region's environmental stressors have now become a threat multiplier across sub-Saharan Africa, and have contributed to conflict dynamics in countries that have never enjoyed popular internal sovereignty in the postcolonial era or robust institutions to settle conflicts over vital resources. Add to this the involvement of transnational terrorist groups and militias such as AQIM and the Janjaweed (in Mali and Darfur, respectively) and these conflicts become more complex, transforming resource competition into ethnopolitical conflict."

~ CNA Military Advisory Board[25]

"The pressures caused by climate change will influence resource competition while placing additional burdens on economies, societies, and governance institutions around the world. These effects are 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."

~ U.S. Department of Defense Quadrennial Defense Review[26]

[21] Secretary-General Ban Ki-moon, "Remarks to the Security Council on the Impact of Climate Change on International Peace and Security," UN Headquarters, July 20, 2011.
[22] "Development Agenda Must Include the Fight Against Climate Change," European Parliament, November 20, 2007.
[23] World Bank, *Building Resilience: Integrating Climate and Disaster Risk into Development - the World Bank Group Experience* (Washington: World Bank, 2013), viii.
[24] U.S. Secretary of State John Kerry, "Commitment to Africa," Addis Ababa, Ethiopia, May 3, 2014.
[25] CNA Military Advisory Board, *National Security and the Accelerating Risks of Climate Change* (Alexandria: CNA Corporation, 2014),13.
[26] U.S. Department of Defense, *Quadrennial Defense Review 2014*, 8.

Discussion

Climate change poses a dramatic challenge to sustainable socioeconomic development and poverty alleviation. Yet precise cause-and-effect mechanisms are still poorly understood. Moreover, challenges remain in assessing how effective mitigation and adaptation activities are in reducing vulnerability and building resilience. For example, it is exceedingly difficult to discern direct causal impact of individual mitigation programs on overall national or global carbon emissions. It is even more difficult to distinguish the causal impacts of adaptation programs—whose benefits are unlikely to be seen for decades or generations on societies long-term ability to cope with a changing climate.

International commitments to providing the finance for climate change mitigation and adaptation needs in developing countries have been thus far generous. Fulfilling promises with actual funding, however, has proven more elusive. The momentum behind climate change aid is constantly threatened by numerous factors, including the inability to persuasively demonstrate the benefits of such aid, waning degrees of support for development in the wake of donor country financial crises, and skepticism over the very existence of climate change and the threats it poses to development.

Several issues shape the global conversation on climate change and development and the future of climate aid. Here are a few examples:

First, few means exist for ensuring compliance with international commitments to new and additional financing for climate change adaptation and mitigation.

Efforts to achieve consensus on how to track climate finance, with robust reporting mechanisms, have developed slowly and have not been uniformly adopted by multilateral and bilateral aid agencies. Monitoring of climate finance remains hindered by lack of clear and comparable data. As a result, it is nearly impossible to accurately estimate how well individual countries, and the international community as a whole, have fulfilled their promises made in Copenhagen in 2009. Accountability mechanisms at the global level thus remain weak.

Second, there are few rigorous methods or systems in place to evaluate climate change aid to justify these expenditures.

The global development aid industry is governed by a results-based management framework that demands evidence of aid being effective in reducing poverty and supporting economic growth and human development. Yet evaluating climate aid has proven very difficult. The absence of strong monitoring and evaluation frameworks creates challenges for scientifically discerning what works and does not work in climate aid programs. More critically, the lack of robust results also weakens the accountability of development aid agencies to both donor country parliaments and taxpayers, as well as recipients of climate programs on the ground in developing countries.

Third, how will political support for climate aid be sustained in the future?

In an era of economic austerity and increasing skepticism regarding aid effectiveness, it is not clear how long the momentum for climate aid will last. The dearth of impact evaluation results will inevitably undermine political support for climate finance, despite lofty commitments made during various international climate change negotiations. International financial commitments are in danger of remaining rhetorical without viable means of enforcing commitments through transparent reporting and monitoring mechanisms. Development work in general is prone to fall victim to passing fads and fashions; if climate change work is not fully mainstreamed into the operations, policies and, evaluation practices of aid agencies, it may quickly become “last year’s” development priority.

Early Icebreaker Activity

Ask students to answer the following questions on a piece of paper at the beginning of the session before any presentations. Collect and tally the answers to get a sense of participants basic awareness and opinions on climate change and development aid prior to initiating the discussion.

(1) In general, do you think international development aid is effective?

(2) Do you believe that development aid is the best channel for delivering resources for climate change adaptation and mitigation to developing countries?

(3) How might development aid be effectively mobilized to address the threat multiplier effects of climate change, in particular migration and potential conflicts over scarce resources that could threaten regional political stability?

(4) In your opinion, how important is it that developed countries fulfill their pledge of $100 billion per year in “new and additional financing” for climate change mitigation and adaptation in developing countries?

Later Exploration Questions

These questions are intended to jumpstart critical thinking about where we get information on climate change aid and how we use that information to determine whether climate change risks in developing countries are effectively addressed via development assistance.

(1) Should the U.S. defense community support or participate in efforts to help developing countries adapt to climate change?

(2) What are the extant risks of getting the U.S. defense community involved in adaptation assistance, for example building capacity to respond to climate-change induced natural disasters and complex emergencies?

(3) What are the potential opportunities or challenges inherent to the U.S. Department of Defense working closely with the U.S. and multilateral development aid and humanitarian assistance community in promoting and financing climate change adaptation?

Scenario

The U.S. Geological Survey predicts a spike in the intensity and frequency of floods in the next year in the volatile Goma region of the Democratic Republic of Congo due to El Nino effects in the Indian Ocean. The International Food Policy Research Institute in turn warns that high flood risks will significantly exacerbate underlying food insecurity in the region, where malnutrition levels and infant mortality rates are already at critical levels. Political experts are concerned that the food security crisis will lead to an escalation in the refugee and internally displaced persons (IDP) crisis with possible spillover onto the already tense relationship with Uganda and Rwanda. Anxieties over the potentially high demand on humanitarian relief groups is compounded by recent challenges in accessing areas within Goma due to ongoing fighting as well as persistent concerns over the safety of humanitarian and emergency relief aid workers. The African Union (AU) has contacted the U.S. Africa Command with a request for a civilian-military joint planning exercise between key local and international humanitarian groups, the AU, and U.S. military.

First Order Questions:

(1) Should the U.S. be concerned about the purported threats of climate change to the socioeconomic and political stability of the Great Lakes region of Africa?

(2) How can the U.S. identify what resources are already being mobilized, via international or national channels, to address these purported threats?

(3) What should the U.S. do, if anything, to address the underlying climate change threats through its various foreign assistance channels, both bilateral and multilateral?

Second Order Questions:

(4) How should the U.S. military approach this proposed joint planning exercise?

(5) What is the optimal role for the U.S. Africa Command in this planned response, vis-□-vis the AU, U.S. relief aid agencies, and other local and international actors?

(6) Under what conditions should the U.S. military become involved in a joint or unilateral mission to assist any humanitarian relief efforts in Goma, if the food insecurity or IDP crisis were to further threaten the already tenuous Great Lakes regional political stability?

Resources

Scientific Resources

Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014: Impacts, Adaptation and Vulnerability: Contribution of Working Group II to the Fifth Assessment of the Intergovernmental Panel on Climate Change*, eds. C.B. Field et al. (Cambridge: Cambridge University Press, 2013).

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