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NEW CHALLENGES TO HUMAN SECURITY:

Environmental Change and Human Mobility

Institute for the Study of Diplomacy
Working Group Report, April 2017

Institute for the Study of Diplomacy

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The Institute for the Study of Diplomacy is an integral part of the Edmund A. Walsh School of Foreign Service at Georgetown University. Founded in 1978, the Institute brings together diplomats, other practitioners, scholars and students from across and beyond the university to explore global challenges and the evolving demands of diplomatic statecraft, to better understand the nexus of theory and practice, and to enhance and expand an appreciation of the role of diplomacy as a critical element in national policy formulation and implementation. More information about the Institute and the ISD Diplomacy Case Studies Library is available at https://isd.georgetown.edu/.

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With generous support from the Carnegie Corporation of New York's "Bridging the Gap" initiative, in October 2016 the Institute for the Study of Diplomacy launched a two-year working group series entitled "The New Global Commons: Emerging Global Diplomatic Challenges." Bringing together senior practitioners, policymakers, and leading academics, the series harnesses the experience and collective knowledge of this broad range of experts to discuss and find workable policy solutions and guiding principles to some of the world's most pressing issues through the end of the decade and beyond. Over the course of two meetings in the fall of 2016, the series' first working group looked at the little-understood issue of environmental change and migration.

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Dear Colleagues,

Climate change and shifting weather patterns are not the Tinker Bells of science or of policy. Disbelief, or denial, or a suspension of research will not make melting icecaps, rising sea levels, desertification, and floods go away. There may be legitimate debate on the pace of these changes, or whether there is a meaningful difference between the degrees of global warming that will result in inconvenient, catastrophic, or apocalyptic scenarios. But the empirical data is there. There is change and it affects human security—whether food can be grown, if water is available, and which lands are likely to become uninhabitable. And these needs, along with other drivers, will influence where humans live—and whether they must abandon their homes. As people are forced to migrate simply to survive, we face the possibility of major shifts in human settlement patterns, along with increased competition for resources.

We leave the science of climate change and shifting weather patterns to the scientists. The focus of this working group is the range of global policy challenges that lie ahead for the international community. Individually or collectively, countries will have to manage and mitigate the impact of environmental changes on human mobility—and on security and stability. With slow-onset migration likely to become more commonplace, the challenges go well beyond the concept of humanitarian aid, or short-term disaster relief. As the US military and intelligence community, as well as global studies like the Nansen Initiative and Foresight Project recognize, environmental migration has the potential to emerge as a fundamental security issue of the 21st century.

Our goal was to define more precisely the policy challenges behind the science, and to develop a series of guiding principles for policymakers and identify areas of further research on environmental change as a driver of migration. The ISD working group, composed of experts from academia, think tanks, and the non-governmental sector, along with senior policy practitioners, looked at resource shortages, extreme weather events, rising sea levels, and other factors that influence human livelihoods and push families to relocate. Some of the key findings include a need to look at resiliency measures that may help communities at risk stay in place, as well as efforts to help those who do migrate find ways to integrate, economically and socially, into new host communities. Regional agreements, for instance, may be needed to manage transborder migrant flows and guide migrants to places that can sustain the inflow of people. Increasingly, governments also may need to consider "planned relocations" of vulnerable communities.

This working group is part of the ISD's "New Global Commons," a two-year series of working groups funded by the Carnegie Corporation of New York to examine a number of emerging policy challenges. We hope you find the results thought provoking, and welcome your comments.

Barbara K. Bodine

Director, Institute for the Study of Diplomacy

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SUMMARY BRIEF

New Challenges to Human Security: Environmental Change and Human Mobility

INSTITUTE FOR THE STUDY OF DIPLOMACY

Environmental changes shape internal and external patterns of human movement around the globe—both sudden, large-scale displacement and the more difficult to track slow-onset migration. These changes in many cases put human security at risk. Increasingly, climate change and man-made environmental shifts have profound implications for global patterns of mobility and resettlement. To explore how climate change drives migration, and discuss how global patterns of mobility and resettlement are likely to affect stability and security around the world, in the fall of 2016 the Institute for the Study of Diplomacy convened a working group on "New Challenges to Human Security: Environmental Change and Human Mobility." Experts in climate change, migration, and security policy joined a number of senior policymakers to explore the nexus between climate change and human security, focusing on environment-linked migration and its implications for policy.

The ISD working group produced a set of **Guiding Principles** for policymakers, non-governmental organizations, and international institutions to incorporate into their near-term planning:

- **Define "environmental migrants"** – Universally accepted definitions of people who leave their homes for environmental reasons, distinct from other forms of migrants and refugees, are important for a host of legal, economic, and security reasons.
- **Collect more data** – Which groups and societies are hit the hardest, and which resiliency interventions are the most effective? More research is also needed on where people are heading—or where we think they will go.
- **Consider the advantages of "planned relocation"** – Planned relocation will likely become more necessary—and more common, as environmental changes make it impossible for people to remain in some locations. The high costs and complexity of moving entire communities proactively, however, warrant further study and planning.

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- **Make development assistance more adaptive** – National governments, NGOs, and international organizations can work together to become more flexible in designing projects that assist communities that are most threatened by climate change.
- **Create regional agreements** – Environmental migrants are likely to traverse multiple international boundaries, with potential legal and security ramifications. Regional agreements may be needed to allow for more fluid and workable migration, particularly in the event of large-scale displacement.
- **Develop regional "safety valves"** – There may be a need to plan collectively for one nation or nations to serve as a safe haven for environmental migrants within a region, and create workable incentives for these safety valve nations.
- **Manage resources and infrastructure needs effectively** – Some communities at risk may be able to stay in place, if local infrastructure and resource management can be strengthened. Communities receiving environmental migrants may also face compounded challenges to existing resources and infrastructure.
- **Steer people where their needs can best be met** – With most environmental migrants heading to urban areas along the coast, the working group recommends the identification of regions and cities to serve as suitable landing spots for environmental migrants—and creating "pull" mechanisms that steer environmental migrants to these cities/regions.
- **Focus on migrants' needs in the receiving communities** – Most environmental migrants head to nearby urban areas, which may also face similar environmental challenges. And there may be significant ethnic or cultural challenges due to large numbers of incoming environmental migrants.
- **Prioritize the creation of jobs within receiving cities** – There is an ongoing urban population explosion, particularly within coastal areas that are already highly vulnerable to climate change and environmental stresses. But this "urbanization without growth" too often does not include new jobs or economic growth—offering environmental migrants few work opportunities.

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Environmental changes, resulting from climate change and man-made environmental shifts as well as long-term, natural changes, increasingly affect global patterns of mobility and settlement. These changes, both profound and subtle, in many cases put human security at risk.

During the fall of 2016, the Institute for the Study of Diplomacy's (ISD) New Global Commons working group explored the nexus between climate change and human security, focusing on human mobility and its implications for policy.

The 30 participants for the "New Challenges to Human Security: Environmental Change and Human Mobility" discussions represented a broad range of climate change and migration experts and senior policymakers. This report distills these discussions, which framed the key issues and most pressing security problems—and provides a set of "guiding principles" for policymakers, non-governmental organizations (NGOs), and international institutions to incorporate into their near-term planning.

INTRODUCTION

Environmental changes over the short and long term will influence how people live and work around the world. Temporary evacuations resulting from floods or storms—in the United States and around the globe—are frequent news stories, for instance. Increasingly, however, climate change and man-made environmental shifts have profound implications for global patterns of mobility and resettlement.

Designated a US national security issue for a decade or more,[1] climate change is more than swamped islands and weird weather. Environmental changes shape internal and external patterns of human movement around the globe—both sudden, large-scale displacement and the more difficult to track slow-onset migration—through their influence on a broad range of economic, social, and political drivers.[2] Diving far deeper than well-trodden debates on climate change science and the consequences of these global changes, this working group addressed the human side of climate change, specifically investigating slow-onset migration—when families and communities can no longer support themselves because of local environmental changes. The key questions are not so much the "what" of climate change and its impact, but rather what new policy tools do states and organizations, individually and collectively, need to guide the most constructive forms of mobility and migration due to environmental changes and their follow-on effects?

THE ISD NEW GLOBAL COMMONS WORKING GROUP

ISD's working group discussed the challenges the international community and, specifically, the United States face regarding environmental change and displacement/migration. The working group highlighted the underlying difficulties in resolving these problems, offered relevant policy options, and ultimately agreed upon a number of **guiding principles** (see p. 19) for policymakers, NGOs, international institutions, and the academic community to implement.

The goal of these discussions was to identify the key human security implications of human mobility in the face of environmental change, but also to move beyond piecemeal or issue-specific recommendations, in favor of a more comprehensive set of guidelines for policymakers as they plan for a broad set of problems associated with climate change-induced migration. There is an urgent need for more effective planning—

which became even more apparent over the course of discussions—to help environmental migrants manage and adapt to long-term internal and external resettlement. This planning should also include structured anticipatory migration, or "planned migration"—when governments proactively relocate people whose homes and livelihoods are threatened by environmental changes.

The discussions focused on two primary areas: 1) the opportunities to build resilience within communities most likely to be affected; and 2) the longer-term, adaptive policies geared toward slow-onset migration and urbanization. Both are significant undertakings, but with the appropriate policies in place, policymakers have the potential to mitigate the harshest challenges of environmental changes, and guide human migration events along a more rational basis.

DEFINING THE CHALLENGES

Environmental and climatic changes, including more intense storms, rising sea levels, record-breaking temperatures, increased droughts exacerbated by over-consumption of water, and myriad other climate-related changes, are likely to affect growing numbers of people around the world. There are a number of specific climate-related challenges that may drive human migration.

Jon Barnett and W. Neil Adger, climate change scholars, summarize the critical problem:

Climate change increasingly undermines human security in the present day, and will increasingly do so in the future, by reducing access to, and the quality of, natural resources that are important to sustain livelihoods. Climate change is also likely to undermine the capacity of states to provide the opportunities and services that help people to sustain their livelihoods.[3]

In a sweeping 2014 report, the Intergovernmental Panel on Climate Change (IPCC) noted that climate change has significantly affected humans and ecosystems across the planet in recent decades. More specifically, the IPCC 2014 report notes:

- In many regions, changing precipitation or melting snow and ice are altering hydrological systems, affecting water resources in terms of quantity and quality. Glaciers continue to shrink almost worldwide due to climate change, affecting runoff and water resources downstream… Climate change is causing permafrost warming and thawing in both high-latitude and high-elevation regions.[4]
- Climate change over the 21st century is projected to reduce renewable surface water and groundwater resources significantly in most dry subtropical regions, intensifying competition for water among sectors.[5]

Our changing global climate has an increasing impact on migration trends around the world. It can be difficult to pinpoint the precise reasons people seek to migrate, whether internal or external, immediate or slow-onset. The catalyst for people leaving their homes (i.e., the drivers of migration) initially may reflect one reason—to seek better economic opportunities, perhaps. By the time migration actually occurs, the situation may be more complex. For instance, a family may contemplate leaving a certain area due to ongoing ethnic conflict or a lack of economic opportunities, but only make a final decision to do so once their lands are no longer fertile, or their home is flooded. These factors can happen in any order and other factors can be at play, but the result is the same: People leave their homes.

The key motive for this working group was to focus on the geographical regions that are already seeing, or will see, environmental changes as a complementary driver of migration, and the host regions that migration will affect. These discussions sought to define specific environmental challenges, then look at their ramifications for migration—and offer guidelines to help communities mitigate and adapt to environmental migration.

Increased competition over natural resources make conditions ripe for wide-scale displacement

A host of nations between now and 2022, according to a 2012 US National Intelligence Council (NIC) report on Global Water Security, "will experience water problems—shortages, poor water quality, or floods—that will risk instability and state failure" and "increase regional tensions." Expanding out to 2040, the same report predicts that "fresh water availability will not keep up with demand absent more effective management of water resources. Water problems will hinder the ability of many countries to produce food and generate energy, posing a risk to global food markets and hobbling economic growth."[6]

Those who rely on coastal fishing, for instance, may lose their livelihoods as rising temperatures affect hydrological systems in unknown ways. The IPCC 2014 report notes, "Many terrestrial, freshwater, and marine species have shifted their geographic ranges, seasonal activities, migration patterns, abundances, and species interactions in response to ongoing climate change."[7] Other species may simply go extinct.

Environmental changes may have lengthened the growing season and boosted the acreage of arable land in higher-altitude regions, but crop yields worldwide, particularly for wheat and maize, are likely to be negatively affected.[8] The IPCC study also notes that, while not yet as severe as the effects on other sectors, "local changes in temperature and rainfall have altered the distribution of some water-borne illnesses and disease vectors."[9] Working group specialists also highlighted this issue, pointing out that as we contemplate both environmental change and migration that stems from it, we must also keep issues of health and disease—linked both to changes in climate/weather patterns and to changes in human settlement patterns—front and center.

Impact on migration:

As environmental changes exacerbate resource shortages, conflict over those resources is likely to prompt migration to safer havens—but may then create conflicts in new host communities coping with an influx of environmental migrants. Migration scholar Susan Martin points out, for instance, that "migrants from environmental change may resemble labor migrants, seeking better livelihood opportunities in a new location, or they may resemble refugees and internally displaced persons who have fled situations beyond their individual control."[10] But, as Martin also notes, "competition for increasingly scarce resources may lead to a higher incidence of human conflict."[11] A 2016 Wilson Center study points out, though, that "the risk of violent conflict or instability related to climate change-induced migration is highly dependent on local context. Climatic factors are very difficult to separate from other critical factors in decisions to move or engage in armed conflict. These economic, political, and social factors will always be key parts of any analysis of climate change, migration, and conflict."[12]

The relationship between climate change and conflict also has direct US national security implications. As the NIC notes in a September 2016 report on *Implications for US National Security of Anticipated Climate Change,* "even if climate-induced environmental stresses do not lead to conflict, they are likely to contribute to migrations that exacerbate social and political tensions, some of which could overwhelm host governments and populations." Moreover, the report continues, "over 20 years, the net effects of climate change on the patterns of global human movement and statelessness could be dramatic, perhaps unprecedented."[13]

Changes in the environment will likely influence global migration flows in several ways. Susan Martin, for instance, points out that "long-term trends such as increases in droughts or flooding may reduce livelihoods in certain areas, particularly those based on agriculture,

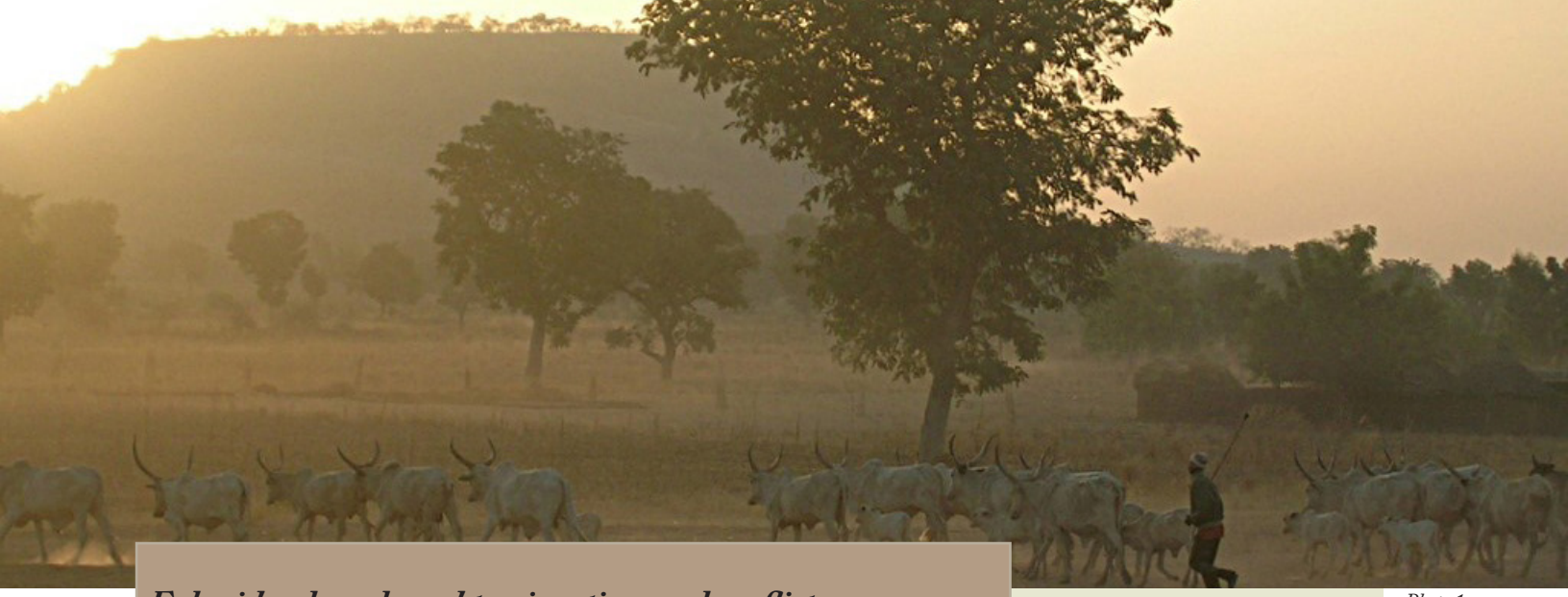

Photo 1: Fulani herders

Fulani herders: drought, migration, and conflict

In 2014, Fulani herders killed an estimated 1,200 people over disputes relating to farmland, grazing areas, and water.[1] From 2012-2014, the conflict between the herders from the north and farmers in central Nigeria cost the economy more than $14 billion, and caused profound ethnic rifts between the farming and herding communities.[2]

Environmental changes are fueling this conflict. The Fulani, a Muslim semi-nomadic group in the northern, desert-like regions of Nigeria, migrate hundreds of miles with their cattle, seeking better pastures. Increasingly, they compete for land and resources with Nigerian farmers, who tend to be Christian and belong to other ethnic groups.[3] The conflict has also helped to empower the terrorist group Boko Haram, which feeds on the discontentment of the Fulani.[4]

This conflict is no doubt exacerbated by climate change, as Nigeria has been experiencing "persistent droughts and flooding, off season rains and dry spells that have sent growing seasons out of orbit."[5] Though deserts have grown and shrunk for thousands of years, global warming is predicted to cause severe desertification in northern Nigeria, with two-thirds of the land potentially turning into full or partial deserts, making arable land scarce, if not nonexistent.[6] Desertification is already occurring in many regions, as "the Sahel creeps south by approximately 1,400 square miles a year, swallowing whole villages," and affecting the incomes of 15 million pastoralists.[7] Already, 35 percent of arable land is now desert in eleven of the northern states, and 200 villages have disappeared.[8]

Land shortages are changing the migration patterns of these herdsmen, pushing them "southwards to the grasslands of the savannas and forests."[9] Accounts from Fulani herdsmen corroborate the drivers of their migration south. One herdsman noted, "We settled in Damboa [in Borno state] like many other Fulani nomads, running away from desertification and drought in the north where we have little food for our herd."[10] Similarly, a survey of Fulani herdsmen found that climatic factors like "worsening weather conditions, erratic rainfall, dwindling grazing resources" were the primary drivers of their decision to migrate, followed secondarily by economic motives.[11]

causing residents of these areas to move elsewhere to support themselves."[14]

Longer-term global drying trends will continue to spur migration as growing numbers of communities struggle with crop losses and disruption of pastoral livelihoods. Prolonged droughts have also exacerbated recent conflicts in both Darfur and Syria. In Darfur, in particular, as groups moved out of drought-ridden areas, "the new arrivals' need for land—both for agriculture and grazing—caused tension, which slowly escalated into outright hostility and eventually the explosive violence beginning in 2003."[15]

Those displaced or forced to migrate are not the only ones potentially affected. These changes and events also create any number of severe operational challenges in the receiving communities and, in many instances, geopolitical ones as well. But, as both Martin and the Foresight project point out, planned and closely guided migration can greatly reduce later instances of humanitarian crises and displacement.[16]

Extreme weather events are becoming more frequent and more intense

In the near term, climate changes related to global warming appear to be causing extreme weather events such as cyclones, storm surges, and greater variability in rainfall, along with greater incidences of weather-related disruptions. These types of weather events highlight the vulnerabilities to weather volatility within both ecosystems and human systems.

The Mekong Delta : erosion and salinization

Vietnam is facing a near-term environmental and economic crisis directly linked to climate change.[1] The Mekong River Delta is home to nearly 19 million people—one-fifth of Vietnam's population. The Delta feeds half of Vietnam's population and accounts for 90 percent of the country's rice exports.[2]

But droughts, floods, and increased salinization threaten the region's agricultural productivity. In spring 2016, the Delta's worst drought in 90 years left more than 150,000 hectares of damaged rice paddies, and 1 million people without access to clean water.[3] Each year the Mekong Delta loses an estimated 500 hectares to soil erosion, some from sediment flows from dam construction and sand mining, but some from rising sea levels and storms.[4] By 2050, according to some reports, coastal erosion is likely to displace an estimated 1 million Vietnamese.[5]

The IPCC 2014 report notes:

> Impacts of such climate-related extremes include alteration of ecosystems, disruption of food production and water supply, damage to infrastructure and settlements, morbidity and mortality, and consequences for mental health and human well-being. For countries at all levels of development, these impacts are consistent with a significant lack of preparedness for current climate variability in some sectors.[17]

The IPCC 2014 report cautions that many communities are at risk from extreme weather events, which can cause a "breakdown of infrastructure networks and critical services."[18] As several working group participants noted, Yemen is a case-in-point of these phenomena. A country that rarely sees typhoons, Yemen experienced two extremely severe

Photo 2: Mekong Delta

Rising sea levels create another issue for Vietnam's rice basket: increased salinization. USAID predicts that 1.2 million hectares will see increased salinity, with saltwater intrusion adversely affecting 70 percent of the Mekong Delta's arable land. Saltwater has already damaged an estimated 100,000 hectares of farmland in the Delta region.[6] Increased salinization will eliminate dry season rice production in Vietnam by 2030.[7]

The human destruction of mangroves and the rise of shrimp farming may also be partly to blame for salinization. Yet survey results have found that families are likely "to persist with present activities and resist migration imperatives as long as possible," meaning migration patterns will likely be "high-amplitude, short-duration outmigration in fifteen to twenty years."[8]

storms in 2015, exacerbating the country's already-precarious humanitarian situation.

Impact on migration:

Acute weather-related events make conditions ripe for wide-scale displacement. Cyclones and hurricanes—both of which are occurring more frequently, and with greater severity—destroy infrastructure and cropland, and lead to the loss of jobs. The IPCC 2014 report notes that "extreme weather events provide the most direct pathway from climate change to migration. It is widely established that extreme weather events displace populations in the short term because of their loss of place of residence or economic disruption."[19]

Longer-term environmental changes caused by climate shifts also amplify existing trends such as rural to urban migration, though results diverge on the importance of climate change and resource scarcity in driving such trends.[20]

As noted in these working group discussions, in many parts of the world the management of resources, both before shortages become an issue and after, has emerged as a major factor in a group or region's ability to cope with environmental change. In South Asia, for instance, shifting weather patterns and overuse of groundwater have forced many people away from their homes, either temporarily or permanently. The response of some Indian families to the loss of arable lands is to send their children to American universities—effectively using education as a form of pre-emptive migration. In some low-lying Pacific Islands, governments have begun to include job training programs as part of the overall resilience planning, to ease the transition of islanders into non-agricultural communities in Australia and New Zealand.

Pacific islands: planning for rising sea levels

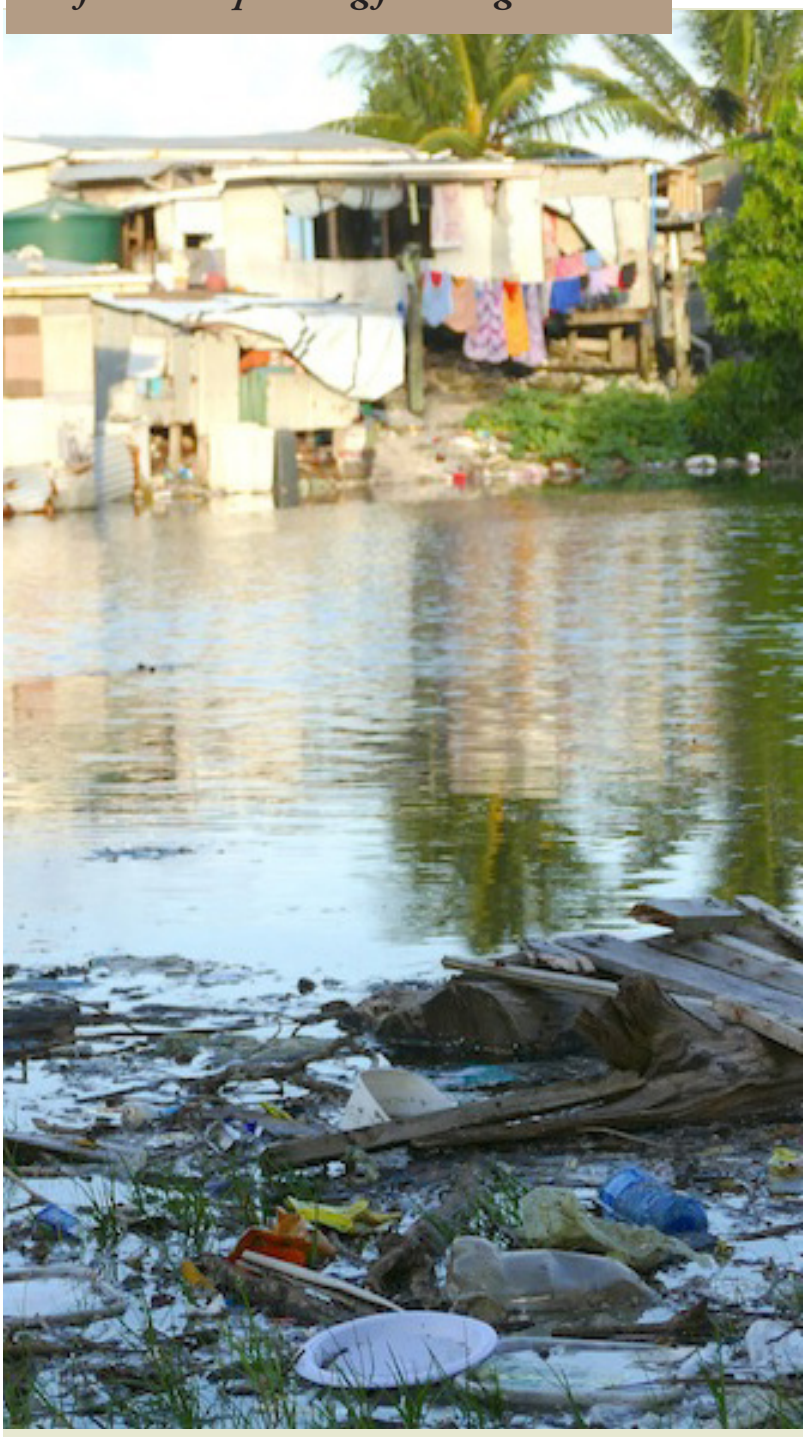

Photo 3: Tuvalu

Low-lying island chains, increasingly battered by storm surges, are among the communities most likely to face migration because of climate-related changes. Some islands are now planning to relocate entire communities, while a few build up their defenses against the rising sea levels:

Marshall Islands – With few areas higher than 6 meters above sea level, the 24 inhabited atolls in this island chain have few options to relocate the country's 70,000 residents. Storm surges leave homes destroyed or damaged, and increasingly salty or contaminated soils. Perhaps as much as one-third of the population has already relocated to Guam, Hawaii, and Arkansas—a 1986 US reparations agreement after the Bikini Atoll nuclear testing program left parts of the island chain uninhabitable gives Marshall Islanders the right to live in the United States.[1]

Solomon Islands – Aerial and satellite imagery from 1947 to 2014 helped identify five uninhabited islands that have now vanished altogether, along with six islands with severely receding shorelines. The town of Choiseul Bay is less than 2 meters above sea level and vulnerable to storm damage and coastal erosion. The community of 1000 residents is now planning to relocate everyone to higher ground on the main part of Taro Island within the next 10-20 years.[2]

Kiribati – With a population of 110,000 across 33 low-lying islands, Kiribati is developing its "option of last resort" relocation plans. The government included skill-building in these plans, to prepare the population to emigrate to Australia or New Zealand—or Fiji, where the Kiribati government has already purchased 20 sq km of land to resettle some of the population.[3]

Tuvalu – Comprising nine coral atolls totaling just 26 sq km, Tuvalu is seeing peak tides that reach as high as 3.4 meters, though much of the land is only 2 meters above sea level. In 2000, the government appealed to Australia and New Zealand to take in the 10,000 or so Tuvaluans if migration becomes necessary. Tuvalu's prime minister sees displacement as a last option, and the country is working with the UN Development Programme to build up land management resources and strengthen health services addressing climate-related diseases arising from coastal flooding and contaminated water.[4]

Tokelau – With just 12 sq km of land on three coral atolls, this tiny New Zealand territory is preparing to stay in place, despite rising sea levels. One of the three islets has been entirely enclosed within concrete walls that are 5 meters high, and the territory is entirely solar powered.[5]

Papua New Guinea – The 3,300 residents of Carteret Island, an atoll only 1.2 meters above sea level, now have few options for growing traditional crops like taro. Storm surges have destroyed gardens, while the increased swamp areas also mean an increase in malaria-bearing mosquitoes. Frustrated by a slow response from the Papua New Guinea government, in 2006 the Carteret Council of Elders formed a nonprofit organization to gradually resettle the population to nearby Bougainville, where the Catholic Church donated part of the land needed to build new homes for Carteret families.[6]

Rising sea levels create a range of problems

On a global scale, rising sea levels over the remainder of the 21st century will cause increased flooding, submergence, saltwater intrusion into aquifers and deltas, and coastal erosion of low-lying areas and coastal systems. These types of climate change-related damage are particularly troubling because, as the IPCC 2014 report notes, "the population and assets projected to be exposed to coastal risks as well as human pressures on coastal ecosystems will increase significantly in the coming decades due to population growth, economic development, and urbanization."[21] Rapid population growth and poor living conditions in many of the world's large littoral cities, moreover, only increase the potential for humanitarian disasters.

Photo 4: Shishmaref, Alaska

The IPCC report notes that longer-term environmental changes caused by climate change also amplify existing trends such as rural to urban migration, though results diverge on the importance of climate change and resource scarcity in driving such trends.[22] For those in coastal zones or islands, the IPCC report notes a clear "risk of death, injury, ill-health, or disrupted livelihoods,"[23] reflecting the problems that arise from insufficient access to drinking and irrigation water and reduced agricultural productivity resulting from rising sea levels.

Impact on migration:

Rising sea levels are likely to cause more frequent and intense flooding that eventually force communities to abandon some coastal areas. Susan Martin notes that "rising sea levels and glacier melt may make coastal or low-lying areas uninhabitable.[24] The likely outcome, according to Martin, is a greater incidence of "slow-onset migration, in which people seek new homes and livelihoods over a lengthy period of time as conditions worsen."[25] From the Mekong Delta to the Maldives and dozens more island chains and in coastal zones from Bangladesh to Alaska, homes and livelihoods are at risk.

Resettlement is already underway in a number of Alaskan communities affected by rising sea levels. According to the Government Accounting Office, 31 Alaskan villages face "imminent threats" of climate change and 86 percent of native Alaskan communities are already experiencing flooding and erosion.[26] Four villages require total and rapid relocation in the short term, while eight others will gradually migrate over a longer period.[27] On August 16, 2016, one of the four, Shishmaref, voted to relocate rather than continue to fight against the ongoing erosion and flooding.[28] About one-quarter mile wide and two-and-a-half miles long, this village has grappled with the loss of buildings and infrastructure due to storm surges for decades, losing more than 200 feet of shoreline since 1969.[29] Another village facing similar challenges—Newtok—is in the process of moving its 300 residents, but the new site has only a few homes and roads, and "will not have working power, water treatment or a sewage lagoon for years."[30]

According to a US government press release, "President Obama has proposed $50.4 million in federal spending to help Native American communities grapple with climate change."[31] This is only half the funding, though, of what is needed to move just the village of Kivalina, another Alaskan town in dire straits.[32]

SETTING SOME INITIAL PARAMETERS

Environmental change is by no means the only force behind human migration, as longer-term economic, societal, political, or ethnic conflicts may also come into play.

The working group's discussions focused on those individuals and groups worldwide at greater risk of being displaced due to extreme weather and environmental-related events that seriously affect their livelihoods and/or the local infrastructure. A number of important parameters guided the working group's recommendations:

1) Are these refugees or migrants? The terminology is important.
A clear lexicon of terms is important, particularly with regard to those who migrate primarily for environmental reasons. Conventional definitions of "refugee" vs. "migrant" are problematic, as they can create ambiguity in terms of international obligations—and, potentially, state assistance and other services—as well as how the world views these individuals and groups. There are sharp legal distinctions between the two terms; they are not interchangeable:

> Environmentalists have long used the term 'environmental refugees' to describe those who move largely as a result of environmental factors. Migration experts, however, are quick to point out that 'refugee' is specifically defined in international law to include only those who are unable or unwilling to return to their countries of origin because of a well-founded fear of persecution on the basis of race, religion, nationality, membership in a particular social group, or political opinion. Those who move because of environmental factors are unlikely to meet this international definition.[33]

Ultimately, an individual's or group's "vulnerability or resilience to these situations—that is, the capability to cope or adapt to them—will determine the degree to which people are forced to migrate."[34]

2) Is there a difference between sudden vs. long-term displacement of people?

The working group also distinguished between sudden vs. long-term displacement from a policy and resource mobilization standpoint, noting that countries may find it easier to deal with sudden displacement and disaster relief needs. In fact, the dynamics to help people in urgent distress and the mechanisms to respond often are well established.

This is not the case for longer-term, slow-onset migration. In situations like these, participants reiterated that planned relocations will likely become more common events in the future. But this projection also highlights the need for more fluid response mechanisms. As currently positioned, global and national response mechanisms are too siloed—humanitarian aid, development assistance, and migration planning too often are not integrated sufficiently.

A key insight from these discussions is that the individuals and groups who are least able to cope with environmental change are also those least able to adapt—or undertake mitigating responses.[35] Environmental changes also have the ability to create human "immobility"—when the very people who need to leave an area are unable to flee because the change in question has taken away their livelihood. The Foresight report points out that "in the decades ahead, millions of people will be *unable* to move away from locations in which they are extremely vulnerable to environmental change."[36] "The exodus of large portions of societies, taking with them their skills and capabilities, alongside changes in resource availability, could erode existing governance mechanisms," having a further impact on those that remain, according to the Wilson Center report.[37]

3) Where are the receiving communities?

The majority of migration is more likely to be internal, or involve cross-border migration to neighboring nations.

Most notions of climate migration envision movement from the global south to the global north. Yet the majority of migration is far more likely to be internal, or involve cross-border migration to neighboring nations. In fact, "internal migration accounts for about 75 percent of all migration,"[38] as the Wilson Center report points out. This type of displacement and migration can be especially problematic because the receiving communities are likely to have similar economic and development problems, further straining the capacity of those areas as well. Moreover, the geographic proximity of these particular receiving areas means that they likely face many of the same environmental challenges. And, when those displaced from rural areas head to nearby cities, they create heavier demands on the infrastructure of those cities, many of which likely already are trying to cope with the effects of environmental change.[39]

4) How does "planned migration" work?

Rising sea levels, increased salinization, desertification, and other environmental forces may leave communities with few options to survive. Planned relocation efforts are already underway on a small scale in areas threatened by rising sea levels, for instance. In these situations, governments proactively help resettle residents at risk, identifying receiving communities, providing funding and follow-on assistance. These types of assisted migration are likely to become more frequent in the future.[40]

The Institute for the Study of International Migration at Georgetown University, along with the Brookings Institution and the office of the UN High Commissioner for Refugees, produced a paper on "Guidance on Protecting People From Disaster and Environmental Change Through Planned Relocation." The paper defines **planned relocation** as:

> A planned process in which persons or groups of persons move or are assisted to move away from their homes or places of temporary residence, are settled in a new location, *and* provided with the conditions for rebuilding their lives. Planned Relocation is carried out under the authority of the State, takes place within national borders, and is undertaken to protect people from risks and impacts related to disasters and environmental change, including the effects of climate change. Such Planned Relocation may be carried out at the individual, household, and/or community levels.[41]

What are the top priorities regarding migration?

As working group participants discussed the scope of issues and potential avenues for mitigation and adaptation, it became clear that our energies should focus on issues related to mitigation and adaptation policies regarding slow-onset migration—both internal and external. This is an area where there has been far less policy work. There is of course a need for governments and the international community to continue to respond with disaster relief efforts. The working group suggested, however, that its collective efforts can best be directed at issues related to slow-onset migration—and the longer-term, slow-burning challenges.

Working group members also suggested an urgent need for a coordinated approach to planning and response mechanisms related to specific and workable policy recommendations on long-term environmental migration. This is not to negate important work taking place in government agencies, NGOs, and international institutions—

rather, it is to call for a more integrated approach. [See appendix for resources on ongoing work related to migration and climate change.]

As the international community begins to plan for and devise strategies to deal with environmental migration, it is imperative that policymakers keep both ends of the migration path in mind. There are multiple issues and problems to plan for—in both outgoing and receiving communities—to make the migration process as smooth as possible from start to finish.

Many countries, however, generally do not view issues related to the environment and human mobility as a tier-one priority—although many governments consider mass refugee and migration flows critical issues. This is an opportunity for the US government, as well as the United Nations and other international organizations and the NGO community, to work together to 1) define the problem, and 2) problem-solve on strategies to mitigate the impacts of slow-onset migration.

With this in mind, the ISD New Global Commons working group created a broad set of "Guiding Principles" for all of these institutions to use when creating mitigation and adaptation policies, as well as strategies for longer-term, slow-onset migration.

GUIDING PRINCIPLES

- **Define "environmental migrants"** – Universally accepted definitions of people who leave their homes for environmental reasons are important for a host of legal, economic, and security reasons. The international community must work to create definitions for these people that are socially and legally acceptable to all.
- **Collect more data** – There is an urgent need for a coordinated push for real and useable data and new research on environmental change as a driver of migration, which groups and societies are hit the hardest, the efficacy of resiliency interventions, and how to assist vulnerable populations that may not be able to raise the funds to migrate. Do drought insurance plans or new irrigation technologies ease the "push" factors that are likely to force struggling agricultural communities to relocate, for instance? More research is also needed on where people are heading—or where we think they will be going.
- **Consider the advantages of "planned relocation"** – Planned relocation can be a positive and highly viable future alternative to ad hoc migration, done on the fly as a last resort. Working group participants reiterated that planned relocation will likely become more common in the future. At the same time, planned relocation is a highly complex issue with a large number of moving parts that can include different government entities, different nations, and disparate ethnic or socioeconomic groups. As such, this concept warrants further study and planning.
- **Make development assistance more adaptive** – Large-scale development projects in poorer nations and regions, once set in motion, are not necessarily adaptive to sudden environmental changes. Becoming more attuned to the signs that communities are likely to migrate is a first step in recognizing that a project may need to shift gears.

And national governments, NGOs, and international organizations can reframe and rethink the development planning process to reduce each project's potential risk from extreme weather events, for instance. Also, they can prioritize those projects designed to assist communities that are most threated by climate change.

- **Create regional agreements** – Dealing with some environment-related problems on a regional basis might help make these issues more workable. In many instances of external migration, migrants are likely to traverse multiple international boundaries, with potential legal and security ramifications. At other times, those seeking to cross borders will be hampered by neighboring countries' regulations and policies. With this in mind, the working group suggested the creation of regional efforts that would allow for more fluid and workable migration. A regional agreement on coast guard management, for instance, could put large, stable vessels on standby to assist migrants arriving by sea.
- **Develop regional "safety valves"** – Planning collectively for one nation or nations to serve as a safety valve for environmental migrants within a region would be a useful approach. Planning ahead of time allows each region, and potentially the international community, to create workable incentives for these safety valve nations—and provide the support these countries may need.
- **Manage resources and infrastructure needs effectively** – With adequate management of water and land resources in normal times, some communities at risk may not have to leave their homeland when extreme events occur. Building up the local physical and institutional infrastructure may enable people to continue making a living and remain in place despite the more frequent environmental stressors—

and permit additional mitigation and adaptation options. For communities receiving environmental migrants, managing resources and infrastructure will be just as vital to these communities to absorb an influx of newcomers.

- **Steer people where their needs can best be met** – A common theme throughout these meetings was the fact that many, if not most, environmental migrants move to urban areas. Most of this urbanization is occurring in already over-populated and environmentally endangered littoral cities. This working group recommends the identification of regions and cities to serve as suitable landing spots for environmental migrants from both the region/cities perspective and the migrants. This will allow for the creation of "pull" mechanisms that steer environmental migrants to these cities/regions, while relaxing the pressure on some of the more over-populated migrant destinations.
- **Focus on migrants' needs in the receiving communities** – Most environmental migrants head to nearby urban areas, but there are localized consequences: The majority of receiving communities likely also face many of the same environmental challenges that forced migrants out of their home regions. And there may be significant ethnic or cultural challenges with large numbers of incoming environmental migrants. Too often, countries perceive migrants as a burden on receiving communities. However, migrants also can provide highly valued labor, both skilled and unskilled, as productive members of the local and national economy.
- **Prioritize the creation of jobs within receiving cities** – The globe is seeing a continued urban population explosion, particularly within coastal areas that are already highly vulnerable to climate change and environmental stresses.

This increase in population, though, often does not come with an increase in the number of urban jobs, or a boost in economic growth, which has dire consequences as it relates to a potential influx of environmental migrants to cities. This "urbanization without growth" will have severe long-term consequences at both the local and global level, and offer few opportunities for environmental migrants heading to cities in the medium to long term.

APPENDIX

Current Climate Change / Migration Initiatives - as of january 1, 2017

US Government:

International Programs

State Department

- Bureau of Population, Refugees, and Migration (PRM)—partnerships with International Organization for Migration (IOM), U.S. Agency for International Development (USAID), Department of Homeland Security, Department of Labor, United Nations High Commission for Refugees (UNHCR)[1]
- State Department 2014 Climate Change Adaptation Plan: Recognizes and joined Friends of the Nansen Initiative[2]
- State Department and USAID Strategic Plan (FY 2014-2017): "Collaboration…to find solutions to displacement"[3]
- Office of Global Change—Represents the United States in negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) and other international forums on climate change, including the International Civil Aviation Organization and the International Maritime Organization. Office also leads US government participation in the Intergovernmental Panel on Climate Change, responsible for coordinating other bilateral and regional partnerships on climate change[4]

USAID

- Middle East Water Security Initiative: USAID programming to improve sustainable, long-term access to water in the Middle East[5]
- Disaster Preparedness for Effective Response (PREPARE) program: USAID/IOM support to Micronesia and Marshall Islands to improve disaster preparedness response and capacity to mitigate disaster impacts[6]

Domestic Programs

- Obama Administration:
    - Task Force on Climate Preparedness and Resilience: Recommends that federal government create "an institutional framework for responding" to climate migration[7]
    - 2015: Established a federal flood risk management standard for federally funded projects[8]
- U.S. Department of Housing and Urban Development, 2016: Provided $1 billion to states and cities that won National Disaster Resilience Competition[9]

UK Government:

The UK Government takes action that addresses climate-related migration through three government research and development institutions: Foresight Projects, Committee on Climate Change, and the Department of International Development.

Foresight Projects

- October 2011 report: "Migration and global environmental change: Future challenges and opportunities"[10]

Committee on Climate Change (CCC)

- Tasked with advising UK government on emissions and preparing for climate change[11]
- Subcommittee—National Adaptation Programme (NAP) 2013: Notes that flooding represents a major risk to the UK and could result in displacement, and outlines ways to respond to flooding[12]

More details on page 48: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/209866/pb13942-nap-20130701.pdf

Department for International Development (DFID) Programming

- Report: DFID Programme in Bangladesh[13]
    - DFID strategy: "give [migrants] skills and opportunities to improve their livelihoods in Bangladesh or abroad."[14]
    - Parliament: Instructed DFID to expand response in Bangladesh to climate migration[15]

United Nations (UN):

Global Migration Group

- Interagency group primarily involving UN agencies, but also the World Bank, the World Health Organization (WHO), and IOM, that promotes a more coherent and coordinated approach to international migration[16]
- Released statement and recommendations of impact of climate change on migration in 2011[17]

UN Environment Programme (UNEP)

- Focus on three mechanisms: research on hotspots in vulnerable countries, awareness-raising, and country project development[18]
- Joined Global Migration Group in 2017 to contribute to negotiations on the Global Compact for Safe, Orderly, and Regular Migration in 2018[19]

World Meteorological Organization (WMO)

- Specialized agency of the UN; system's voice on the state and behavior of earth's atmosphere, its interaction with land and oceans, weather and climate it produces, and resulting distribution of water resources[20]
- Presented at UN Conference on Housing and Sustainable Urban Development on October 17-20, 2016, contributing to climate change and risk management and urban resilience papers related to migration[21]

Intergovernmental Panel on Climate Change (IPCC)

- International body for assessing the science related to climate change, set up by UNEP and the World Meteorological Organization (WMO). Provides regular assessments of the scientific basis of climate change, impacts and future risks, and options for adaptation and migration[22]
- See IPCC climate change assessment reports here: http://www.ipcc.ch/activities/activities.shtml

UN High Commissioner for Refugees (UNHCR)

- Supports Inter-Agency Standing Committee cluster Approach: Outlines the roles of the various humanitarian aid organizations in crisis situations[23]
- Co-developed guidance on planned relocation of populations threatened by climate change[24]
- For more details on the strategy, see pages 10-11: http://www.unhcr.org/540854f49.pdf
- Working to build resilience in areas of concern through programs that focus on sustainable environmental management and safe access to fuel and energy[25]

Sendai Framework for Disaster Risk Reduction 2015-2030

- Attempts to facilitate continuation of progress and programs related to disaster risk reduction[26]
- Outlines potential risks of displacement and migration brought by climate change and natural disasters; recognizes relocation as an essential strategy in disaster risk reduction efforts

World Bank Group:

The World Bank addresses climate change migration through a technical and financial assistance arm, the Global Facility for Disaster Reduction and Recovery (GFDRR) and a research arm, the Global Knowledge Partnership on Migration and Development (KNOMAD).

- In a September 2016 World Bank report on migration, the World Bank identified a dual plan of supporting projects that reduce the negative impacts of climate change, and supporting orderly and voluntary migration schemes[27]

Global Facility for Disaster Reduction and Recovery (GFDRR)

- Five pillars: risk identification, risk reduction, preparedness, financial protection, and resilient recovery
- Under risk reduction pillar, GFDRR works to relocate communities from areas at risk of coastal erosion and floods.[28] For more details, see: https://www.gfdrr.org/sites/default/files/documents/SISRI%20Knowledge%20Note%203%20Participatory%20Population%20Retreat.pdf

Global Knowledge Partnership on Migration and Development (KNOMAD)

- Working Group on Environmental Change and Migration conducts research and seminars on environmental migration[29]
- See latest events and papers here: http://www.knomad.org/thematic-working-groups/environmental-change-and-migration

World Reconstruction Conference, June 6-8, 2017

- Co-hosted by World Bank in Brussels to focus on resilience through post-crisis recovery as "climate change, urbanization, and migration accelerate[30]

International Organization for Migration (IOM):

- Involved in policy dialogues,[31] provides information on best practices and policies,[32] conducts research initiatives,[33] and carries out operational activities (humanitarian crisis response, disaster risk reduction, community stabilization programs)
- As of April 2017: Published 9 reports on impacts of climate change and migration, including human trafficking,[34] assessing migration and environmental degradation in South Asia,[35] and case studies of Vietnam,[36] Kenya,[37] and Mauritius[38]

European Union (EU):

- EU Adaptation Strategy, includes document on climate migration[39]
- Discusses the lack of legal framework for climate migrants
- Plans to invest in disaster risk reduction mechanisms and engage with partner countries through Global Climate Change Alliance[40]
- Pledges to facilitate future research, continue international dialogue, and cooperate on climate migration[41]

NGO Coalition Efforts:

UK Campaign Against Climate Change

- Pushes for urgent action to mitigate events of climate change
- Co-hosted Union Stage Europe's First Climate Refugees Conference in London on February 10, 2017[42]

UK Climate and Migration Coalition

- Goal: Ensure "people centered" policy responses nationally and internationally for people displaced by climate change [43] through podcasts, reports, events, and outreach

Advisory Group on Climate Change and Human Mobility

- Includes UN agencies, IOM, the Norwegian Refugee Council, Refugees International, the Center for International Relations Studies of Sciences Po, and the Arab Network for Environment and Development
- Lobbied COP21 to include provisions related to climate refugees[44]

Displacement Solutions

- Works with climate displaced persons, governments and UN to find rights-based land solutions to climate displacement[45]
- Built/maintains the Housing Land and Property Rights Expert Registry to send experts to post-disaster settings and ensure rights of displaced individuals are protected
- Climate Change and Displacement Initiative: Developing solutions for climate-displaced people[46]

The Nansen Initiative:

- Aims at facilitating the international response to climate-related migration[47]
- Global consultation in 2015: Resulted in Agenda for Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change,[48] endorsed by over 100 states[49]

Platform on Disaster Displacement

- Follow-up to Nansen: Aims to implement the Protection Agenda and continue the work of the Nansen Initiative through a similar state-led process[50]
- See Platform's initiatives on human mobility and climate change here: http://disasterdisplacement.org/mainstream-human-mobility-challenges-across-relevant-action-areas/

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New Global Commons Working Group

NEW CHALLENGES TO HUMAN SECURITY: ENVIRONMENTAL CHANGE AND HUMAN MOBILITY

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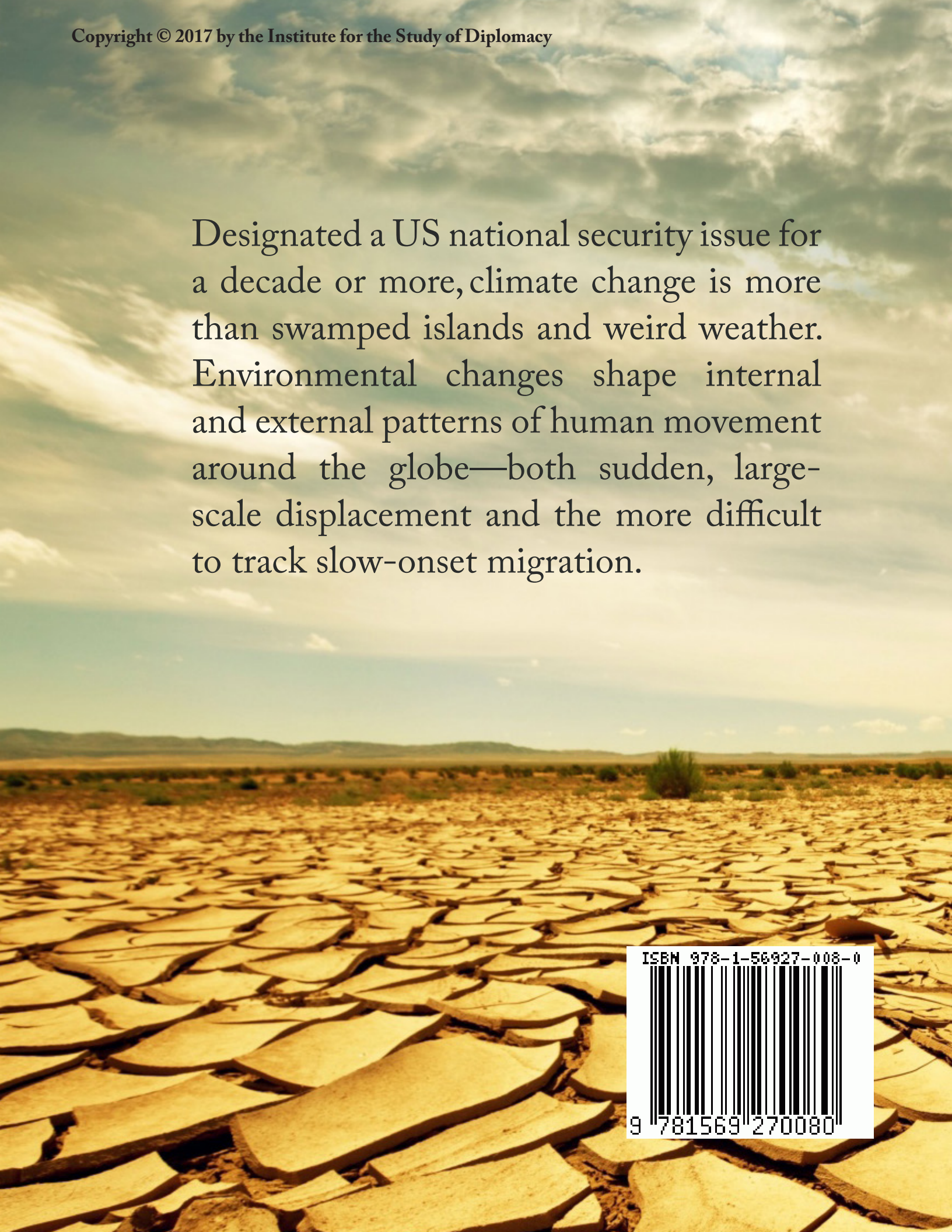
Designated a US national security issue for a decade or more, climate change is more than swamped islands and weird weather. Environmental changes shape internal and external patterns of human movement around the globe—both sudden, large-scale displacement and the more difficult to track slow-onset migration.



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