

# Issue Brief

## Environmental Migration: Policy Gaps and Response Strategies

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This issue brief was drafted by Chris Perry, IPI Senior Policy Analyst. It follows up on a policy forum hosted by the International Peace Institute (IPI) on October 24, 2011, called “Environmental Migrants: Climate Change and Human Migration.”

The audience at the forum included approximately eighty United Nations Secretariat officials, UN permanent mission representatives, and NGO officials.

The brief provides an introduction to the issue and presents the major themes discussed at the forum, but it does not necessarily represent the views of all the participants.

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*Environmental change exacerbates existing socioeconomic, political, and cultural incentives to migrate. In fact, there will be an estimated 200 million environmental migrants by 2050. As the global climate warms, people will be pushed to move by sea-level rise, drought and desertification, food insecurity, natural disasters, and conflict over scarce resources. This paper examines the links between climate change and migration and identifies gaps in the current international policy and legal frameworks for dealing with environmentally displaced persons. It recommends strategies for coping with these population movements, including better international coordination on migration issues, funding and technical assistance for at-risk countries, and innovative institutional and legal frameworks for potential migration flows.*

### Background

Negotiations on climate change mitigation strategies have stalled within the United Nations Framework Convention on Climate Change (UNFCCC). Mitigation strategies, such as carbon reduction, are needed to minimize the amount of temperature increase the world will see. However, international attention is increasingly turning towards developing concrete adaptation strategies—those needed to adapt to the challenges posed by a warmer world. These include decreased food security, territorial uncertainty, and extreme weather events. Adaptation is no substitute for agreement on an overarching mitigation framework. Nonetheless, given the state of current carbon concentrations and projected emission trajectories, climate scientists are increasingly considering a world beyond the baseline scenario of a two-degree Celsius temperature rise by the end of the twenty-first century, as outlined by the Intergovernmental Panel on Climate Change (IPCC) in 2001.<sup>1</sup> In this context, effective adaptation strategies will take many forms, one of which will be risk management in relation to migration and displacement caused by environmental disasters and changing livelihoods.

<sup>1</sup> According to the IPCC's Third Assessment Report, impacts associated with climate increase markedly when global temperatures rise 2 degrees Celsius or more above pre-industrial levels. However, a 2010 report by the United Nations Environment Programme (UNEP) suggests that the global temperature averages will be 2.5 to 5 degrees hotter than pre-industrial levels by the end of the twenty-first century, with results dependant on global emissions controls. Indeed, emission increases are now proceeding faster than the IPCC Fourth Assessment Report's worst case scenario. In the absence of any policy intervention to rein in emissions, current modeling by MIT's Joint Program on the Science and Policy of Climate Change predicts an average increase in temperature of 5.2 degrees by 2100. IPCC, *Climate Change 2001: Synthesis Report. A Contribution of Working Groups I, II, and III to the Third Assessment Report of the Intergovernmental Panel on Climate Change* (New York: Cambridge University Press, 2002); UNEP, "The Emissions Gap Report: Are the Copenhagen Accord pledges sufficient to limit global warming to 2 °C or 1.5 °C?," November 2011, pp. 18-19; IPCC, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate* (Geneva, 2008); A. P. Sokolov et al., "Probabilistic Forecast for Twenty-First-Century Climate Based on Uncertainties in Emissions (Without Policy) and Climate Parameters," *Journal of Climate* 22, No. 19 (October 2009): 5175-5204.

The linkages between environmental conditions and migration have been on the international agenda at least since the first United Nations Conference on Environment and Development, or “Rio Summit,” held in 1992. However, early attempts to create consensus faced acrimony from within. Migration and demography experts at times viewed environmental policy advocates’ use of the issue as overreaching the scientific knowledge at the time. While the correlations were beginning to be understood, causal relationships were unknown. Activists in turn viewed the migration community as being inactive on an issue that they saw as a looming threat.

That dynamic changed in recent years as the linkages between migration and the environment became better understood. Today, it is clear that the environment and environmental change impact migration. They do this by influencing the socioeconomic, political, and cultural drivers that lead people to move. As a consequence, environmentally-driven migration will most likely look similar to existing forms of migration. Some of these movements will be temporary, and most will be internal to the country of origin, as is the case with other forms of migration today. Those that do cross national borders will most likely move to a neighboring country and from one developing country to another.

While migration experts are hesitant to provide concrete projections of the effects of environmental change, anywhere from 25 million to 1 billion people are expected to be migrating due to environmental factors by 2050.<sup>2</sup> The most widely used estimate is 200 million environmental migrants by 2050.<sup>3</sup> This would be on top of approximately 214 million international migrants worldwide today.<sup>4</sup> The possibility of this drastic increase should be a matter of concern for the international community, especially in the context of adapting to a warming planet.

## Linkages Between Climate Change and Migration<sup>5</sup>

The linkages between the environment and human migration are not completely understood, though experts paint a compelling picture of the relationship. Migration is caused by many interlocking socioeconomic, political, and cultural factors. Environmental change in turn influences all of these root causes in various ways, tending to exacerbate existing incentives to move. While we should not treat the issue with broad strokes, there are some general dynamics that migration experts have identified.

There are four primary “push” factors linking environmental change to migration, two of which are gradual processes and two of which are acute events. These are territorial loss due to sea-level rise, decreased ability of land to sustain life through drought and desertification, displacement due to natural disasters, and conflict over scarce resources. These factors should not be viewed as determinants, but should instead be understood to interact with the facts on the ground, influencing people to move.

**Sea-level rise** contributes to migration on the most basic level by leading to the physical loss of territory. The situation faced by the Small Island Developing States (SIDS) is the most dramatic example since low-lying islands face challenges that are existential in nature. The Pacific Island nations alone represent some twenty-two countries and 9.2 million people.<sup>6</sup> As these land masses disappear, it will be necessary to address displacement and finally statelessness in a comprehensive and coherent way. In addition, both island and coastal regions will face challenges of declining agricultural productivity due to land salinization long before they face territorial loss.<sup>7</sup>

**Drought and desertification** is also an

2 Oli Brown, “Migration and Climate Change,” *IOM Migration Research Series* No. 31, 2008, p. 12.

3 Norman Myers, “Environmental Refugees,” *Population and the Environment* 19, No. 2 (1997): 167-182.

4 UN Department of Economic and Social Affairs, “Trends in International Migrant Stock: The 2008 Revision,” New York: United Nations, July 2009, available at [www.un.org/esa/population/migration/UN\\_MigStock\\_2008.pdf](http://www.un.org/esa/population/migration/UN_MigStock_2008.pdf).

5 This section draws from Susan Martin, “Climate Change, Migration, and Governance,” *Global Governance* 16, No. 3 (July-September 2010): 397-415.

6 Elizabeth Ferris, Michael M. Cernea, and Daniel Petz “On the Front Line of Climate Change and Displacement: Learning from and With Pacific Island Countries,” The Brookings Institution and London School of Economics: Project on Internal Displacement, September 2011, p. 9.

7 *Ibid.*, p. 5.

important, gradual driver of migration. The IPCC's Fourth Assessment Report identifies much of Africa; East, South, and Southeast Asia; parts of Australia and New Zealand; and southern Europe as at risk of increased drought.<sup>8</sup> Additionally, through a combination of changing climate and poor natural-resource management, many of the world's deserts are growing at alarming rates. The Sahara, for instance, is estimated to expand at a rate of up to thirty miles per year.<sup>9</sup>

In some ways, Africa will face the largest challenges in this regard. Today, two-thirds of the continent is already categorized as desert or dry land.<sup>10</sup> Under current scenarios, this will increase by 5 to 8 percent by 2080.<sup>11</sup> Also, much of the economic activity in Africa, especially in sub-Saharan Africa, is based on climate-sensitive agricultural activity. In an area where drought and desertification are already driving the movement of people, this will have far-reaching and drastic implications.

Most recently, we've seen these effects in the Horn of Africa, where an extreme drought has caused severe food crises across Ethiopia, Kenya, and Somalia. In the first half of 2011, almost 300,000 Somalis fled to neighboring Kenya, Ethiopia, and Djibouti, with an average of more than 2,000 people arriving each day at the peak in July. This is on top of some 700,000 Somali refugees already registered in these neighboring countries, against a backdrop of continuing insecurity and drought at home.<sup>12</sup> In addition to cross-border refugees, there are already 1.5 million internally displaced people (IDPs) in Somalia,<sup>13</sup> many of whom are now in IDP camps near Mogadishu, despite attendant security concerns. Even if the drought is alleviated by the rains expected in the spring of 2012, the implications for physical and human security will remain for years to come.

**Natural disasters**, especially extreme weather

events, are typical acute drivers of migration. Recent disasters like Hurricane Katrina in the United States, Cyclone Nargis in Myanmar, and extensive flooding in Thailand are examples of highly disruptive weather events that displaced huge numbers of people. This trend only looks likely to grow due to an increased number of disasters, as well as their increased severity.<sup>14</sup> Low-lying coastal systems are particularly vulnerable to this threat, through the interaction of sea-level rise, mentioned above, and storm surges caused by events such as tropical cyclones.

These events are best thought of as hazards rather than inevitable catastrophes, as good governance and national-level risk management can play a critical role in mitigating the effects of natural disasters. However, developing countries often lack the resources and human capital to appropriately respond to these disasters. Additionally, extreme weather may strike areas not historically prone to natural disasters and, by extension, underinvested in appropriate risk-management strategies. This was most recently evident in Pakistan in 2010, when approximately one-fifth of the country found itself underwater. While the event was undoubtedly large in scope, the slow response of the Pakistani government and the lack of financial support from the international community had disastrous consequences. Riots and the looting of aid convoys soon followed, which allowed Islamist insurgent groups to gain local legitimacy by delivering the aid that the state could not.

Finally, **conflict** arising from the competition over scarce resources can lead to communal tension and violence, which in turn can lead to temporary and permanent displacement. Resource scarcity can arise from issues of access, quality, and quantity. It is rare for violent conflict to arise exclusively over competition for resources. Rather, scarcity tends to exacerbate underlying ethnic or political tensions

8 IPCC, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate* (Geneva, 2008), Table SPM.2, p. 11.

9 Abraham McLaughlin and Christian A. Purefoy, "Hunger Is Spreading in Africa," *Christian Science Monitor*, August 1, 2005, available at [www.csmonitor.com/2005/0801/p01s02-woaf.html](http://www.csmonitor.com/2005/0801/p01s02-woaf.html).

10 United Nations Economic Commission for Africa, "Africa Review Report on Drought and Desertification," Addis Ababa, April 2008, p. 6, available at [www.uneca.org/eca\\_resources/publications/books/drought/](http://www.uneca.org/eca_resources/publications/books/drought/).

11 IPCC, *Climate Change 2007: Synthesis Report*, Table SPM.2, p. 11.

12 UNHCR, "East and Horn of Africa Update: Somali Displacement Crisis at a Glance," October 17, 2011, p. 1, available at [www.unhcr.org/4e8c56919.html](http://www.unhcr.org/4e8c56919.html).

13 Ibid.

14 Susan Solomon et al., *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, UK: Cambridge University Press, 2007), pp. 628-629.

and weaken the state and its capacity to deal with those tensions.<sup>15</sup> For instance, changing weather and consumption patterns can drive spikes in food prices, which in turn puts domestic pressure on governments and can cause instability. The 2008 food price spike triggered unrest in sixty-one countries and led over thirty countries to introduce export bans or restrictions.<sup>16</sup> Migration tends to add population pressure to competition over already scarce resources.

As environmental changes accelerate, these four factors will have important implications for future adaptation strategies. These were most recently highlighted in a report by UK Chief Scientific Advisor Sir John Beddington for the UK Government Office for Science and the UK-based think tank Foresight.<sup>17</sup> The report found that as the environment changes, the poor and those who are already most vulnerable will be at greatest risk, and they will likely not be able to migrate when necessary. Migration often requires financial capital and constitutes an expense prohibitive to many of the world's poor. In addition, some of the very factors that are drivers of migration, such as drought and flooding, destroy the capital needed to move. This could lead to people becoming "trapped" in vulnerable areas and to migration in unsafe and undocumented ways when necessary.

Those that are able to migrate may actually move towards high-risk areas. This is especially reflected in the trend of internal migration towards urban settings that are often not capable of absorbing the incoming flux and are themselves at risk of disasters. For example, some estimates show that by 2060, through a combination of migration and natural population growth, up to 192 million more people will be living on at-risk urban floodplains in Africa and Asia.<sup>18</sup> In East Asia alone, this number is expected to increase from 18 million to 45–67 million.<sup>19</sup>

## Policy Gaps and Recommendations

The current international policy and legal framework for dealing with the issues surrounding environmentally displaced persons is severely underdeveloped. Most of the current framework is based on temporary protection and not suited to the types of permanent migration necessitated by some forms of environmental change. It is strongest for refugees from conflict, who are protected through the UN *Convention Relating to the Status of Refugees* and the mandate of the UN High Commissioner for Refugees (UNHCR). The framework is much weaker for slow-onset types of international migration pressures. In the case of internally displaced persons (IDPs), the framework is evolving based on international legal foundations, but it is nonbinding. A promising development in this regard is the *African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa* (the Kampala Convention), which includes the obligation to "take measures to protect and assist persons who have been internally displaced due to natural or human made disasters, including climate change."<sup>20</sup>

Before large-scale environmental migration starts, regional and national institutions should have effective and comprehensive disaster-management and risk-reduction plans in place. In many areas, especially those most vulnerable parts of the developing world, this is not the case. Additionally, in cases of conflict driven by competition over resources, conflict-resolution and mediation efforts need to take environmental factors into account. The United Nations Environment Programme's (UNEP) efforts to mainstream environmental peacebuilding are a step in the right direction, but much more is needed. Lastly, the international

15 Thomas Homer-Dixon, *Environment, Scarcity, and Violence* (Princeton: Princeton University Press, 1999), pp. 12–18.

16 Alex Evans, "Globalization and Scarcity," New York: Center on International Cooperation, November 2010, p. 5.

17 Sir John Beddington, *Foresight: Migration and Global Environmental Change. Final Project Report* (London: The Government Office for Science, 2011).

18 As compared to the year 2000. *Ibid.*, p. 9.

19 18 million estimate refers to the year 2000. *Ibid.*, p. 13.

20 *African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa* ("Kampala Convention"), October 22, 2009, Article 5.4, available at [www.unhcr.org/refworld/docid/4ae572d82.html](http://www.unhcr.org/refworld/docid/4ae572d82.html).

system and developed nations must assist in elaborating adaptation strategies for those that cannot move. Funding and the transfer of adaptive technology and related skills are crucial in this regard.

Once migration becomes necessary, strategies for coping with these population movements will also need to be developed. In cases of disaster response, workable relocation processes will be required to smooth the road. This will include the process of return where possible and strong mechanisms for resettlement where necessary.

Finally, in the case of low-lying islands, the need to address the issues surrounding statelessness is becoming increasingly urgent. There is no international legal precedent for a state losing territory for reasons other than war, annexation, or sale. But even as some island nations disappear, their populations will remain. How questions of resettlement, sovereignty, and rights are dealt with is critical and remains largely unaddressed today.

In order to respond to these gaps, the United Nations, regional organizations, and national governments should take steps to bolster the current system. The Security Council's open debates on the subject of climate change and security are good first steps, despite lingering disagreements. While many Group of 77 (G-77) states are vocal about fears of encroachment, it is important to remember that the longer negotiations on mitigation schemes take within the UNFCCC, the more urgent the need for adaptation strategies and effective crisis management will become. What is today an issue of sustainable development could quickly become an issue of crisis management tomorrow.

First, more research is needed, and that research needs to be fed into the deliberations of the international community. Experts need to better understand how migration, which is itself a strategy for adapting to climate change, fits into the complex relationship of broader adaptation, risk reduction, and conflict prevention. Also, more research is

needed on the regional and microtrends relating to migration. Where are the hotspots? And where are there currently strong regional migration relationships?

Second, migration issues should be better coordinated at the global level. Currently, the issue is spread across multiple bodies, including the International Organization for Migration (IOM), International Labour Organization (ILO), World Trade Organization (WTO), UNHCR, UN Office for the Coordination of Humanitarian Affairs (OCHA), UN Human Rights Commission, and the Bretton Woods institutions. Coordination could be achieved in a number of ways; for instance, by creating a new overarching body, by designating a lead agency from within the UN system, or by designating an existing organization such as the IOM as the de facto lead. However it is achieved, a clearinghouse on international migration policy would go far in filling the current leadership gap.

Third, the international community should supply funding and technical assistance to at-risk countries with limited response capacity. Funding mechanisms such as the Global Environmental Facility or the Copenhagen Green Climate Fund should be used to finance migration strategies in the context of adaptation. Technical assistance in areas such as urban planning,<sup>21</sup> logistical coordination, and disaster management<sup>22</sup> will be crucial for effective mitigation of the risks associated with environmental change, and to minimize the amount of migration needed. Likewise, national and regional adaptation strategies should take into account migration as an adaptation strategy in and of itself. The international community, especially wealthy countries, also needs to work with governments to develop capacity to manage disasters.<sup>23</sup>

Finally, there is a pressing need to move more quickly towards a comprehensive normative and legal framework to deal with environmental migration. The lack of time and political will make the creation of a new convention on this issue unlikely. However, there is much that can be done

21 See JoAnn Carmin, Debra Roberts, and Isabelle Anguelovski, "Planning Climate Resilient Cities: Early Lessons from Early Adapters," paper prepared for the World Bank, 5th Urban Research Symposium, "Cities and Climate Change," Marseille, France, June 2009. See also Claire L. Walsh et al., "Assessment of Climate Change Mitigation and Adaptation in Cities," *Proceedings of the ICE-Urban Design and Planning* 164, No. 2 (June 2011): 75-84.

22 See Lisa Schipper and Mark Pelling, "Disaster Risk, Climate Change and International Development: Scope for, and Challenges to, integration," *Disasters* 30, No. 1 (March 2006): 19-38.

23 Roger Few et al., "Linking Climate Change Adaptation and Disaster Risk Management for Sustainable Poverty Reduction: Synthesis Report," November 2006, available at [http://ec.europa.eu/development/icenter/repository/env\\_cc\\_varg\\_adaptation\\_en.pdf](http://ec.europa.eu/development/icenter/repository/env_cc_varg_adaptation_en.pdf).

to create space within the current legal framework. Developing regional agreements for potential migration flows and linking national, regional, and international frameworks should both be priorities. Policy makers should identify current effective processes, such as the Colombian Temporary Circular Labour Migration Scheme.<sup>24</sup> This bilateral agreement offers families confronted with natural disasters the opportunity to seek temporary work abroad in Spain. This both temporarily alleviates some of the population pressures on the environ-

ment and helps the recovery of affected areas through remittances.

Whatever policy steps are taken, attention should remain focused on tailored solutions to specific circumstances rather than one-size-fits-all recipes. There are clear linkages between environmental change and migration, but the dynamics (as well as the necessary responses) differ greatly from region to region. Innovative institutional and legal frameworks are urgently needed to facilitate tailored solutions.



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