

Population Displacement, Relocation, and Migration

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Introduction

As global climate change intensifies, communities already threatened by water scarcity, food and housing insecurity, low employment, and the spread of disease are likely to become more vulnerable to disasters. This includes much of the developing world. People may be displaced or forced to migrate to avoid the worst impacts. “One out of 19 persons living in developing countries may be affected, in comparison to 1 out of 1,500 persons living in OECD [developed] countries.”¹ The exact number of people who will be affected throughout the world is unknown—average estimates range from 23 million per year to 62 million per year.²

In the 2010 negotiations of the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in Cancun, Mexico, governments concluded an action agenda on climate adaptation that encouraged cooperation on addressing climate change–induced displacement, migration, and relocation.³ As governments undertake short-term and long-term adaptation planning, their traditional approaches to human mobility are shifting.

Immediate displacement and longer-term migration present different human rights challenges, legal challenges, and institutional challenges for governments and humanitarian relief practitioners. Human mobility, particularly in large numbers from rural to urban areas, creates governance issues. It can engender conflict and discrimination among ethnic groups competing for jobs or other scarce resources, tax overburdened infrastructure, and put stress on human welfare and social services systems. Those forced to migrate without legal status or recognition may remain undocumented, may be ineligible for social protection, and may be forced into the underground economy.

The success of past disaster management programs is mixed, and recent large disasters in developed countries, such as from Hurricane Katrina in the United States, demonstrate that even high-income countries are not adequately prepared.⁴ Relief

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programs have been criticized for failing to address the human rights of those displaced or relocated, and humanitarian projects regularly battle issues of local corruption, negligence, or a lack of training. Many past programs of resettlement were ethnically or politically driven, or left populations more socially and economically vulnerable after resettlement.

Addressing human displacement, resettlement, and migration in the context of climate change adaptation presents decision makers with a number of concerns. One issue is how to best incorporate the role of migration in constructing adaptive programs given the dearth of models. A second issue is how decision makers can design and incorporate “migration” indicators into their risk assessment processes. A third is the considerable barrier posed by the politicization of migration and displacement. Governments have generally resisted policies to receive large numbers of migrants whether they are moving from disasters or otherwise.

If adaptation plans are to both enhance development and protect the most vulnerable groups, decision makers will need to better understand how ecosystem changes influence the interaction of human social organization and economics more generally; that is, how communities affected by environmental change are influenced by government stability and its provision of welfare and justice at all levels of society—the household, local, national, and international levels. Government agencies creating adaptation plans will need to consider migration in the context of development, particularly if communities are already migrating as part of a coping strategy in the face of economic decline.

Countries likely to be receiving states are located both north and south but, as yet, few regional or international agreements exist to protect migrants and virtually none address the impacts of climate change. This has led to a significant gap in legal structure, practice, and financial resources for managing disaster-related migration flows. Where countries already face humanitarian and human rights challenges, the use of governance approaches that can more humanely and effectively address the needs of displaced persons or those who migrate due to climate impacts is particularly critical. Climate-oriented bilateral or multilateral migration management agreements, or recognizing a new status for migrants forced to leave uninhabitable climate-affected locations on a temporary or permanent basis, may be the most appropriate policy tools.

This chapter identifies the areas where populations are most vulnerable to displacement and briefly examines how governments are responding to the issue in national adaptation planning. Next, it discusses the broader landscape of international human rights and humanitarian standards related to displacement, resettlement, and migration. It then considers immigration policy and practice and legal strategies for migration management and, following this, analyzes the unique human rights issues presented by the potential for stateless persons from small island nations. The chapter concludes by identifying reforms proposed by international experts to help governments improve their laws and governance in this area.

Areas Where Populations Are Most Vulnerable

For scientists assessing the impact on human populations from climate-related events in 2011, 2010 provides some perspective. Tying with 2005 as the warmest year on record since 1880, 2010 witnessed a myriad of calamities, from heat waves and drought in some locations to torrential storms and cyclones in others.⁵ The northern

and western Amazon experienced the worst drought in four decades. Heat waves in Russia led to massive forest fires, while flash floods and widespread flooding moved across parts of Asia and Central Europe. Three million people in 36 of Thailand's 76 provinces were affected by weeks of flooding.⁶ Similar floods left millions homeless in Pakistan and caused \$9.5 billion in damage.⁷ All told, "385 natural disasters killed more than 297,000 people worldwide, affected over 217.0 million others and caused US\$ 123.9 billion of economic damages."⁸

These are not isolated incidents. Over the past two decades the number of recorded disasters per year has doubled from 200 to 400.⁹ The frequency of flood disasters has grown by four times (from 50 to 200 per year). In some areas, rapid glacier melt may contribute to additional flooding. For example, between 1955 and 1999, several glaciers in Kyrgyzstan and the northern Tian Shan bordering China lost between 15 percent and 30 percent of their surface area.¹⁰

Those in less-developed regions are expected to suffer the most. Of the 262 million people reportedly affected by climate disasters from 2000 to 2004, 98 percent lived in the developing world.¹¹ People in highly congested urban centers and low-lying deltas are most threatened by rapid-onset disasters (e.g., cyclones and floods). Slower-onset disasters (e.g., drought and desertification) have their greatest effect on rural and agriculture-based communities.

Island populations are exposed to seawater intrusion and storm surges affecting fishing, agriculture, and habitations. Over a much longer-term horizon, sea-level rise could inundate entire islands and require inhabitants to relocate permanently. Well before the worst impacts, people may move in anticipation of livelihood loss or because repeated weather-related disruptions have become intolerable.

How many new migrants will be generated by future climatic events is highly speculative. Human migration has occurred for thousands of years, stimulated by micro and macro variables. While the role of environmental factors in stimulating migration is still relatively little understood, the past experiences of migration related to drought, desertification, and natural disasters suggest that over the next century migration flows will increase, possibly substantially, with extreme climate variability.¹²

Most displacement under predicted climate change scenarios is likely to be internal—i.e., within countries, but some will be across borders. It is unknown whether climate shocks or ecosystem changes will significantly alter current migration pathways internally, or instigate much more cross-border and longer-distance international migration.

International migration has already increased to a global total of 214 million people, after doubling in size between 1985 and 2005.¹³ Migration from least developed countries (LDCs) is now as likely to be directed to other LDCs as to higher-income countries.¹⁴ Migration generated by climate change-related events therefore poses as great a challenge for countries in the South as it does for those in the North, perhaps more so given the economic constraints in these countries.

Understanding that some countries will be affected more severely by climate change than others, and that each country's unique pattern of migration may be disrupted, it will be particularly important for planners to evaluate these variables together in identifying priority actions. For example, a number of countries are expected to be affected by both rapid- and slow-onset extreme weather events, while also experiencing high trends of international migration: Afghanistan, Bangladesh, Cambodia, most of Central America, Colombia, Ecuador, Equatorial Africa, India,

Iraq, Kazakhstan, Kyrgyzstan, Laos, Mali, Mexico, Mozambique, Myanmar, Niger, Nigeria, Pakistan, Peru, the Philippines, Senegal, Thailand, and Vietnam.¹⁵ These may be notable hotspots because people in various geographic pockets within these countries already battle food insecurity, high levels of unemployment, and environmental degradation.¹⁶ Current levels of out-migration suggest that some of these communities have established networks abroad and, faced with additional climate threats to livelihood, could more readily use migration as a coping mechanism. This migration may become part of a community's adaptation strategy. Governments can better understand the use of such migration strategies by engaging these at-risk communities in adaptation dialogue.

Small island states within a few meters of sea level that are at risk from ocean inundation or storm surges are another category of countries likely to produce migrants or require resettlement or relocation of entire peoples, particularly in the Pacific and Indian Oceans (notably in Polynesia, Micronesia, and the Maldives) and the Caribbean Sea.¹⁷ Some migration and resettlement is already occurring. These pose serious international legal issues, as discussed below in the section titled "Government Resettlement of Affected Populations."

The countries sending and receiving migration related to these "hot-spot" areas should be encouraged to engage in further bilateral and multilateral dialogue, and to consider entering migration-development agreements related to adaptation. This is discussed below in the section titled "Internally Displaced Persons."

Government Recognition and Response to Migration in Adaptation

The varying characteristics of the displacement and migration involved in rapid- and slow-onset calamities tend to alter the way governments view their international obligations for humanitarian assistance. While humanitarian law and human rights doctrines provide some broad standards, wide gaps remain that leave enormous discretion in how governments choose to respond.

In practice, official protection can depend on whether the affected person is displaced inside her country of origin, is forced to move to another town or city, or moves across an international border, or whether the events are life-threatening. States have differed in their responses and obligations toward persons affected by slow-onset disasters and rapid-onset disasters. They have concentrated resources, support for relief, and the development of legal norms around displacement from rapid-onset disasters. Part of the reason is the immediacy of these crises—human suffering caused by sudden, highly visible events generates public pressure to respond quickly.

Yet another reason is the uncertainty of cause and effect for slow-onset disasters. To what extent is drought, for example, the primary cause of migration in any given setting? Local conflict or economic strife may influence migration together with climate variability that produces water scarcity.

Disaggregating purely environmental factors from the myriad of other possible socioeconomic factors that can influence migration is difficult for migration specialists. The differences among researchers in their case-study findings has complicated policy responses. The growing body of research, however, reveals more consistently that drought can be a *factor* when it is prolonged, affects the economic livelihood of vulnerable groups, and occurs in areas where migration has been used previously as a coping mechanism.¹⁸ Though a drought may last years, the migration is often driven by

short-term and seasonal employment opportunities. When the season ends, migrants may return home to await the next season's opening or an end to the drought. While internal migration is documented to a much greater extent, cross-border migration can also be significant (particularly in Sub-Saharan Africa, Central Asia, and North America) where borders are more porous or there are significant flows of migrants annually.

This section discusses some of the differences in how governments view climate-induced migration in climate adaptation planning. The following sections contain analysis of the specific legal standards applicable to persons internally displaced, relocated, or resettled, and those who move across borders.

Migration as a Failure of Adaptation or an Adaptive Strategy

Until recently, global climate change negotiations reflected the widely held view that migration represents a failure of climate adaptation strategies—that is, migration served as a reminder that if mitigation and adaptive programs fail, climate disasters will stimulate many millions of people to migrate. Thus, governments did not consider migration as a component of adaptation planning. In the past few years that has changed.

While most governments continue to prioritize adaptation that allows communities to remain in place, a growing number of experts recognize that migration could also play a positive role in development policy and may help to strengthen local resilience to disaster.¹⁹ At the insistence of humanitarian agencies, delegates in the UNFCCC negotiations have begun to consider migration both in terms of the need for more thoughtful migration management strategies and within the context of adaptation planning.²⁰ This shift in viewpoint may lead to new standards of practice in adaptation planning. It has resurrected the debate on the extent to which migration plays a positive or negative role in economic and social development.

Whether migration serves as a catalyst or hindrance to community development can vary depending on the context of communities and households affected by extreme climate events. On the one hand, remittances sent home to families are reaching extraordinary levels in nearly every region of the world: In 2010, global remittances totaled \$445 billion, of which developing countries received \$325 billion, more than a 10-fold increase from 1990.²¹ For some countries, this income makes up a significant share of GDP (35 percent of Tajikistan's GDP in 2009), and exceeds totals of foreign aid and foreign direct investment (FDI) flows.²² Remittances to Latin America and the Caribbean totaled \$66.5 billion for 2007, one-third more than net FDI and 10 times that of Official Development Assistance (ODA).²³

On the other hand, while in theory remittances may serve to build household or community resilience to disasters, such as by providing new capital for economic investment, many households invest in their land or family welfare but not necessarily in community entrepreneurship or infrastructure.²⁴ There is also concern about the migration process itself. Migrants may become more impoverished when they do not find jobs as anticipated and have little social support in their new environment. Migrants may face discrimination due to differences in ethnicities, religion, culture, language, or economic status. In the worst cases, people desperate to migrate may be lured by smuggling or trafficking rings, and forced into indentured servitude.²⁵ When temporary migration evolves into permanent migration, communities of origin may suffer economic and cultural decline if migrants cease sending remittances home.

The availability of jobs, social welfare, flexibility for migrants in their return, and the support of Diaspora communities are some of the initiatives that can help to avoid the abusive impacts of migration. Governments concerned about migration (those sending or receiving) are just beginning to consider how to advance the role of migration in development. Little of this new thinking, however, has yet to be reflected in national adaptation programs of action (NAPAs), the national action plans being established by developing countries under the international climate negotiations framework that will provide financing for adaptation.

Treatment of Migration in NAPAs and Preventative Measures

For the most part, government references to displacement and migration in their NAPAs focus on helping communities remain in place with the assumption that any displacement or migration results from the failure of adaptation, e.g., reiterating in their programs of action that the loss of lands, water resources, and livelihoods will prompt migration. They cite programs to improve community agricultural or other economic activities as ways to *prevent* mass displacement or migration, for example, early warning systems (such as for Mozambique and Tuvalu).²⁶

Some countries recognize that migration is already serving an adaptive function. Ghana's adaptation strategy, for example, states that global-warming impacts on migration and settlement will affect national security.²⁷ It lists as traditional and ongoing adaptation strategies migration from areas of water stress, notably, migration of coastal fishermen into the interior for freshwater fishing in rivers during the off-season.²⁸ Bangladesh's NAPA also anticipates that the success of adaptation programs will prevent migration to cities for jobs and livelihood.²⁹

A number of NAPAs in fact relate development projects to relieving migration stress. In a review of 38 NAPAs, author Susan Martin found numerous examples of this approach including the following:

Guinea Bissau proposes a project for Protection of Salt-Water Rice against High-Tide Invasion to stem migration. Central African Republic designated a project titled Management of Native Lands for Rehabilitation of Pastoral Spaces as a way to reduce nomadic practices that are shifting toward more permanent settlement. Mali proposed to enhance durable production of fish and diversify activities of fishing communities to reduce migration pressures.³⁰

Countries that reference migration in terms of adaptive strategy appear to promote government-regulated (or government-encouraged) population movements from one internal locale to another, or full resettlement of populations. The Gambia's NAPA says, "[t]hematic studies and stakeholder consultations reveal three basic response strategies: 1) change in fishery (harvest previously under-utilised species); 2) reduction of post-harvest losses (use of preservation techniques); and 3) seasonal/permanent migration of fisherfolk (to high productive areas)."³¹

A number of NAPAs also consider large-scale resettlement as a means of adaptation. These are discussed below in the next two sections related to internally displaced persons and resettlement.

Internally Displaced Persons

Victims of natural disasters who are generally displaced inside their country of origin often seek to return to their community when it is safe, rather than engage in

permanent migration or relocation. That is, people tend to move temporarily to nearby urban centers to cope with the disaster, seeking employment and aid until they are able to return.³² The World Health Organization reports that 75 percent of those displaced by disaster are women and children.³³ International migration statistics reveal that men and women tend to move equally, sometimes with their households if the disaster is severe enough.³⁴ While international migration occurs much less frequently than internal displacement in response to natural disasters, people may move to countries where social networks have already been established and/or where they have cultural ties.³⁵ If aid is delivered quickly and effectively to disaster areas, migration may be avoided entirely.

Internal displacement implicates a number of human rights and humanitarian principles. International law generally is concerned with state-to-state relations, with the duties and obligations states owe to each other, but human rights doctrine comprises additional duties owed by states to individuals and groups. It prescribes special responsibility to protect vulnerable populations and minorities, including women, children, and indigenous groups. Displaced persons have also been the subject of special consideration as human rights doctrine has evolved.

Governments have a number of obligations related to protecting victims of disaster, some of which are discussed in chapter 19, “Global Health and Disaster Preparedness.” The human rights of internally displaced persons (IDPs) due to disasters, and the corresponding obligations of states, are dynamic. They evolve as the international community gains more understanding and experience in addressing the needs of disaster victims. At present, the extent of government obligation and the level of protection afforded victims depend on the context of the disaster and on whether victims are displaced temporarily, voluntarily move away from a disaster-affected area, are relocated, or move across borders in search of new livelihood opportunities. This part will briefly focus on the first two situations, which are also discussed from a somewhat different perspective in chapter 19. The next two sections below address the latter situation.

International law protects those internally displaced by conflict or disaster under the Guiding Principles on Internal Displacement (IDP). These principles, developed by a special representative of the UN secretary general and supported by the UN Human Rights Council, “address the specific needs of internally displaced persons worldwide.”³⁶ “They identify rights and guarantees relevant to the protection of persons from forced displacement and to their protection and assistance during displacement, as well as during return or resettlement and reintegration.”³⁷ Specifically, they apply to “persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state border.”³⁸

The IDP principles codify the state’s human rights obligations toward those displaced in its territory, including the right to life and dignity and security of persons displaced. IDPs have the right to move to other parts of the country or to leave their country, and to have their family members remain together or be reunited if separated. They have the right to an adequate standard of living, food, water, basic shelter and housing, property restitution, essential medical services, and sanitation, and they continue to enjoy the right to seek employment and participate in economic activities.³⁹ The principles reiterate that governments are prohibited from discriminating against

IDPs in the distribution of aid or other treatment and must adhere to human rights protections in the resettlement and reintegration of IDPs.⁴⁰

Studies suggest that there are gender differences in disaster impacts that raise issues of discrimination. Women suffer higher mortality rates than men during and after disasters. Previously existing trends of discrimination against women or other minorities tend to be exacerbated, and human trafficking may also increase in the wake of disasters.⁴¹ The principles require governments to consider these issues in disaster management.

Most governments appear to accept these principles, evidenced by a number of recent confirmations as to their importance and adoption by the OSCE.⁴² The principles are reflected in, for example, the United Nations General Assembly Outcome Document, adopted by consensus after the 2005 World Summit on Development (recognizing the principles as “an important international framework for the protection of internally displaced persons.”).⁴³ Though the United States has not formally done so, many other governments have adopted these principles in their domestic policy and law⁴⁴ and, as discussed below, they have been incorporated within international agreements in various regions.

Most recently, the IDP principles served as the foundation for the African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention) concluded in November 2009. The Kampala Convention recognizes that climate change may cause internal displacement and provides a detailed description of government obligations, including reparations for failure to act, and encourages nongovernmental and other assistance in the region for IDPs when a state affected by disaster is unable to provide full assistance.

It is unclear whether the IDP guidelines apply to *all* climate-related victims. The principles require protection only for victims forced or obliged to move. Victims of immediate-onset disasters, such as hurricanes and floods, would be covered by such protection. If situations of drought and desertification or other environmental changes that occur more slowly over time are considered disasters, then victims who are forced to migrate inside their country of origin should be covered as well. However, *voluntary* movements by people fearing or in anticipation of the impacts of another drought disaster appear to fall outside the guidelines and thus are not protected.

Moreover, even if states agree to follow international guidelines, the lack of monitoring or accountability mechanisms allows states to violate the standards with impunity. There are no procedures by which victims can complain of abuse, in the context of environment-related movements or otherwise, within the IDP guidelines. There are general human rights bodies at the international and regional levels, in some cases courts and complaint mechanisms, that can consider human rights violations related to IDPs. However, these are not specifically tailored to the needs of disaster victims, and are likely to be beyond the effective access of such victims or international migrants without substantial legal assistance.⁴⁵ There is presently no international disaster-monitoring body or ombudsperson with a mandate to monitor or receive complaints. The Kampala Convention, though not covering all types of climate-induced displacement, may provide a foundation for a future model once implemented, particularly if African Union (AU) bodies become more centrally involved in these issues.

Under human rights doctrine, governments may violate their international treaty and customary law obligations if they fail to prevent disasters or impacts where such

harm is foreseeable. International treaty bodies, including the Human Rights Committee (established to monitor implementation of the International Covenant on Civil and Political Rights), the Inter-American Commission and Court of Human Rights, and the European Court of Human Rights, have reinforced this principle through legal declarations and decisions that discuss the state's positive obligation to take precautions against foreseeable harm.⁴⁶

In one prominent case, the European Court found a violation for foreseeable environmental harm. After several storms led to devastating mudslides in the Central Caucasus region, the local government's failure to repair infrastructure, prepare the public, or take other public safety measures to prevent harm, led to extreme vulnerability of the community during the next storm. This resulted in more death and injury, as well as property destruction that left many in the community without homes. Russia was found in violation of its treaty obligations before the European Court of Human Rights because it knew the potential but failed to take measures that could have reduced the damage to human life and property caused by the natural disasters.⁴⁷ As a member of the Council of Europe and party to the European Convention on Human Rights, Russia is obligated to comply with decisions of the European Court of Human Rights. The European Court of Human Rights found similarly against Turkey in a case involving foreseeable harm from a methane explosion.⁴⁸

The principle related to environmental harm, founded in government obligations to protect life from foreseeable disasters, may affect adaptation planning and has implications for all 47 members of the Council of Europe that are party to the European Convention on Human Rights. In 2003, the Council of Europe Parliamentary Assembly drafted Recommendation 1614 calling for a protocol to the European Convention on Human Rights on obligations to protect the environment.⁴⁹ European doctrine and the European Court's decisions are influential in global human rights doctrine, and other regional and international human rights bodies are likely to follow this reasoning.

Walter Kalin, the UN secretary general's former representative on IDPs, has interpreted the European Court cases and other human rights obligations related to foreseeable environmental harm as follows:

In summary, the individual right to life and the corresponding state obligation to protect life require that, with regard to natural disasters, including those caused by climate change, the relevant authorities must: enact and implement laws dealing with all relevant aspects of disaster risk mitigation and set up the necessary mechanisms and procedures; take the necessary administrative measures, including supervising potentially dangerous situations; and inform the population about possible dangers and risks; evaluate potentially affected populations; conduct criminal investigations and prosecute those responsible for having neglected their duties in case of deaths caused by disaster; and compensate surviving relatives killed as a consequence of neglecting those duties.⁵⁰

Government Resettlement of Affected Populations

A number of governments are considering temporary or permanent resettlement of affected populations within their adaptation strategies. São Tomé, for example, adopted as a priority project the relocation of local communities and new settlements for Malanza, Sta. Catarina, and Sundy in order to avoid flood risks.⁵¹ The Gambia

has identified the need for resettlement of various groups of people affected in several areas—those living where water management resources problems are most serious; those near the Kotu stream, which the government seeks to rehabilitate; and fisherfolk near areas where the government wants to rehabilitate mangroves.⁵² In 2008, the government of Papua New Guinea authorized the relocation of 1,500 people from the Carteret Islands to Bougainville in anticipation of climate impacts.⁵³

The Maldives has indicated that resettlement is also preferred. Its Safer Island Strategy, originally adopted after the 2004 tsunami, seeks to consolidate populations via resettlement from smaller, more vulnerable islands into larger and better protected ones, and to develop measures to mitigate ecological disasters that “enable the communities to sustain social and economic development in times of emergencies and disasters.”⁵⁴ This is an attempt to manage social cohesion within resettled communities.

Pakistan identified that the 2010 storms and floods that displaced 20 million people were caused by climate change conditions and, while the country is attempting to relocate these people, it is faced with significant health, housing, and social support problems.⁵⁵ As discussed later in this section, Pakistan should resettle victims pursuant to international IDP standards. As the country has indicated that it faces substantial practical and resource issues in accomplishing this effectively, a key legal question is whether other countries are required to provide assistance under international human rights law, particularly under provisions of the treaty International Covenant on Economic, Social and Cultural Rights, to which over 160 countries are members.⁵⁶

Most past experience in pre-disaster and post-disaster management demonstrates that governments confront enormous challenges in identifying and adopting successful strategies for resettlement. This is due in part to a lack of national standards, institutional planning, and financial resources.⁵⁷ Many existing institutional structures in developing countries do not have the capacity to handle the impact of human displacement or to help communities build resilience. Communities themselves often lack the social capital—institutions, relationships, and norms that affect the quality or quantity of a community’s interactions—necessary to improve their resilience or to recover from disaster.

The focus of government and international assistance on emergency relief instead of long-term prevention has left those affected by slow-onset disasters extremely vulnerable to more frequent drought events. A series of droughts in consecutive growing seasons, for example, can deplete the social capital of a farming community as significantly as a rapid flood or hurricane, and create significant vulnerability to the next disaster.

Disaster planning has not consistently included a deeper understanding of the socioeconomic factors that contribute to building or weakening the resilience of communities. In some cases, resettlement schemes related to infrastructure development and disaster relief have resulted in further poverty for those affected.⁵⁸

According to the IDP Guiding Principles, resettlement or forced relocation is to be used only as a last resort where governments have investigated and found that no feasible alternative is available to protect the health and safety of those affected. It must not be arbitrary or discriminatory and should not harm the needs of indigenous or marginalized groups dependent on or attached to their lands.⁵⁹ All measures must be taken to minimize displacement and its adverse effects. When the disaster or disruptive event causing the resettlement ceases, affected populations must be helped to return home.

Importantly, principles 6, 7, and 29 are particularly relevant to adaptation programs. Principle 6 reads in part:

1. Every human being shall have the right to be protected against being arbitrarily displaced from his or her home or place of habitual residence.
2. The prohibition of arbitrary displacement includes displacement: . . .
 - (c) In cases of large-scale development projects, which are not justified by compelling and overriding public interests;
 - (d) In cases of disasters, unless the safety and health of those affected requires their evacuation; . . .
3. Displacement shall last no longer than required by the circumstances.

Principle 7 requires that those resettled give their “free and informed consent”—the government “shall endeavour to involve those affected, particularly women, in the planning and management of their relocation.” This principle of public consultation is supported by international funding agencies.⁶⁰ Principle 29 requires that “competent authorities . . . assist returned and/or resettled internally displaced persons to recover, to the extent possible, their property and possessions which they left behind or were dispossessed of upon their displacement. When recovery of such property and possessions is not possible, competent authorities shall provide or assist these persons in obtaining appropriate compensation or another form of just reparation.”⁶¹

There are no detailed international regulations expanding on these requirements. Best practice is emerging from experience stemming from past development projects, such as resettlement due to construction of dams or other large infrastructure facilities. Michael M. Cernea, a leading expert in this field, identifies eight risk factors governments must address in resettlement planning, with the participation of affected communities: landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity and mortality, loss of access to common property, and social disintegration.⁶²

The Asian Development Bank suggests that in the context of climate change adaptation governments comprehensively integrate disaster preparedness with associated population displacement strategies through well-coordinated planning efforts across temporal and spatial scales. The Asian Development Bank offers other specific recommendations, including:⁶³

- Retaining migration to meet needs of “new” local labor markets in destination areas to expedite socioeconomic integration;
- Exploring scenarios that identify related sociocultural complexities that international resettlement (such as for the Pacific region) will require;
- Facilitating effective delivery of assistance provided by the international community to regions in distress;
- Enhancing the set of disaster response strategies established by the United Nations to address climate change–induced migration challenges, including building appropriate capacity to facilitate disaster preparedness, managing large numbers of sudden evacuees, and organizing their temporary accommodation and eventual permanent resettlement.

Other experts suggest that compliance with the IDP standards requires a number of other institutional practices:

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- Reorienting work of institutions on disaster preparedness and response to include potential climate-related migration factors. Agencies engaged in disaster risk and adaptation planning should reevaluate their current programs to identify capacity gaps in both slow-onset and rapid-onset disasters. Planning should be reoriented to include climate-related displacement and migration. Improved coordination in this area can strengthen synergies in reducing risk and responding to impacts.
 - Professionalizing resettlement personnel. Professional and standardized training programs should be adopted for disaster response and resettlement personnel. These should be based upon international best practices. Adaptation and other funding for disaster preparedness should be provided to governments in need of assistance to support such programs.
 - Establishing a responsible agency or institution with lead authority to coordinate migration and resettlement in response to disaster. This agency should coordinate with other adaptation planning and disaster prevention agencies on incorporating migration data into planning efforts.⁶⁴

The ADB and other recommendations developed by expert groups warrant further attention and consideration by governments and international agencies that seek to improve the effectiveness of climate adaptation planning. As noted earlier, until recently such issues have not been considered comprehensively within the official international climate change discourse but undoubtedly will be a permanent part of future dialogue on adaptation.

Moving across Borders in Search of Alternative Livelihoods

In response to both slow-onset and rapid-onset climate disasters that affect livelihood or employment, people can be motivated to cross a neighboring border or to move longer distances. This part discusses the characteristics of this type of migration and the international standards related to these movements.

As a general rule, people who move voluntarily or who are forced to move across an international border are entitled to all of the fundamental human rights guarantees that protect human dignity. These include civil, political, economic, social, and cultural rights, such as the right of freedom of movement, the right to choose their place of residence, the right to engage in religion or cultural practice, the right to life, privacy, and to health, the right to seek employment, and the right not to be discriminated against.⁶⁵ With few exceptions, however, this does not include a right to enter another country, to work or remain there, or to receive the same legal protection as a refugee under international law.

This poses a serious concern for disaster victims who face little alternative to survival other than to cross into another country. Many victims of slow-onset drought disasters view themselves in this light. A prolonged drought event may not appear as urgent as a tsunami or flood that attracts immediate international attention, but the need for protection, for a new survival strategy, for jobs outside the drought-affected area, e.g., via labor migration, may be just as compelling a humanitarian issue.

Slow-Onset and Drought-Related Disaster Migrants

Droughts and desertification of agricultural lands are expected to increase with global warming. Climate variability can lengthen the duration of droughts and increase their

frequency, contributing to further desertification—land degradation in arid, semi-arid, and dry sub-humid areas. This results from a variety of factors, including climate and human activities. Droughts and resulting desertification are considered slow-onset disasters because while they do not immediately threaten human life or livelihood, they often do if they continue over a period of years. In this way, prolonged droughts can influence migration decisions, most particularly for households engaged in agricultural employment.

As indicated earlier, whether migration is used as a mechanism to cope with drought incidents is complicated by additional intervening factors (e.g., financial resources, social networks, and population pressure). Where migration has been utilized, studies show that people generally move from one rural area to another on a seasonal basis following employment opportunities either inside their country of origin or across the border to a neighboring state.⁶⁶ Gender differences have not been well-documented in drought-related studies but the data available suggests that while women represent half of all international migration they represent much less of the local, seasonal migrant pool.⁶⁷

Longer-distance international migration (from West Africa to Europe for example) is less frequent and involves much greater expense and planning as well as developed social networks in the destination country. Nevertheless, it appears to be increasing.⁶⁸

Humanitarian agencies are becoming more occupied with mobility due to slow-onset disasters, such as the five-year drought in the Horn of Africa.⁶⁹ Millions of people are suffering food insecurity, water scarcity, and loss of employment. This has led to greater migration throughout the region. The International Organization for Migration (IOM) reported that the border of Liboi in Kenya has become a major border crossing for drought-affected Somalis who are undocumented but searching for better livelihood or work in Kenya.⁷⁰ The Norwegian Refugee Council also reported similar international border crossings during the 2004 drought in Burundi, where drought-affected migrants moved to Rwanda.⁷¹

The protection of humanitarian law in the context of severe or prolonged droughts is uncertain. Refugee law is limited in large part because the legal definition of an international refugee under the 1951 Convention Relating to the Status of Refugees does not include persons fleeing environmental harm.⁷² The Convention, as updated by the 1967 Protocol, defines a refugee as a person who:

owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.⁷³

Governments are therefore not generally required to protect or provide special legal status to the victims entering their territory as a result of climate events. In narrow circumstances a case could be made that some drought-affected victims are entitled to protection by the host country under the principle of nonrefoulement recognized in the 1951 Convention. The principle would prevent a government's return of a person in their country, regardless of legal status, where the person's life or integrity are at risk, or where return would subject the person to the risk of cruel, unusual, or

degrading treatment.⁷⁴ Whether a drought event would rise to this level of risk would have to be demonstrated on a case-by-case basis.

Under the 1969 OAU Convention on Specific Aspects of Refugee Problems in Africa, the refugee definition includes those fleeing “events seriously disturbing public order in either part or the whole of his country of origin or nationality.”⁷⁵ A similar provision is contained in the Cartagena Declaration on Refugees.⁷⁶ While the victims of natural disasters (e.g., tsunamis, earthquakes, and floods) might arguably be included in this definition, it is much less certain whether victims of protracted droughts, like the one ongoing in East Africa, would be included. If a country affected by a severe drought declared a national emergency or formally identified the disaster as one disrupting public order, an argument could be made that international migrants from that country should receive temporary asylum or refuge in the host country and/or international assistance.

More significant humanitarian protection arises for those fleeing serious conflicts that erupt in the wake of environmental scarcity or drought. Normally, these persons should be protected under international refugee law due to the presence of violent or serious conflict.⁷⁷ For example, the related scourges of drought, water scarcity, and food insecurity are currently the most significant climate-related hazards contributing to conflict and mass displacement in East Africa. The competition for scarce land and water resources for pastoralists is on the rise. Higher levels of cattle-rustling incidents have been documented in the region as owners seek to restock herds badly affected by the prolonged drought that has swept across East Africa.⁷⁸ Humanitarian agencies have reported that pastoralists living along the borders of Sudan, Kenya, Ethiopia, Tanzania, and Uganda are losing their lives from increased cross-border resource-based armed conflicts. For a full discussion of how climate change may foster destabilization and conflict, see chapter 25, “Human Security and Military Preparedness.”

A conflict refugee should receive the protection of a host government even if the cause of flight across the border was due to a combination of conflict and other causes, such as severe drought.⁷⁹ However, the government’s obligation to provide these persons with shelter, food, and security may not extend to the provision of employment or jobs. In this way, the designation of “refugee” status for those experiencing both conflict and drought may be of limited value for some victims. Depending on the level of conflict, those migrating due to combined conflict and environmental factors may cross an international border in search of both refuge and temporary employment. Since humanitarian law does not easily facilitate these mixed motives, conflict refugees may shun traditional host government protection in favor of seeking employment, even if it means they remain undocumented. For example, in East Africa the IOM has reported that many now crossing into Kenya due to the drought and resource conflicts are choosing not to seek status as “refugees” or to enter the refugee camps in Kenya because Kenyan law would prevent them from freely traveling or working.⁸⁰ This has led to an increase in undocumented migrants. Without clarification and perhaps new standards, international refugee norms are of diminished utility in protecting persons forced to move because of combined humanitarian crises.

International agencies, such as IOM and the Office for the Coordination of Humanitarian Affairs (OCHA), consider that effectively addressing these mixed humanitarian crises should include facilitating cross-border mobility for labor migration and access to water and pasturelands as a complement or alternative to traditional refugee camps or asylum. At present, there are no international or cross-border

agreements for this type of economic migration. Hence, the agencies have identified the need to establish a regional normative framework to facilitate this regularized mobility.⁸¹

International migrants who have left drought or disaster areas are not otherwise wholly unprotected. As mentioned, each person carries fundamental human rights that governments must safeguard irrespective of their country of origin, such as freedom from discrimination, freedom of thought and religion, and other rights related to the protection of human dignity.

These rights have been reinforced and clarified in the International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families.⁸² Where governments have ratified the convention, it would generally apply to all migrants, including climate-related migrants who engage in international labor migration. The Committee on the Protection of the Rights of All Migrant Workers and Members of Their Families established by the Convention has authority to review the implementation of the treaty by all state parties and make concluding observations on state compliance related to periodic reports that are to be submitted by states.⁸³ Where accepted by states, the Committee would have the further authority to hear complaints of immigrant workers against state parties related to abuses and to determine whether a violation of the treaty occurred.⁸⁴ The main concern with this treaty is that the United States and a number of other countries with high levels of immigration are not legal parties. Where the treaty codifies existing human rights norms and customary international law, such norms would be applicable. However, the treaty's mechanisms for accountability would not apply to nonparty countries, and international migrants would have limited recourse to remedies.

The European Convention on Migrant Workers contains similar provisions clarifying protection of labor migrants but includes provisions that social and medical assistance to migrants be provided on a nondiscriminatory basis as with other nationals.⁸⁵ Its provisions would have broader reach among countries of Europe receiving migrants than the Migrant Workers Convention but, similarly, the determination of immigrant status is largely discretionary. Each country is authorized to determine which international migrants will be provided legal status to enter, remain, and work in their territories.

Rapid-Onset Disaster Migrants

The conditions facing rapid-onset disaster migrants and those confronted by slow-onset and drought-related disaster migrants are significantly different. Victims migrating from storms or floods most often seek to return home shortly after disasters occur or when it is safe to do so, as opposed to drought-related migrants who may seek to engage in international labor migration as a means of coping with longer-term or persistent drought situations. As such, rapid-onset disaster migrants have an immediate and temporary need for protection and, where return is delayed, they may need to engage in short-term employment.

Rapid-onset disaster migrants who are forced to cross international borders are perhaps better protected under international law than drought victims. Major floods or storms related to climate change may cause serious disruptions to a country's infrastructure, housing, and food distribution systems and may disrupt public order. Such events could lead to mass displacement. Victims of these disasters could potentially qualify as refugees under the 1969 OAU refugee convention referred to above or the

Cartagena Declaration on Refugees if such events were so extreme as to disrupt public order, because both of these international instruments include in their definition:

The term “refugee” shall also apply to every person who, owing to . . . events seriously disturbing public order in either part or the whole of his country of origin or nationality, is compelled to leave his place of habitual residence in order to seek refuge in another place outside his country of origin or nationality.⁸⁶

This complies with the principle of nonrefoulement discussed above, but it is limited in two ways: first there must be an extreme event that disturbs public order and forces persons to cross an international border; and second, it would apply only to those countries that are signatories of the OAU Convention or have incorporated the Cartagena Declaration.

In practice, general humanitarian assistance and temporary assistance have been provided to such victims crossing borders, as demonstrated by government action after the 2004 Asian tsunami. Canada, Switzerland, and the United Kingdom suspended deportations of people from Sri Lanka, India, Somalia, Maldives, Seychelles, Indonesia, and Thailand.⁸⁷

For those not qualifying as refugees but who cannot return to their country of origin because of the impacts of a natural disaster, some countries have adopted laws to provide for temporary protected status (TPS). The United States Immigration Act of 1990 provides for discretionary designation of TPS in events such as earthquakes, floods, droughts, epidemics, other environmental disasters, or disruptions to living conditions where the state of origin cannot adequately manage the return of its nationals.⁸⁸ To qualify, several factors must be present: an environmental disaster in the foreign state resulting in a substantial, but temporary, disruption of living conditions; the foreign state is unable, temporarily, to handle adequately the return of its own nationals; and the foreign state officially has requested such designation.⁸⁹

The status has been granted in a few circumstances where disasters occurred in Montserrat, Nicaragua, and Honduras. It applies only to those in the United States at the time of disaster and allows for a six-month stay, which can be extended to 18 months. During the stay, residents can work but cannot apply for admission of spouses or family members.

The Finnish and Swedish Alien Acts provide for TPS when victims cannot return due to serious environmental disruption, and Denmark can provide even an expanded protection for victims and their families seeking humanitarian asylum from drought disaster.⁹⁰ Norway is also considering reform to its Aliens Act that will allow its Ministry of Immigration to grant residence permits to those whose place of origin is affected by a humanitarian disaster, including a natural disaster.⁹¹

Much more narrowly, the Council of Europe adopted a directive on TPS for situations of a mass influx due to armed conflict and where the disruption prevents return to the country of origin or the persons would be subject to serious human rights violations and would not qualify otherwise under the 1951 Convention. In such cases, the Council of Europe may decide to convey temporary status up to one year, which can be extended.⁹²

Those who do not qualify for these narrow exceptions, such as slow-onset disaster migrants, are not entitled to asylum or special status. As yet, there is no global migration agreement, nor known binational agreements that cover migration, voluntary or

forced, due to environmental disasters. Each country determines the terms (e.g., visas) and the grounds for entry of migrants to enter and to work in its territory.

While the UN high commissioner for refugees has a mandate to provide assistance in such cases where governments cannot, there is no requirement for host states to provide temporary or permanent status for those affected, leaving them possibly without refuge if their own countries are unable to assist. If they do cross borders or remain “undocumented,” they may be at risk of suffering criminal sanctions or discrimination or being sent back to an uncertain or dangerous environment. The current TPS designations are not only highly discretionary but too narrow to apply to most cases of international climate migration.

Sea-Level Rise and Migrants

Sea-level rise is likely to threaten large urban coastal populations in developing countries, especially large populations in South Asia and East Asia and along the coasts of Africa, including the Nile Delta. Predictions of thermal expansion of the oceans and accelerated melting of the polar and Greenland ice caps are expected to lead to a rise in sea levels of at least one meter by the century’s end, and possibly considerably more.⁹³ The break of an ice mass from the Petermann Glacier in northwest Greenland on August 5, 2010, of 251 km² in size (a glacier four times the size of the island of Manhattan) is consistent with these scientific predictions.⁹⁴ More than 100 million people live within one meter of mean sea-level rise.⁹⁵

Of the various categories of climate change migrants, persons expected to flee to other countries due to sea-level rise inundating part or all of small-island nations are in a particularly unique position. Several small-island states within a meter of sea level could be submerged. (The legal ramifications of this potential event are discussed in this chapter’s section titled “Finding Alternative Homelands and the Issue of Statehood.”) Long before predictions of sinking islands come to pass, storm surges and flooding of low-lying mainland deltas and island coasts are expected to impair agricultural or fisheries industries, and force people to higher ground.⁹⁶ These impacts are already being reported.⁹⁷ The severe impairment of income-generating activities may lead coastal populations to move to other countries in search of new jobs or livelihoods. Thus, while mainland coastal regions and small islands may remain technically habitable, the loss of employment opportunities from fishing, agriculture, and tourism may lead to migration.

People affected in this way are covered by the same human rights principles pertaining to migrants discussed above but are not as yet viewed by governments as “refugees.” However, islanders who are victims may become “stateless” persons should their homelands become uninhabitable due to submersion, persistent flooding, or loss of drinkable water, and the provisions of various treaties and international instruments relevant to stateless persons may apply (see the section below titled “Finding Alternative Homelands and the Issue of Statehood”). International law in this area does not require states to provide permanent refuge. The principle of nonrefoulement discussed above would seemingly prevent return if the victims would risk human life but beyond that, international law is unclear about providing a stateless person with a new state or territory. The European Directive on Subsidiary Protection might be most pertinent as it would convey at least temporary status to third-country nationals or stateless persons not otherwise qualifying as refugees where return would risk

serious harm in the form of inhuman or degrading treatment of an applicant in the country of origin.⁹⁸

Liberalizing Immigration to Protect Climate Change–Related Migrants

A number of groups, political leaders, and international agencies have referred to those displaced by climate disasters as refugees, with some calling for the application of refugee status to those affected by climate change. There has been considerable resistance to expanding this definition. Instead, international agencies and experts have called for reassessing strict limitations on migration and considering new avenues for protecting those forced to migrate in the context of adaptation.

In 2009, international humanitarian agencies requested the United Nations Framework Convention on Climate Change (UNFCCC) to consider the issue in the climate negotiations leading up to negotiations in Copenhagen.⁹⁹ To some extent the issue was debated in side-events during that negotiating session and again in similar meetings during the Sixteenth Conference of the Parties (COP16) in Cancun, Mexico, in 2010.¹⁰⁰ The Outcome Document resulting from COP16 recognizes the need to consider human displacement and migration in adaptation planning, stating in paragraph 14 (f) that the UNFCCC:

Invites all Parties to enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following: . . . (f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at national, regional and international levels; . . .¹⁰¹

The Council of Europe also considered these issues and at least one parliamentary committee has asked governments in the region to adopt standards for climate-related migrants within a migration agreement or as a protocol to the existing European Convention on Human Rights. Still others are calling for a full convention on the subject.¹⁰²

In the absence of a new convention, policymakers can seek to protect climate change–related migrants and facilitate migration that enhances community of origin development through more liberalized or innovative immigration policies. Two areas for this type of reform are discussed below: development-oriented labor migration agreements, and adopting a new immigrant-protected status.

Modifying Labor Agreements to Promote Development and Adaptation

At the Global Forum on Migration and Development in 2010, governments identified the benefits of new cooperation agreements between neighboring countries, and stressed the need for bilateral and regional migration agreements to help address climate change–related migration.¹⁰³ They noted that circular labor migration schemes that incorporate development programs and the reinvestment of remittances are mechanisms that could assist people living in communities at risk to build their resilience to disaster.

The Asian Development Bank's 2010 study of climate-related migration in the Asia-Pacific region concurs. It recommended the adoption of new migration governance mechanisms to facilitate the process of migration with minimum cost and to encourage the safe transfer of remittances to assist adaptation: by supporting household income where climate impacts have reduced productivity; providing emergency support when there is increased incidence of climate events; and increasing long-term capacity of a community to adapt by reinvestment in in-situ economic activity.¹⁰⁴ While recognizing that migration is not a panacea, it suggests that in some hot-spot communities, migration can improve livelihood development, particularly if working in tandem with other adaptation strategies. Moreover, "[p]oor governance results in significant undocumented migration, lack of protection and exploitation of migrant workers."¹⁰⁵

Bilateral labor-development migration agreements offer community members the opportunity to work in another country and to learn skills to improve their capacity for entrepreneurship or other development activities back home. The components of these agreements vary, but they may be of considerable value to climate change-affected communities. The existing labor-migration models would need to be scaled up if the goal is to cover a larger segment of vulnerable populations.

One model of interest for small-island states is the Kiribati Australia Nursing Initiative (KANI) program that facilitates nursing students in Kiribati to study, work, and learn in Australia.¹⁰⁶ It was developed under a five-year pilot program to address population and climate change issues affecting Kiribati.¹⁰⁷ The program is available to 81 students who must study in their home territory for four months, then complete a diploma and bachelor's degree in nursing. As it incorporates skill-building, temporary immigration, and financial assistance, its expansion to other areas of employment and to other island states may be warranted.

The United States has migration compacts with island states that were former trust territories (Federated States of Micronesia, Marshall Islands, and Palau) that allow for migration and work in the United States.¹⁰⁸ While the underlying compacts are meant to help the islands develop independently, they do not address climate-related events, and other issues make the program problematic. For example, though there are 30,000 to 40,000 islanders living in the United States under this program, some congressional members are seeking to limit the program,¹⁰⁹ and the United States government still retains large discretionary authority to deport islanders.¹¹⁰ Other Pacific island labor-migration programs are employer driven and have strict limitations not amenable to addressing the impacts of climate displacement.¹¹¹

Circular labor migration agreements, such as those between New Zealand and islands that are closely associated with New Zealand, such as Samoa, Kiribati, and Tuvalu,¹¹² are similar to guest worker programs. They generally allow persons from a particular country to enter for a fixed period of time to work in a specific sector and/or with a specific employer as prearranged. After the term ends, migrants are required to return home. If migrants overstay their visa or fail to return, severe penalties are incurred, such as disqualification from future migration programs, criminal punishment, and prohibition from returning to the country for any purpose.¹¹³

These agreements are meant to benefit both the sending and receiving migrant countries. Researchers have found that this goal can be met as the following example illustrates:

Korean firms participating in turnkey projects in the Middle East during the 1970s acquired project management skills that were applied to the large

construction projects in the Korean industrialization drive a decade later . . . the migrants acquired skills and experience while abroad, and then used them upon settling permanently back in their home countries. Return, however, need not be permanent, but is in many cases temporary or even cyclical.¹¹⁴

Newer agreements often have a “development” component. For example, France and Mauritius ratified a new agreement in 2010 that includes provisions for 800 temporary workers from Mauritius per year to work in France in selected sectors (for example, in the agricultural, fishing, construction, and hotel industries 500 permits are to be allotted).¹¹⁵

Whether circular migration programs can deliver a development benefit in every circumstance is unclear. “Once the migrant has covered basic necessities and has accumulated the necessary human and social capital, it is more likely that he/she will seek possibilities to invest in a business in the home country or sometimes even in the destination country.”¹¹⁶ Among the factors that increase the likelihood of positive development benefits are the expected improvement of socioeconomic conditions in the country of origin, a return by the migrant that is both voluntary and planned, and the acquisition of skills and savings by the migrant.¹¹⁷

The closest example of a circular migration agreement relevant to addressing climate disasters is the Colombian-Spain Temporary and Circular Labor Migration Scheme (TCLM).¹¹⁸ Under this program, Colombians facing recurring natural disasters are offered employment opportunities, business training, and education in Spain, and can send remittances home while their community recuperates. The program includes a codevelopment component in which people who do not migrate are given both social and financial support. Essentially, this is a circular labor migration agreement that facilitates migrants as agents for development.¹¹⁹ The potential promise of such agreements to help build resilience among climate-affected communities warrants further consideration by policymakers in countries undertaking adaptation planning that are sending and receiving migrants.

New Status of Protection

For persons who do not qualify as refugees but whose return is not feasible or not reasonable due to circumstances in their country of origin, the United Nations (UN) high commissioner for refugees has suggested that states establish alternative forms of protection and otherwise identify and fill existing legal and operational gaps in protecting people vulnerable to climate displacement.¹²⁰

The special representative of the UN secretary general on IDPs has similarly recommended that states should provide greater protection for international migrants affected by disaster who are not able to return, possibly through their national migration management systems.¹²¹ The special representative has also called for national legislation to incorporate the IDP Guiding Principles to expand implementation and increase accountability, and for governments to use the principles as a “checklist” during a disaster to ensure proper response and protection.¹²²

At the 2010 Global Forum on Migration and Development, many governments called for “urgent action” on this issue, with some recommending a new set of Guiding Principles on migration related to climate change that facilitate solutions by governments and other actors.¹²³ The IOM has also separately recommended that governments address the normative gaps in protection of migrants, and facilitate a holistic approach to research and policy development.¹²⁴

A number of cogent policy reflections on this topic emerged from the United Nations University and Munich Re Foundation Summer Academy, which this author had the privilege to chair in 2010.¹²⁵ These included new agreements for cooperation on migration and resettlement. In addition to recommending that governments support migration-development schemes, such as the Colombia-Spain model, the experts recommended governments adopt the following, more permanent, reforms.

- Establish a temporary relocation scheme (TRS) for climate-displaced migrants where some migration or displacement across borders will be inevitable. Governments should consider establishing a TRS mechanism to allow individuals to apply for legal temporary status in a destination country while still in their home country *if* they are displaced by certain extreme rapid- and/or slow-onset climate disasters (e.g., high-impact storms and prolonged droughts); *and* they have no opportunity to relocate elsewhere in their country. States could consider establishing an open-ended scheme or one based on a quota for such disaster victims. Any scheme established should include an appropriate framework for duration, employment, and assistance. This mechanism could serve to reduce irregular migration by providing temporary legal avenues for those most critically affected. It could also be an important mechanism to assist countries with potential mass displacement across borders from unanticipated natural calamities.
- Extend the stay of deportation for migrants or provide temporary protection status (TPS) for those who cannot return to their home country. Governments should clarify national law to ensure that a stay of deportation is possible for those living in a host country who cannot safely return to their home country and where no internal flight alternative is possible, or survival is threatened upon return due to their vulnerability. In this context, the extended stay of deportation would be consistent with international law, granting limited rights and legal status where return would jeopardize a person's survival.¹²⁶ Supporting evidence of the nature of disaster could be provided through a new type of review process, such as a *Migration and Displacement Vulnerability Assessment (MDVA)*, or similar evaluations that could independently verify vulnerability of a particular region affected by disaster. A certification process could also be established to verify disaster threats and ensure that receiving countries have access to such information in determining legal status.¹²⁷

Finding Alternative Homelands and the Issue of Statehood

Small-island states are particularly vulnerable to climate change impacts, with some anticipating considerable migration or permanent resettlement of their populations. As discussed above, some of these states face an existential threat as a result of sea-level rise. The World Bank calculates, for example, that a “one-meter rise in the sea level could result in the loss of 75 percent of certain low-lying islands of Vanuatu, and 80 percent of the Majuro atoll in the Marshall Islands—home to 50 percent of that nation's population.”¹²⁸ Some 40 island nations are threatened. With the loss of physical territory and population, an island may lose its “statehood”—its recognition as a state under international law—and its entire population could be rendered stateless. There is no precedent for this type of loss.¹²⁹

Certainly, having a defined “territory” is one of the key elements of statehood under international law. The Montevideo Convention on the Rights and Duties of

States provides that states must possess (a) a permanent population; (b) *a defined territory*; (c) government; and (d) capacity to enter into relations with other states.¹³⁰ According to international commentators, as long as there is an effectively established political community, it doesn't matter whether the territory is small and its frontiers ill-defined.¹³¹

Yet, international law does presuppose that some territory exists. If an island does sink, a key question is whether the state would still possess sovereign rights to the territorial sea and continental shelf (that used to exist) or rights to the deep-sea bed and the land submerged. These could potentially become income-generating assets for the community in exile.

Under the United Nations Convention on the Law of the Sea (UNCLOS),¹³² islands have rights to territorial waters of 12 nautical miles and are entitled to claim further authority over an exclusive economic zone (EEZ) of 200 miles.¹³³ These rights are substantial. Article 56 (a) of Part V of the Convention states:

In the exclusive economic zone, the coastal State has:

(a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds. . . .¹³⁴

The land naturally extending (up to 350 miles) from the island's land mass below water, which is known as the continental shelf, can be claimed by the island state for its exclusive use in drilling, mining, or other activities.¹³⁵ The baseline from which these distances are calculated may vary under the UNCLOS. Part II of the treaty, in articles 6 and 7, provides some reference.

Article 6 Reefs

In the case of islands situated on atolls or of islands having fringing reefs, the baseline for measuring the breadth of the territorial sea is the seaward low-water line of the reef, as shown by the appropriate symbol on charts officially recognized by the coastal State.

Article 7 Straight baselines

1. In localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity, the method of straight baselines joining appropriate points may be employed in drawing the baseline from which the breadth of the territorial sea is measured.¹³⁶

When natural erosion diminishes the coastline, including from sea-level rise, a commonly held view is that the baseline for calculating these rights is altered as well—that the baseline is ambulatory.¹³⁷ However, not all scholars agree with this interpretation of international law. In a detailed discussion in chapter 21 on international maritime law, the fundamental assumptions about the impact of geomorphological changes on state maritime jurisdiction that underlie this “ambulatory” theory are challenged. Experts at the World Bank have posed the dilemma in this way:

Article 121 provides that islands are entitled to a 200-mile wide EEZ as well as a territorial sea, contiguous zone, and the continental shelf. According to most commentators, an island in the legal sense has to meet two conditions: (i) it must be natural and not an artificial installation and (ii) it must always be above sea level. Formations visible only at low tide, and permanently submerged banks and reefs, do not in general produce a territorial sea. One key, therefore, to the issue of climate change as discussed here is that the rising sea level could submerge part of or an entire island, thereby potentially giving rise to the claim that the impacted island state has been deprived of its right to use that part of its island group to extend its EEZ. [citations omitted]¹³⁸

If the baselines are recognized as permanent, islands could retain their economic rights even if the island is submerged. This could provide some relief for affected island peoples. For example, Part V, art. 60 of UNCLOS recognizes state jurisdiction over artificial islands. While this provision specifically prevents a state from using an artificial island to calculate baselines for sovereignty under UNCLOS, the recognition of a permanent baseline for islands that become submerged could presumably allow for the state to add land mass to the submerged area in order to retain physical integrity suitable for human habitation.¹³⁹

Some island countries are apparently taking this approach to preserving their islands and maritime boundaries. Consider the following analysis.

Under UNCLOS, islands can generate all four maritime zones. In contrast, Article 121(3) states that “[r]ocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.”

Rocks are therefore entitled only to a territorial sea and contiguous zone. For states composed of many separate islands, the transformation of an island into a rock could result in the loss of a large EEZ and continental shelf zone.

What legally qualifies as a rock under the wording of Article 121(3) is not clear. For example, what kind of “human habitation” or “economic life” is required to pass for an island? States such as Iceland and Japan have reinforced small islands disappearing below sea level, at great expense, to try and prevent them from becoming rocks. If successful, this would maintain the EEZ and continental shelf zones generated by these islands. [citations omitted]¹⁴⁰

Experts differ in their opinions as to whether such permanent boundaries would be accepted. It is clear that states must report to the United Nations their outer boundaries, which, if not changed, become permanently fixed. “This provision [Art. 121 of UNCLOS] allows coastal states to change the baseline as long as such a change is done in accordance with the Convention. If a state does not take any actions to change the baseline, however, the old baseline remains effective. No state, to date, has changed its baseline pursuant to this Article.”¹⁴¹ However, this does not appear true for setting a minimum boundary, particularly to preserve what a state possesses before sea-level rise impact.¹⁴² The traditional view is that boundaries move with natural accretion and erosion, that maritime baselines are in fact ambulatory.¹⁴³ Thus, some further clarification by the international community is warranted in the context of islands that may lose their sovereignty due to sea-level rise.

Scholars have suggested various means for addressing this dilemma. For example, Rosemary Rayfuse suggests that nations recognize a “deterritorialized” state as a

legitimate sovereign body that would retain control over its former territories' assets (e.g., territorial sea, EEZ, and seabed), though its people may be hosted by another state.¹⁴⁴ Maxine Burkett also recommends the recognition of ex-situ nationhood if it "allows for the continued existence of a sovereign nation, afforded all the rights and benefits of sovereignty amongst the family of nations, in perpetuity."¹⁴⁵ She contends that, due to the rootedness of island peoples to their ancestral lands for their identity, culture, and livelihoods, and their lack of culpability in the impact of climate change, the international community has ample justification to recognize this special status "as compatible with societal mores and principles of equity."¹⁴⁶

Scholars debating the issue highlight the precedent of nations that once had their territory, then lost it, yet still retain certain aspects of sovereignty. An example is the situation of the Military Order of Malta, which formerly had statehood, lost its territory, yet continued to have internationally recognized sovereignty.¹⁴⁷ The status in the United Nations of Palestine, which also formerly claimed territory, may become a new precedent.¹⁴⁸

A further critical issue for international human rights doctrine should small islands become uninhabitable is the question of how to ensure that peoples actually can continue to enjoy the same way of life, livelihood, and culture that they did in their former territory. The recognition that sovereignty over economic resources would continue is but one part of the larger human dimension. Burkett, proposing ex-situ nationhood, suggests that the island state government that is exiled negotiate with the new host states where its people are living to retain governance authority.¹⁴⁹ While this may provide some temporary protection, as a long-term solution it presents a number of human rights concerns. Can the government of such an affected people, who may be scattered among various countries, continue to govern for purposes of ensuring the actual community continuity of the former political state and coherence of its unique social and cultural characteristics? If land is such an inherent part of identity to a people, can living in multiple countries or territories suffice as a surrogate? These human rights issues have not been fully examined by commentators.

International human rights law does not provide clear requirements on the status of such persons, the legal protection that must be accorded them on a permanent basis, or how states are to consider their options before "statelessness" arises.¹⁵⁰ The current treaties on statelessness are insufficient to address the potential for either movements in anticipation of territorial loss or complete relocation under predicted climate change scenarios.¹⁵¹ If an entire population must be resettled, for example, it is uncertain which countries may bear some responsibility under international law for accepting the populations. It is also unclear whether international law or the community of nations must continue to recognize the former state's sovereignty. Most of the legal doctrine in this area relates to the succession of states or abandonment of territory, neither of which applies here.¹⁵²

International human rights law does provide that all peoples have the fundamental right to self-determination and to choose their form of government and governance, and that all states have an obligation to promote this right (nearly all states have ratified both of the two major international covenants on human rights).¹⁵³ Article 2 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) requires each state party to undertake progressive measures to fulfill their obligations individually and in cooperation with other states. The Committee on Economic, Social, and Cultural Rights (CESCR), established by the UN Economic and Social

Council in 1985 with a mandate to review state implementation of obligations under the ICESCR,¹⁵⁴ has indicated that it is the responsibility of a state to request assistance from other countries to ensure that it can fulfill its obligations under the treaty, and that it is the responsibility of other countries to provide assistance and cooperation where feasible.¹⁵⁵ In all, 160 countries have ratified the covenant.

Island peoples have a right to preserve their way of life, their families, and their cultural and religious practices, including the ability to practice their beliefs and traditions in community with others of the same group.¹⁵⁶ Article 15 of the ICESCR provides:

1. The States Parties to the present Covenant recognize the right of everyone:
 - (a) To take part in cultural life;
 - (b) To enjoy the benefits of scientific progress and its applications;
 - (c) To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.

Under resolution 1985/17 of the United Nations Economic and Social Council, the CESCR's mandate includes the periodic review of state parties' reports on implementation of their obligations under the treaty. The CESCR will also have authority to hear and determine complaints of victims of abuse living in states that have ratified the Optional Protocol to the Covenant.¹⁵⁷ The Office of the High Commissioner for Human Rights has indicated:

All States parties are obliged to submit regular reports to the Committee on how the rights are being implemented. States must report initially within two years of accepting the Covenant and thereafter every five years. The Committee examines each report and addresses its concerns and recommendations to the State party in the form of "concluding observations." With regard to individual complaints, on 10 December 2008, the General Assembly unanimously adopted an Optional Protocol (GA resolution A/RES/63/117) to the International Covenant on Economic, Social and Cultural Rights which provides the Committee competence to receive and consider communications. The General Assembly took note of the adoption by the Human Rights Council by its resolution 8/2 of 18 June 2008, of the Optional Protocol. The Optional Protocol was opened for signature at a signing ceremony in 2009. In addition to the Committee on Economic, Social and Cultural rights, other committees with competence can consider individual communications involving issues related to economic, social and cultural rights in the context of its treaty.¹⁵⁸

In principle under international law, the international community as a whole, or a smaller consortium of countries that have contributed most to the global warming impacts leading to the loss of islanders' rights, could bear responsibility to these peoples and their governments for permanent protection, assistance, and, potentially, some form of remediation.¹⁵⁹ Cause and effect of individual nations is difficult or impossible as a matter of proof. However, the principles embedded in international human rights treaties obligating other states to provide assistance may apply to

higher-income countries as a group (especially those whose combined contribution to global warming can be assumed to have contributed to the physical phenomenon of sea-level rise).¹⁶⁰ Chapter 24, “Legal Rights and Remedies,” provides a full discussion of potential legal rights and remedies.

If statelessness is foreseeable, the United Nations high commissioner for human rights asserts that a principle of “prevention of statelessness” arises akin to a right to nationality under the 1961 Convention on the Reduction of Statelessness, the Draft Articles on Nationality of Natural Persons in Relation to Succession of States, and, for countries regionally within the Council of Europe, the Convention on the Avoidance of Statelessness in Relation to State Succession.¹⁶¹ Other experts have indicated that while there is no right of nationality it could perhaps be inferred as well in the inverse—as a negative duty—that arises under the Convention on Statelessness.¹⁶² McAdams cites the example of an offer of citizenship by New Zealand, Australia, and the United Kingdom to Nauruans in 1960 to address the phosphate mining contamination and inhabitability of Nauru.¹⁶³ Nauru rejected these offers because such an agreement would require assimilation of its people into a foreign culture, and they sought an island of their own.

Under UN General Assembly Resolution 50/152 (1996), the high commissioner has a mandate on prevention and protection of stateless persons and must help to facilitate their protection within the international community.¹⁶⁴ In its role, the high commissioner has suggested that climate change may require long-term political arrangements or bilateral and multilateral agreements to address the issue of those forced to leave or be resettled from islands due to sea-level rise.¹⁶⁵ For example, Indonesia apparently offered to lease its islands to the climate-displaced.¹⁶⁶ While this may address the issue of providing a territory to island peoples displaced, this type of arrangement raises additional issues regarding rights of island peoples to perpetuate their culture in a territory without the worry of lease payments that one day could cause economic hardship.

These agreements “would need to provide, *inter alia*, for the rights of residence, military obligations, health care, pensions, and other social security benefits.”¹⁶⁷ In addition, the high commissioner makes the point:

The early introduction of education and other measures to prepare for such displacement, such as labour migration schemes, could serve not only to increase the resilience and ability to adapt in the host country, but also provide further resources and reinforce the resilience of the population remaining on the islands. Although complete relocation of the entire population would be a measure of last resort, early preparedness could also help avert a humanitarian catastrophe by promoting orderly movements of affected populations and increasing the viability of the move.¹⁶⁸

The protection of culture, language, and identity, and land tenure and employment rights are additional requirements under the International Covenant on Economic, Social and Cultural Rights that states will need to consider in either offering or accepting bilateral arrangements to relocate island populations.¹⁶⁹

Conclusion

International law is evolving with respect to climate-induced displaced persons and migrants. Humanitarian and human rights doctrines provide principles and legal

standards that lay a foundation for further consideration of both the obligations of governments and the protection of the rights of those affected. Other principles and international norms may be brought to bear.

The principle of “common but differentiated responsibilities” within the international community and reflected under the UNFCCC may suggest that wealthier countries will need to transfer technical, institutional, and financial resources to affected countries and peoples to address displacement and migration. In the 2010 study by the Asian Development Bank, the authors suggest that Asia-Pacific Economic Cooperation association (APEC), Association of South East Asian Nations (ASEAN), and the South East Asian Association for Regional Cooperation (SAARC) will need to cooperate on migration issues, particularly in “data collection, management on migrant recruitment, settlement, and remittance flows.”¹⁷⁰ They also recommend the establishment of a specialized agency to develop a comprehensive and effective mechanism for regional coordination of migration problems with funding to assist countries in adaptation planning.

It is problematic that most governments have yet to integrate in a significant way the migration-related challenges of predicted climate change impacts within their national adaptation plans or their immigration policies. In part, this may be because migration is highly politicized in most developed countries. This suggests the continuing need for dialogue on appropriate responses between sending and receiving countries. A large increase in migration without appropriate planning may lead to greater discrimination against migrants, as well as local conflicts and further human rights abuses.

To begin a more robust dialogue on best practice in climate adaptation, international humanitarian agencies requested that UNFCCC consider the issue more comprehensively in its negotiations, resulting as mentioned in paragraph 14(f) of the UNFCCC Outcome Document on Adaptation adopted at COP16.

A vigorous debate on what policies and standards would be appropriate is certainly warranted. Though migration related to climate change raises issues of human security, it should not necessarily be viewed as a failure of adaptation. More thoughtful planning around human mobility could help to reduce involuntary displacement on the one hand, and on the other, could better channel positive migration toward poverty alleviation strategies to improve land and water management and abate potential conflicts.

Notes

1. ROUNDTABLE 3, REPORT OF PROCEEDINGS, FOURTH MEETING OF THE GLOBAL FORUM ON MIGRATION AND DEVELOPMENT (Mexico, Nov. 8–11, 2010), at 37, *available at* <http://www.gfmd.org/en/documents-library/mexico-2010.html>.

2. *Id.*

3. REPORT OF THE CONFERENCE OF THE PARTIES ON ITS SIXTEENTH SESSION, HELD IN CANCUN FROM 29 NOVEMBER TO 10 DECEMBER 2010, para. 14(f), FCCC/CP/2010/7/Add.1 (Mar. 15, 2011).

4. *See, e.g.,* M. Meyer Lueck, *United States Environmental Migration: Vulnerability, Resilience, and Policy Options for Internally Displaced Persons*, in CLIMATE CHANGE & MIGRATION: RETHINKING POLICIES FOR ADAPTATION AND DISASTER RISK REDUCTION (UNU-EHS and Munich Re Foundation, Bonn, 2011).

5. WORLD METEOROLOGICAL ORGANIZATION (WMO), STATEMENT ON THE STATUS OF THE GLOBAL CLIMATE IN 2010 (Geneva, 2011). Global temperature records available for its assessment date back to 1880. *See also* U.S. Department of Commerce National Oceanic and

Atmospheric Administration (NOAA) statistical review, *available at* http://www.noaanews.noaa.gov/stories2011/201110112_globalstats.html.

6. Bruno Philip, *Bangkok Faces Severe Flooding*, THE GUARDIAN (Nov. 2, 2010), *available at* <http://www.guardian.co.uk/world/2010/nov/02/thailand-flooding>.

7. Sahar Ahmed, *Pakistan Flood Damage at \$9.5 Billion*, REUTERS (Oct. 13, 2010), <http://uk.reuters.com/article/2010/10/13/uk-pakistan-floods-damages-idUKTRE69C18P20101013>.

8. D. Guha-Sapir, F. Vos, R. Below & S. Ponsere, *Annual Disaster Statistical Review 2010*, 1, 21, WHO collaborating Centre for Research on the Epidemiology of Disasters (CRED), Catholic University of Louvain. Since 1988, with the sponsorship of the United States Agency for International Development's Office of Foreign Disaster Assistance (USAID/OFDA), CRED has maintained EM-DAT, a worldwide database on disasters. It contains essential core data on the occurrence and impacts of more than 19,000 disasters in the world dating from 1900 to the present.

9. *Id.* Since 2000, the average yearly number of disasters has increased to over 380. *See also* UNITED NATIONS DEVELOPMENT PROGRAM (UNDP), *FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD, HUMAN DEVELOPMENT REPORT 2007/2008* (2009). CRED defines a disaster as "a situation or event which overwhelms local capacity, necessitating a request to a national or international level for external assistance; an unforeseen and often sudden event that causes great damage, destruction and human suffering." *See supra* note 8, at 7.

10. S. Kutuzov & M. Shahgedanova, *Glacier Retreat and Climatic Variability in the Eastern Terskey-Alatau, Inner Tien Shan between the Middle of the 19th Century and Beginning of the 21st Century*, GLOBAL & PLANETARY CHANGE 69 (2009), *available at* <http://www.paleogeology.org/regions/TienShan/GlacierRetreat/>.

11. UNDP, *supra* note 9.

12. *See, e.g.*, M. Leighton, *Migration and Slow-Onset Disasters: Desertification and Drought, and Other Case Studies*, in *MIGRATION, ENVIRONMENT AND CLIMATE CHANGE: ASSESSING THE EVIDENCE* (F. Laczko & C. Aghazarm eds., 2009); UNIVERSITY OF ADELAIDE, FLINDERS UNIVERSITY, AND UNIVERSITY OF WAIKATO, *CLIMATE CHANGE AND MIGRATION IN ASIA AND THE PACIFIC* (draft) (Asian Development Bank, 2010) [hereinafter *CLIMATE CHANGE AND MIGRATION IN ASIA AND THE PACIFIC*]; K. WARNER, C. EHRHART, A. DE SHERBININ, S. ADAMO & T. CHAI-ONN, *IN SEARCH OF SHELTER: MAPPING THE EFFECTS OF CLIMATE CHANGE ON HUMAN MIGRATION AND DISPLACEMENT* (UNU, 2009); *ENVIRONMENT, FORCED MIGRATION AND SOCIAL VULNERABILITY* (T. Affi & J. Jäger eds., 2010).

13. U.N. Population Division, *Trends in Total Migrant Stock: The 2008 Revision*, *available at* <http://esa.un.org/migration/index.asp?panel=1>; P. Martin & G. Zucheher, *Managing Migration, the Global Challenge*, POPULATION BULL. 1–3 (2008). In 2005, of the 115 million migrants hosted by developed countries, 62 million came from developing countries; of the 75 million hosted by developing countries, nearly the same amount or 61 million were from developing countries.

14. Martin & Zucheher, *supra* note 13. In 2010, of global migrants, 74 million people from developing countries had migrated to other low-income countries as compared to 73.5 million who migrated to high-income countries. U.N. Population Division, *Trends in Total Migrant Stock*, *supra* note 13.

15. Investigation and research paper of the author for the United Nations Food and Agriculture Organization, on file with the author (2009).

16. *Id.* THE WORLD BANK, *NATURAL DISASTER CASE STUDIES* (M. Arnold et al. eds., 2006).

17. IPCC, *CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY* (M.L. Parry et al. eds., 2007).

18. *See, e.g.*, M. Leighton, *supra* note 12; B. Knerr, *Desertification and Human Migration*, in *BIOLOGICAL RESOURCES AND MIGRATION* 317–38 (D. Werner ed., 2004); M. EZRA, *ECOLOGICAL DEGRADATION, RURAL POVERTY, AND MIGRATION IN ETHIOPIA: A CONTEXTUAL ANALYSIS*, WORKING PAPER No. 149 (New York, Policy Research Division Population Council, 2004), <http://www.popcouncil.org/pdfs/wp/149.pdf>; S. Henry, B. Schoumaker & C. Beauchemin, *The Impact of Rainfall on the First Out-Migration: A Multi-Level Event-History Analysis*, in 5

BURKINO FASO, POPULATION AND ENVIRONMENT 423–60 (2004); K. VAN DER GEEST, INSTITUTE FOR ENVIRONMENT AND HUMAN SECURITY, MIGRATION AND NATURAL RESOURCES SCARCITY IN GHANA (UNU-EHS, EACH-FOR Project, 2009), *available at* <http://www.ccema-portal.org/article/read/each-for-project-publications>.

19. This is reflected, for example, in the 2010 Global Forum on Migration and Development where governments met with experts on *Assessing the Relevance and Impact of Climate Change on Migration and Development*, ROUNDTABLE 3, *supra* note 1.

20. *See, e.g.*, Joint letter of InterAgency Standing Committee signed by 18 members of the United Nations, humanitarian assistance Intergovernmental Organizations, and NGOs (April 30, 2009) to the UNFCCC, *available at* <http://www.iom.int/jahia/Jahia/migration-climate-change-and-environment/migration-climate-partnerships>. *See also* WALTER KALIN, REPORT OF THE REPRESENTATIVE OF THE SECRETARY-GENERAL ON THE HUMAN RIGHTS OF INTERNALLY DISPLACED PERSONS, ADDENDUM: PROTECTION OF INTERNALLY DISPLACED PERSONS IN SITUATIONS OF NATURAL DISASTERS, at 6 (2009); UNHCR, FORCED DISPLACEMENT IN THE CONTEXT OF CLIMATE CHANGE: CHALLENGES FOR STATES UNDER INTERNATIONAL LAW, at 10, submitted to the UNFCCC ad-hoc working group on Long-Term Cooperative Action under the Convention by the UNHCR in cooperation with the Norwegian Refugee Council, Representative of the Secretary General on the Human Rights of Internally Displaced Persons, and the United Nations University (May 20, 2009).

21. WORLD BANK, MIGRATION AND REMITTANCES FACT BOOK (2011), *available at* <http://go.worldbank.org/QGUCPJTOR0> (developing countries received approximately 32 billion dollars in remittances in 1990). In 2010, the top recipient countries of recorded remittances were India, China, Mexico, the Philippines, and France. As a share of GDP, however, smaller countries such as Tajikistan (35 percent), Tonga (28 percent), Lesotho (25 percent), Moldova (31 percent), and Nepal (23 percent) were the largest recipients in 2009.

22. *Id.*

23. R. Vargas-Lundias, M. Lanly, M. Villareal & M. Osorio, International Fund for Agricultural Development and Food and Agriculture Organization, *International Migration, Remittances and Rural Development* (2007), www.ifad.org/pub/remittances/migration.pdf.

24. R. Skeldon, *International Migration as a Tool in Development Policy: A Passing Phase? Population and Development Review* 34(1), 1–18 (2008).

25. UNITED NATIONS OFFICE ON DRUGS AND CRIME, ORGANIZED CRIME AND IRREGULAR MIGRATION FROM AFRICA TO EUROPE (2006).

26. S.F. Martin, *Climate Change, Migration, and Adaptation*, 3 GERMAN MARSHALL FUND, 2010, publications, *available at* http://www.gmfus.org/publications/publication_view?publication.id=650.

27. Ghana National Adaptation Program of Action, at 3, 12, UNFCCC NAPA project database, *available at* http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php.

28. *Id.* at 9, 14.

29. Bangladesh National Adaptation Program of Action, at 35, UNFCCC NAPA project database, *available at* http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php.

30. S.F. Martin, *supra* note 26, at 3.

31. Gambia National Adaptation Program of Action, UNFCCC NAPA project database, *available at* http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php.

32. A. Oliver-Smith, *Climate Change and Population Displacement: Disasters and Diasporas in the Twenty First Century*, in ANTHROPOLOGY AND CLIMATE CHANGE: FROM ENCOUNTERS TO ACTIONS (S. Crate & M. Nuttall eds., 2009).

33. World Health Organization, Family, Health and Research, statistics published by WHO, http://www.searo.who.int/en/Section13/Section390_8282.htm.

34. *See Trends in World Migration*, *supra* note 14.

35. *See, e.g.*, Skeldon, *supra* note 24.

36. FRANCIS DENG, GUIDING PRINCIPLES ON INTERNAL DISPLACEMENT, REPORT OF THE REPRESENTATIVE OF THE SECRETARY-GENERAL ON THE HUMAN RIGHTS OF INTERNALLY DISPLACED PERSONS (Feb. 11, 1998), U.N. Doc. E/CN.4/1998/53/Add.2.

37. *Id.*

38. *Id.*

39. *See also* REPORT OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS ON THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND HUMAN RIGHTS 19, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009).

40. The Human Rights Committee and Committee on Elimination of Racial Discrimination have also commented on the key issues of concern related to a government's discriminatory treatment of those displaced. *See, e.g.*, Concluding Observations of these bodies relating to treatment of displaced persons after Hurricane Katrina in relation to the right of return, housing, and other assistance by the United States (para. 26, CCPR/C/USA/CO/3/Rev.1, Concluding Observations on United States, 2006) and Convention on Elimination of Racial Discrimination (para. 31, CERD/C/USA/CO/6, Concluding Observations on United States, 2008).

41. E. NEUMAYER & T. PLUMPER, THE GENDERED NATURE OF NATURAL DISASTERS: THE IMPACT OF CATASTROPHIC EVENTS ON THE GENDER GAP IN LIFE EXPECTANCY, 1981–2002 (2007), *available at* <http://ssrn.com/abstract=874965>.

42. *See, e.g.*, discussion of national adoption and OSCE incorporation in P. Neussl, *Bridging the National and International Response to IDPs*, at 20, FORCED MIGRATION REV. 42 (2004).

43. UNGA Doc. A/RES/60/1, 2005.

44. *See, e.g.*, discussion of national adoption and OSCE incorporation in P. Neussl, *supra* note 42, at 20.

45. For a listing and discussion of the myriad of international human rights bodies under the United Nations, treaty bodies, and regional legal arrangements of states, see <http://www.ohchr.org/en/hrbodies/Pages/HumanRightsBodies.aspx> and <http://bangkok.ohchr.org/programme/regional-systems.aspx>.

46. REPORT OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS ON THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND HUMAN RIGHTS, at 24, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009). *See* Council of Europe discussion of enforcement of Court Decisions under Article 46 of the European Convention on Protection of Fundamental Freedoms in Europe (1950), and Article 39, para. 4, as amended following the entry into force of Protocol No. 14, on June 1, 2010, http://www.coe.int/t/dghl/monitoring/execution/Presentation/About_en.asp.

47. *Budayeva and Others v. Russia*, Applications Nos. 153339/02, 21166/02, 20058/02, European Court of Human Rights judgment of March 20, 2008.

48. *CASE OF öNERILDIZ v. TURKEY*, European Court of Human Rights (2002), *available at* <http://eu.vlex.com/vid/case-of-v-turkey-26840475>.

49. *See* Recommendation 1614, Council of Europe Parliamentary Assembly, *available at* <http://assembly.coe.int/Main.asp?link=/Documents/WorkingDocs/Doc04/EDOC10041.htm>.

50. W. Kalin & C. Haenni Dale, *Disaster Risk Mitigation, Why Human Rights Matter*, FORCED MIGRATION REV. 31 at 39 (2008).

51. São Tomé Príncipe, Relocation of Local Community (Malanza, Sta. Catarina, and Sundy) at Risk of Floods and Landfalls (*see* UNFCCC list of NAPAs Index, http://unfccc.int/files/cooperation_support/least_developed_countries_portal/napa_project_database/application/pdf/napa_index_by_country.pdf).

52. Ghana National Adaptation Program of Action, at 47–48, and 82, UNFCCC NAPA project database, *available at* http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php.

53. *See Papua Guinea, the World's First Climate Change "Refugees."* IRIN, June 11, 2008, *available at* <http://irinnews.org/Report/78630/PAPUA-NEW-GUINEA-The-world-s-first-climate-change-refugees>. This is also discussed in a documentary film *SUN COME UP*, recently nominated for an Oscar award.

54. Maldives National Adaptation Program of Action, at 47, 50, 72, UNFCCC NAPA project database, *available at* http://unfccc.int/cooperation_support/least_developed_countries_portal/submitted_napas/items/4585.php.

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55. ROUNDTABLE 3, *supra* note 1.
56. See discussion of this treaty and its international assistance obligations in the text pursuant to notes 154 and 155, *infra*.
57. S.F. Martin, *supra* note 26, at 3–4. See also M. LEIGHTON ET AL. EDs., CLIMATE CHANGE AND MIGRATION: RETHINKING POLICIES FOR ADAPTATION AND DISASTER RISK REDUCTION 15 (UNU-EHS and Munich Re Foundation, 2011).
58. See, e.g., Oliver-Smith, *supra* note 32; M. Leighton et al., *supra* note 57.
59. Guiding Principles on IDPs, available at <http://www.unhcr.org/43ce1cff2.html>. See also WALTER KALIN, *supra* note 20, para. 5, at 2, listing states such as Georgia, Mozambique, Turkey, Uganda and the Great Lakes Region, Latin American and African regions, and Europe.
60. As cited in S.F. Martin, *supra* note 26, at 5, the IDB, for example, requires participation and has indicated its importance to
- facilitate the provision of information and helps ensure that the resettlement plan reflects the needs and aspirations of those affected. It promotes greater transparency and encourages the community to take a more active role in economic development and in the operation and maintenance of local infrastructure. . . .
61. Compensation or reparation may vary in situations and most often may relate to a government's obligation to help offset the costs of displacement due to state-enforced resettlement policies. This principle may be different or not applicable to natural disasters that result in general displacement otherwise not involving official policies of relocation.
62. M. Cernea, *The Risks and Reconstruction Model for Resettling Displaced Populations*, 25 WORLD DEV. 1569–87 (1997).
63. CLIMATE CHANGE AND MIGRATION IN ASIA AND THE PACIFIC, *supra* note 12.
64. Policy reflections on this topic were developed with academic scholars, international policy experts, and graduates during the 2010 United Nations University and Munich Re Foundation in Summer Academy in Munich, Germany, chaired by the author. Findings and case studies are available at <http://www.ehs.unu.edu/article/read/2010-summer-academy-recommends-new-policy-and-institutional>.
65. REPORT OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS (Jan. 15, 2009), *supra* note 39, at 20.
66. See, e.g., *Drought, Desertification and Migration: Past Experiences, Future Study and Human Rights Issues*, in MIGRATION AND CLIMATE CHANGE (E. Piguët, A. Pécoud, P. de Guchteneire eds., 2011); M. Leighton et al., *supra* note 12.
67. *Id.*
68. Anomalies exist in a few communities where international migration diminishes during drought periods, apparently due to the lack of savings needed to facilitate the move.
69. The UN Office for the Coordination of Humanitarian Affairs (OCHA) Reliefweb database has documented the crises, and its findings and related research can be found at <http://www.reliefweb.int/rw/rwb.nsf/db900sid/HHOO-7YZUNM?OpenDocument&rc=1&emid=ACOS-635NZE>.
70. INTERNATIONAL ORGANIZATION FOR MIGRATION, IN PURSUIT OF THE SOUTHERN DREAM: VICTIMS OF NECESSITY (April 2009).
71. NORWEGIAN REFUGEE COUNCIL, CLIMATE CHANGED: PEOPLE DISPLACED (2009).
72. UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES (UNHCR), CLIMATE CHANGE, NATURAL DISASTERS AND HUMAN DISPLACEMENT: A UNHCR PERSPECTIVE, at 8 (2009).
73. *Id.* Article 1, Convention Relating to the Status of Refugees, adopted 28 July 1951, entered into force, April 22, 1954, 189 U.N.T.S. 150, as amended by the 1967 Protocol Relating to the Status of Refugees, 606 U.N.T.S. 267, entered into force Oct. 4, 1967.
74. See, e.g., UNHCR, FORCED DISPLACEMENT IN THE CONTEXT OF CLIMATE CHANGE: CHALLENGES FOR STATES UNDER INTERNATIONAL LAW, at 10, submitted to the UNFCCC ad-hoc working group on Long-Term Cooperative Action under the Convention by the UNHCR in Cooperation with the Norwegian Refugee Council, Representative of the Secretary General on the Human Rights of Internally Displaced Persons, and the United Nations University (May 20, 2009).
75. OAU Convention Governing the Specific Aspects of Refugee Problems in Africa, 1001 U.N.T.S. 45, entered into force June 20, 1974.

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76. Cartagena Declaration on Refugees, Section III(3), adopted 1984.
77. UNHCR, CLIMATE CHANGE, NATURAL DISASTERS AND HUMAN DISPLACEMENT: A UNHCR PERSPECTIVE, at 8 (2009).
78. The UN Office for the Coordination of Humanitarian Affairs (OCHA), Reliefweb database: <http://www.reliefweb.int/rw/rwb.nsf/db900sid/HHOO-7YZUNM?OpenDocument&rc=1&cemid=ACOS-635NZE>.
79. See, e.g., Danish Refugee Council, Policy on Mixed Migration, 2008, available at <http://www.drc.dk/about-drc/publications/>; UNHCR, *Guidelines on International Protection: Membership of a Particular Social Group*, within the context of Article 1A(2) of the 1951 Convention and/or its 1967 Protocol relating to the Status of Refugees. See also United Nations Office High Commissioner for Refugees, Regional Office United States, Amicus Curiae brief, *In the Matter of Michelle Thomas Removal Proceedings*, Executive Office for Immigration Review, Board of Immigration Appeals, U.S. Department of Justice, File No. A75-597-033/-034/-035/-036, Jan. 25, 2007.
80. *UN Office for Coordination of Humanitarian Affairs*, IRIN, Feb. 2, 2009.
81. *Id.*
82. International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, G.A. res. 45/158, annex, 45 U.N. GAOR Supp. (No. 49A) at 262, U.N. Doc. A/45/49 (1990), entered into force July 1, 2003.
83. *Id.* Art. 74.
84. *Id.* Art. 76.
85. European Convention on the Legal Status of Migrant Workers, ETS No. 93, entered into force, May 1, 1983.
86. OAU Convention, *supra* note 75, Art. 1 (2); Cartagena Declaration on Refugees, Section III(3), adopted 1984.
87. Discussed in S.F. Martin, *supra* note 26.
88. Pub. L. No. 101-649, 104 Stat. 4978 (1990), 8 U.S.C. §§ 1103, 1254, 1254a note, 8 C.F.R. part 2.
89. *Id.*
90. See discussion of country TPS provisions in OHCR, FORCED DISPLACEMENT IN THE CONTEXT OF CLIMATE CHANGE: CHALLENGES FOR STATES UNDER INTERNATIONAL LAW 12 (May 2009), available at <http://www.unhcr.org/4a1e4d8c2.html>.
91. *Id.*
92. Council Directive 2001/55, 2001 O.J. (L.212) 12 E.C.
93. IPCC, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY (M.L. Parry et al. eds., 2007). See generally chapter 1 of this book, “Introduction and Overview.”
94. WMO Statement on the Status of the Global Climate in 2010, WMO, Geneva, 2011. This also led to an emergency congressional briefing on sea-level rise as reported in *Science Progress* (Aug. 20, 2010), available at <http://scienceprogress.org/2010/08/new-%E2%80%9Cice-island%E2%80%9D-a-sign-of-things-to-come/>.
95. Sir Nicholas Stern’s report predicts 200 million could be affected by sea-level rise. NICHOLAS STERN, THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW 56 (2007). See also S. Perch-Nielson, Understanding the Effect of Climate Change on Human Migration: The Contribution of Mathematical and Conceptual Models (2004) (diploma thesis, Swiss Federal Institute of Technology, Department of Environmental Sciences).
96. F. Thornton, *Regional Labour Migration as Adaptation to Climate Change: Options in the Pacific*, in 15 CLIMATE CHANGE AND MIGRATION: RETHINKING POLICIES FOR ADAPTATION AND DISASTER RISK REDUCTION (M. Leighton, X. Shen, & K. Warner eds., 2011).
97. See, e.g., Joint Submission 1: submission by Earthjustice, Oakland (USA); Greenpeace International, Amsterdam (The Netherlands); Human Rights Advocates (USA); 350.org, Palau UPR Review by United Nations Human Rights Council, referenced in UNGA Doc. A/HRC/WG.6/11/PLW/3 (May 2–13, 2011).
98. Art. 15(b), Council Directive 2004/83/EC of April 29, 2004, on minimum standards for the qualification and status of third-country nationals or stateless persons as refugees or as persons who otherwise need international protection and the content of the protection granted,

Official Journal L 304, 30/09/2004 P. 0012–0023. For more detailed discussion see A. Lopez, *The Protection of Environmentally-Displaced Persons in International Law*, 37 ENVTL. L. 365 (2007).

99. See, e.g., Global Forum on Migration and Development, *supra* note 2.

100. See, e.g., <http://www.iom.int/jahia/Jahia/activities/by-theme/migration-climate-change-environmental-degradation/copenhagen-and-beyond/iom-unfccc-conference-cancun/cache/offonce/>.

101. UNFCCC REPORT OF COP16, *supra* note 4.

102. CRIDEAU (Centre recherches interdisciplinaire en droit de l'environnement, de l'aménagement et de l'urbanisme), together with scholars from Centre de recherches sur les droits de la personne, équipes thématiques de l'OMIJ (Observatoire des mutations institutionnelles et juridiques) recently proposed and drafted the principles for a new convention on the topic with other human rights groups in Europe.

103. 2010 Global Forum on Migration and Development where governments met with experts on *Assessing the Relevance and Impact of Climate Change on Migration and Development*, ROUNDTABLE 3, *supra* note 1.

104. CLIMATE CHANGE AND MIGRATION IN ASIA AND THE PACIFIC, *supra* note 12, at 25–27 (Asian Development Bank, 2010); research papers commissioned by the German Marshall Fund, *available at* http://www.gmfus.org/publications/publication_view?publication.id=650.

105. *Id.* at 27.

106. See Brian Reed, *Preparing for Sea Level Rise, Islanders Leave Home*, NATIONAL PUBLIC RADIO, <http://www.npr.org/2011/02/17/133681251/preparing-for-sea-level-rise-islanders-leave-home>; Australia Department of Foreign Affairs, http://www.dfat.gov.au/geo/kiribati/kiribati_brief.html.

107. See *supra* note 106.

108. See U.S. Department of State, U.S. Policy in the Pacific Islands: Testimony Before House Committee on Foreign Affairs Sub-Committee on Asia, the Pacific, and the Global Environment by Kurt M. Campbell, Sept. 29, 2010, at www.state.gov/p/eap/rls/rm/2010/09/148318.htm. (Special thanks to Columbia University student Narayan Subramanian for initial research in this area.) The United States provides assistance and support to these former trust territories under the Compacts of Free Association. See also U.S. DEPARTMENT OF INTERIOR, REPORT TO CONGRESS ON THE COMPACTS OF FREE ASSOCIATION WITH THE FEDERATED STATES OF MICRONESIA AND THE REPUBLIC OF THE MARSHALL ISLANDS 13 (2005).

109. *Id.* See also Giff Johnson, U.S. Lawmakers Seek Limit on Micronesian Immigration, MARIANAS VARIETY, May 23, 2011, <http://kshiro.wordpress.com/2011/05/24/u-s-law-makers-seek-limit-on-micronesian-immigrants/>.

110. *Id.*

111. See U.S. Pacific Seasonal Worker Scheme adopted in January 2011.

112. See, e.g., Treaty of Friendship between Samoa and New Zealand allowing 1,100 immigrants annually, New Zealand Ministry of Foreign Affairs and Trade, at <http://www.mfat.govt.nz/Countries/Pacific/Samoa.php>; immigration status under the Pacific Access Category allowing Kiribati, Tuvalu, and Tonga (including their partners and dependent children) to settle in New Zealand each year, New Zealand Department of Labor at <http://www.immigration.govt.nz/migrant/stream/live/pacificaccess/>; and Recognized Seasonal Employer Policy allowing temporary foreign workers, at <http://www.dol.govt.nz/initiatives/strategy/rse/index.asp>.

113. Rannveig and Newland report, for example, that the penalty in Singapore may include confiscation of bonds as well as mandatory caning and up to six months' imprisonment for illegal entry. D. RANNVEIG & K. NEWLAND, CIRCULAR MIGRATION AND DEVELOPMENT: TRENDS, POLICY ROUTES, AND WAYS FORWARD, 10 POLICY BRIEF (Migration Policy Institute, April 2007).

114. *Id.* at 3, 16.

115. See Mauritius Circular Migration Case, *available at* <http://www.gfmd.org/en/pfp/133-mauritius-circular-migration-case.html>.

116. PERMANENT OR CIRCULAR MIGRATION: POLICY CHOICES TO ADDRESS DEMOGRAPHIC DECLINE AND LABOUR SHORTAGES IN EUROPE 238 (E. Honekopp, A. Chindea, M. Griffith eds., 2008). In their study of Romania the authors found:

Due to the shortage of young workers to accumulate land and establish profitable farms, there is widespread subsistence agriculture in Romanian villages . . . [Y]oung people leaving to work abroad have a negative impact on agriculture unless they return and invest in this domain. However, it seems that migration cannot solve the problem of poverty in rural areas. Even though it has a definite positive impact on individual and household level, labour migration does not contribute substantially to sustainable community development, as long as first-cycle migrants are consumption oriented or at best investing in their own households. In the long term, a large volume of remittances to migrant-sending villages might create incentives for migrants to invest in local infrastructure or start a business. This will in exchange create an entrepreneurial environment that will eventually make the community more prosperous. It is likely that large flows of labour associated with low returns in productive investment will lead to structural inflation. As, in some areas, labour migration is still very selective, large categories of people are going to have restricted access to different markets (like housing). Local council or government programmes should create incentives for returned migrants to invest money in productive businesses. [*Id.* at 234.]

117. See RANNVEIG & NEWLAND, *supra* note 113, at 8. “Mandatory saving accounts, whereby temporary migrants pay a proportion of their earnings into a fund redeemable only upon return, are increasingly common, similar to savings plans already operational in a number of countries such as Taiwan, and electively in the United States and the United Kingdom.” *Id.* at 9.

118. N. De Moor, *Temporary Labour Migration for Victims of Natural Disasters: The Case of Colombia*, in 15 CLIMATE CHANGE AND MIGRATION: RETHINKING POLICIES FOR ADAPTATION AND DISASTER RISK REDUCTION (M. Leighton, X. Shen & K. Warner eds., 2011).

119. See *id.* De Moor’s study is the most comprehensive to date of the Colombia-Spain agreement.

120. UNHCR, *Forced Displacement in the Context of Climate Change*, *supra* note 20.

121. WALTER KALIN, *supra* note 20.

122. *Id.*, at 4–5.

123. *Assessing Relevance and Impact of Climate Change on Migration and Development*, ROUNDTABLE 3, *supra* note 1.

124. INTERNATIONAL ORGANIZATION FOR MIGRATION, *MIGRATION, CLIMATE CHANGE AND THE ENVIRONMENT*, IOM Policy Brief (IOM, Geneva, May 2009); see also discussion and publications at <http://www.iom.int/jahia/Jahia/activities/by-theme/migration-climate-change-environmental-degradation>.

125. See UNU-EHS web portal for details of the July 2010 Summer Academy on Policy and Institutional Frameworks for Better Protection of Environmental Migrants: <http://www.ehs.unu.edu/article/read/2010-summer-academy-recommends-new-policy-and-institutional>.

126. International human rights law serves as the basis of criteria where the return of a person to desperate conditions would breach the right to life or amount to inhuman or degrading treatment. In certain cases, return may arguably be prohibited, for example where land is uninhabitable and cannot support life, or there is little possibility of survival. The Inter-American Commission on Human Rights has stated: “[t]he realization of the right to life, and to physical security and integrity is necessarily related to and in some ways dependent upon one’s physical environment. Accordingly, where environmental contamination and degradation pose a persistent threat to human life and health, the foregoing rights are implicated.” REPORT ON THE HUMAN RIGHTS SITUATION IN ECUADOR OEA/Ser.L/V/II.96 Ch 8, Yanomami case (case 7615 of 5 March 1985), referenced in the ANNUAL REPORT OF THE INTER-AMERICAN COMMISSION ON HUMAN RIGHTS, 1984–85.

127. For a fuller discussion of these recommendations, see CLIMATE CHANGE AND MIGRATION: RETHINKING POLICIES FOR ADAPTATION AND DISASTER RISK REDUCTION (M. Leighton, X. Shen & K. Warner eds., 2011).

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128. C. DE LIVA & S. MORITA, MARITIME RIGHTS OF COASTAL STATES: SHOULD STATES ADAPT TO SUBMERGED BOUNDARIES, THE WORLD BANK LAW AND DEVELOPMENT SERIES, NO. 5.
129. See CLIMATE CHANGE AND STATELESSNESS: AN OVERVIEW, UNHCR (May 15, 2009), supported by the International Organization for Migration and Norwegian Refugee Council, at 1, submitted to the 6th Session of Ad Hoc WG on Long-Term Cooperative Action under the UNFCCC (June 1–12, 2009).
130. Article I, Montevideo Convention on the Rights and Duties of States, adopted Dec. 26, 1933, *entered into force* Dec. 26, 1934; I. BROWNLIE, PRINCIPLES OF INTERNATIONAL LAW, at 70–71, statehood, and 123–38, sovereignty (Oxford University Press 7th ed., 2008).
131. See, e.g., BROWNLIE, *supra* note 130.
132. U.N. Convention on the Law of the Sea (UNCLOS), adopted December 10, 1982, *entered into force* November 16, 1994, 1833 U.N.T.S. 396 (1994).
133. *Id.* Part II, Section 2, arts 2–3; Part V, arts. 55–57.
134. *Id.* Part V, art. 56.
135. *Id.* Part VI, art. 76.
136. *Id.* Part II.
137. See, e.g., D. Caron, *Climate Change, Sea Level Rise and the Coming Uncertainty in Oceanic Boundaries: A Proposal to Avoid Conflict*, in MARITIME BOUNDARY DISPUTES, SETTLEMENT PROCESSES, AND THE LAW OF THE SEA 1–17 (Seoung-Yong Hong & Jon M. Van Dyke eds., 2009).
138. DE LIVA & MORITA, *supra* note 128, at 16.
139. *Id.* Part V of UNCLOS, *supra* note 132.
140. D. WEI ET AL., RECEDING MARITIME ZONES, UNINHABITABLE STATES AND CLIMATE EXILES, HOW INTERNATIONAL LAW MUST ADAPT TO CLIMATE CHANGE 3, FIELD, London, http://www.field.org.uk/files/climate_exiles_dw.pdf.
141. DE LIVA & MORITA, *supra* note 128, at 18.
142. *Id.* See also Caron, *supra* note 137.
143. Caron, *supra* note 137.
144. R. RAYFUSE, INTERNATIONAL LAW AND DISAPPEARING STATES: UTILISING MARITIME ENTITLEMENTS TO OVERCOME THE STATEHOOD DILEMMA, University of New South Wales Faculty Research Series 52 (2010), *available at* <http://www.austlii.edu.au/au/journals/UNSWLRS/2010/52.html>. She suggests that the host state and the former island government negotiate the extent of control by the latter over its people while present in the host state territory.
145. Maxine Burkett, *The Nation Ex-Situ*, in THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE (Michael B. Gerrard & Gregory Wannier eds., forthcoming). The Montevideo Convention's Article 3 indicates that recognition by other states is not a prerequisite to "statehood" but global recognition would potentially assure United Nations membership and the benefits of retaining its authority to participate in dialogue, trade agreements, and treaty-making that could benefit its people. See also Jenny Grote Stoutenburg, *When Do States Disappear? Thresholds of Effective Statehood and the Continued Recognition of Deterritorialized Island States*, in *id.*
146. See Burkett, *supra* note 145, at 11–12. Special thanks to Narayan Subramanian and Gregory Wannier of the Columbia Center for Climate Change Law for their research assistance in connection with this discussion.
147. See Burkett, *supra* note 145. For a useful discussion of the legal history of Military Order of Malta as a recognized state before losing its territory to Napoleon, and on its continuing sovereignty, see N. Cox, *The Continuing Question of Sovereignty and the Sovereign Military Order of Jerusalem, of Rhodes and of Malta*, 10 AUSTRALIAN INT'L L.J. 211–32 (Aug. 16, 2010).
148. The Palestinian issue has been discussed by the ICJ in Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, July 9, 2004, *available at* <http://www.icj-cij.org/docket/index.php?p1=3&p2=4&k=5a&case=131&code=mwp&p3=4> and the United Nations is continuing to debate recognition of Palestine. The fact that territory is not fully delimited for the peoples would not prevent statehood, particularly as

U.N. Security Council resolutions earlier on the issues called for negotiation on specified limits. *See, e.g.*, U.N. Security Council resolutions 242 (Nov. 22, 1967) and 338 (Oct. 22, 1973), which call upon Israel to withdraw to the 1949 armistice lines to negotiate appropriate final territorial boundaries, *available at* http://www.un.org/Docs/sc/unsc_resolutions.html.

149. *See* Burkett, *supra* note 145.

150. *See* CLIMATE AND STATELESSNESS: AN OVERVIEW, submitted by UNHCR, supported by the International Organization for Migration and Norwegian Refugee Council, at 1 (May 15, 2009), submitted to the 6th session of Ad Hoc Working Group on Long-Term Cooperative Action under the UNFCCC (June 1–12, 2009).

151. *Id.*

152. *Id.* at 123–38.

153. U.N. General Assembly Resolution, A/C.3/65/L.52, adopted Dec. 3, 2010; *see* U.N. Doc. A/65/455 Dec. 3, 2010; Art. 1, Int'l Covenant on Civil and Political Rights (ICCPR) (Dec. 16, 1966), *entered into force* Mar. 23, 1976, 999 U.N.T.S. 171, ratified by the United States, June 8, 1992; International Covenant Economic, Social, and Cultural Rights (ICESCR) (Dec. 16, 1966), *entered into force* Jan. 3, 1976, 993 U.N.T.S. 3, signed by the United States Oct. 5, 1977, but not ratified.

154. U.N. Res. 1985/17, U.N. Economic and Social Council, May 28, 1985, *available at* <http://www2.ohchr.org/english/bodies/cescr/>.

155. *See* General Comments 2 and 3 of the U.N. Committee on Economic, Social, and Cultural Rights interpreting the International Covenant on Economic, Social and Cultural Rights, reprinted in HRI/GEN/1/Rev. 9 (Vol. I) May 27, 2008.

156. *Id.* The Committee on Economic, Social and Cultural Rights (CESCR) is the body of independent experts that monitors implementation of the International Covenant on Economic, Social and Cultural Rights by its States parties. The Committee was established under ECOSOC Resolution 1985/17 of 28 May 1985 to carry out the monitoring functions assigned to the United Nations Economic and Social Council (ECOSOC) in Part IV of the Covenant. *See also* Arts. 17, 23, 24 of the ICCPR, and Art. 15 of the ICESCR, at <http://www2.ohchr.org/english/bodies/cescr/>.

157. *Id.* As of June 2011, the Protocol has 36 signatories and three parties. It will enter into force when ratified by 10 parties.

158. Office High Commissioner for Human Rights, *available at* <http://www2.ohchr.org/english/bodies/cescr/>.

159. *See, e.g.*, M. Orellana, M. Kothari, and S. Chaudhry, *Climate Change in the Work of the Committee on Economic, Social, and Cultural Rights*, CIEL, at http://www.ciel.org/Publications/CESCR_CC_03May10.pdf; M. Limon, *Human Rights and Climate Change: Constructing a Case for Political Action*, 33 HARV. ENVTL. L. REV. 439, 465 (2009); T. Duong, *When Islands Drown: The Plight of Climate Change Refugees and Recourse to International Human Rights Law*, 31 U. PA. J. INT'L L. 1239 (2010); J. Kilinski, *International Climate Change Liability: A Myth or a Reality*, 18 J. TRANSNAT'L L. & POL'Y 377, http://www.law.fsu.edu/journals/transnational/vol18_2/kilinski.pdf; *see also* REPORT OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS ON THE RELATIONSHIP BETWEEN CLIMATE CHANGE AND HUMAN RIGHTS, at 19, U.N. Doc. A/HRC/10/61 (Jan. 15, 2009).

160. *Id.*

161. *See* CLIMATE CHANGE AND STATELESSNESS: AN OVERVIEW, UNHCR (May 15, 2009), supported by the International Organization for Migration and Norwegian Refugee Council, at 1, submitted to the 6th Session of Ad Hoc WG on Long-Term Cooperative Action under the UNFCCC (June 1–12, 2009). The paper cites Article 21 of Draft Articles on Nationality to support the argument that citizenship should be extended automatically to predecessor island states. This article of the treaty is largely concerned with the merger of states and responsibilities of successor states—in the case of small islands it is uncertain whether there would occur a “merger” or full incorporation into the mainland state as territories and protected or trust status could also be conveyed instead of a merger. *See* Draft Articles on Nationality of Natural Persons in relation to the Succession of States with commentaries, 1999 (United Nations 2005), text adopted by the International Law Commission at its fifty-first session, in 1999, and

submitted to the General Assembly as a part of the Commission's report covering the work of that session (at para. 48). The report, which also contains commentaries on the draft articles, appears in YEARBOOK OF THE INTERNATIONAL LAW COMMISSION, vol. II, Part Two (1999).

162. See J. McAdam, at 12–13 (citing further to J.L. Blackman, *State Successions and Statelessness: The Emerging Right to an Effective Nationality Under Int'l Law*, 19 MICH. L. J. OF INT'L L. 1141, 1183 (1998), *Disappearing States, Statelessness, and the Boundaries of International Law*, University of New South Wales, available at <http://ssrn.com/abstract=1539766>).

163. *Id.*

164. U.N.G.A. Doc. Res/50/152 (9 Feb 1996).

165. See REPORT OF HIGH COMMISSIONER OF HUMAN RIGHTS, *supra* note 39, at 20.

166. *Id.* See McAdam, *Disappearing States, Statelessness, and the Boundaries of International Law*, *supra* note 162.

167. *Id.*

168. *Id.*

169. *Id.*

170. CLIMATE CHANGE AND MIGRATION IN ASIA AND THE PACIFIC, *supra* note 12.