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STRENGTHENING TRANSATLANTIC COOPERATION

# Climate Change and Migration

#### Study Team on Climate-Induced Migration

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Summary: In the Copenhagen Accords, adopted in December 2009, the international community agreed on the need for enhanced action and international cooperation on adaptation strategies to reduce vulnerability and build resilience in developing countries to meet the challenges of climate change. This paper argues that attention needs to be given to both sides of the environment and migration nexus in adaptation strategies:

(1) Identifying adaptation strategies that allow people to remain where they currently live and work; and

(2) Identifying resettlement strategies that protect people's lives and livelihoods when they are unable to remain. Since internal migration is the most likely outcome for those affected by climate change and other environmental hazards, highest priority should be given to policies and programs aimed at managing these issues within the most affected countries. Nevertheless, some international migration may well be needed, particularly for the citizens of island nations, necessitating identification of appropriate admissions policies in potential destination countries.

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## **Climate Change, Migration and Adaptation**

by Susan F. Martin

The Copenhagen Accord signed in 2009 highlighted the importance of adaptation strategies:

Adaptation to the adverse effects of climate change and the potential impacts of response measures is a challenge faced by all countries. Enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa. We agree that developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries (Copenhagen Accord, 2009).

The National Adaptation Programmes of Action (NAPAs) are one of the principal frameworks adopted by the poorest countries to manage environmentally induced migration. According to the United Nations Framework Convention on Climate Change (UN-FCCC), NAPAs "provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage." As of October 2008, 38 countries had submitted plans. In preparing the NAPAs, countries are to prepare syntheses of available information, undertake a participatory assessment of vulnerability, identify key adaptation measures and criteria for prioritizing activities, and select a prioritized short list of activities.

# Recognizing the impact of climate change on migration

A review of the 38 NAPAs indicates awareness in many countries that climate change may well affect migration patterns. Repeatedly, countries reference that loss of habitat and livelihoods could precipitate large-scale migration, particularly from coastal areas that may be affected by rising sea levels and from areas susceptible to increased drought, flooding or other environmental hazards that will affect agriculture. A number of the NAPAs cite examples of migration already occurring in response to environmental events:

Bangladesh notes that the high depth of standing water is preventing crop cultivation during Kharif season, affecting jobs and livelihoods

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and leaving limited food sources, leading to migration to cities for jobs and livelihoods.

Cambodia references that farmers depend on subsistence rain-fed rice farming, which is vulnerable to floods and droughts. Increased crop losses have led to increased food shortages and poor health, serving as a catalyst for ruralurban migration and cross-border migration.

Cape Verde notes the thousands of its residents who have emigrated because of devastating famines resulting from the interplay of environmental and population pressures. Its NAPA also references frequent torrential rains that have provoked large losses of infrastructure, agricultural production, enormous amounts of water into the sea, and at times, displacement of families or loss of human lives.

Eritrea notes that individual coping strategies include extensive seasonal movement, particularly for casual labor in urban areas, and movements to cooler uplands and/or raised grounds.

Ethiopia references that recurrent drought events in the past have resulted in huge loss of life and property as well as migration of people. Ethiopia also notes that "traditional and contemporary coping mechanisms to climate variability and extremes in Ethiopia include changes in cropping and planting practices, reduction of consumption levels, collection of wild foods, use of inter-household transfers and loans, increased petty commodity production, temporary and permanent migration in search of employment (emphasis added), grain storage, sale of assets such as livestock and agricultural tools, mortgaging of land, credit from merchants and money lenders, use of early warning system, food appeal/aid, etc.

Gambia references that unpredictable rainy seasons and dry spells result in lower crop yield, reduced availability of forest products, and poor animal pasture, which leads in turn to decreased rural household incomes and serve as a catalyst for rural-urban migration.

Guinea-Bissau notes increased pressure on the uplands as the longer dry season, particularly in countryside regions (eastern part of the country), are causing displacement of whole villages. Populations have to abandon rice fields due to salt-water invasion. Many farmers are seeking new lands and transforming them into rice fields. Others from the southern littoral are migrating to the north or Guinea. Migratory movements are also happening in the east, northwest, and some locations in the south of the country

Haiti cites the migration of large numbers of people from rural areas to Port au Prince from a combination of poverty, population growth and environmental problems.

Mali references the migration from north to south within the country and towards coastal countries and the west as a spontaneous adaptation strategy to deal with drought, but acknowledges that the internal migration was stressing the already fragile eco-system.

Mauritania has experienced massive rural exodus among livestock herders and their cessation of a nomadic lifestyle because of loss of livestock as result of decreased rainfall.

Sudan references drought as a cause of internal displacement, with some herders being forced to move southwards in search of grazing land.

Tanzania cites erosion and rising sea levels leading to loss of settlements in coastal areas, with potential adaptation activity being the relocation of these vulnerable communities to other areas.

Uganda references drought and soil erosion as causes of rural to urban migration. Also, displacement occurs due to floods and subsequent impacts on clean water, sanitation and spread of disease.

A number of adaptation strategies draw linkages between climate change and the intensification of natural disasters that displace large numbers, often in emergency circumstances. Mozambique cites flooding as a cause of mass displacement and indicates that the numbers of displaced persons from these events have been used as a rationale for prioritizing projects. Tuvalu notes that coastal areas and human settlements are exposed to coastal current force

and prone to natural tragedies like strong force winds from storms, cyclones and tidal surges due to climate change.

#### **Reducing emigration pressures**

Many governments see proposed adaptation strategies as ways to reduce migration pressures and allow people to remain in their original settlements. The strategies generally seek to adapt agricultural practices, management of pastoral lands, infrastructure such as dykes and coastal barriers, fishing patterns and other strategies to reduce pressures on fragile eco-systems, thereby allowing populations to remain in place. Bangladesh, for example, seeks to combat salinization, arguing that it will help reduce migration to cities for jobs and livelihoods and help halt the "social consequences of mass scale migration to cities." 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.

Other approaches focus on early warning and emergency preparedness to reduce displacement from natural disasters associated with climate change. For example, Tuvalu proposes a project, Strengthening Community Disaster Preparedness and Response Potential, which includes a post-disaster resettlement and rescue plan. Mozambique proposes to establish an early warning system that will help identify risky and vulnerable areas and resettle/relocate those populations from flood and cyclone prone areas.

#### Migration as an adaptation strategy

Although most countries would prefer that their populations be able to remain in place, in some cases, migration has been identified as an adaptation strategy in itself. This perspective appears in two contexts. First, some countries see migration as a way to reduce population pressures in places with fragile eco-systems. Second, countries recognize that resettlement of some populations may be inevitable, given the likely trends, but should be accomplished with planning. In the first category, the NAPAs often provide very little information about the ways in which resettlement of population may reduce further environmental problems. Gambia, for example, references resettlement of people as an adaptation strategy to address limited water resources and to rehabilitate mangrove areas, but there is no further discussion of the issues.

More prevalent is the second type of adaptation strategy involving migration – resettlement to mitigate the harm accompanying climate change, particularly flooding and rising sea levels. Sao Tome and Principe, for example, proposes an infrastructure project titled Displacement of Local Communities. Arguing that torrential rains, floods and rising sea levels put fishermen and farmers at risk, interrupt their livelihoods, and force them to migrate, the NAPA cites the government's intention to construct new homes, noting displacement of the communities of Malanza, Santa Catarina, and Sundy will be necessary in the context of climate change. Coastal populations at risk to floods and landslides will be relocated to protected areas, and the communities will be compensated for the harmful effects of climate change.

Samoa also references that relocation of families is a current adaptation strategy in the village community sector. Potential adaptation activities include assistance for relocation of communities inland. A plan titled "Implement Coastal Infrastructure Management Plans for Highly Vulnerable Districts Project" envisions incremental relocation of community and government assets outside Coastal Hazard Zones.

Similarly, the Solomon Islands presents projects focused on relocating at-risk populations. One project, titled Human Settlement, recognizes that island communities' main adaptation option is relocation. The project will enhance the capacity for communities to manage impacts of climate change and sea level rise and be able to plan for adaptation.

The first priority for adaptation in the Maldives is implementation of the Safer Island Strategy, which would resettle communities from the smaller, more vulnerable islands into larger, better protected ones, elevate islands and protect costal zones. The government notes that "given that the average height of Maldivian islands is 1.5m above MSL, sea level rise

would cause regular tidal inundations in most islands even at the medium prediction. The high prediction could cause inundations recurrently in almost all islands." Complicating the situation, the "scarcity of land in the Maldives, the smallness of the islands and extreme low elevation makes retreat inland or to higher grounds impossible." The Maldives also notes that population density in certain islands is contributing to the environmental degradation. Therefore, relocation of the population from the more fragile, vulnerable islands to safer ones may be the only solution.

Maldives intends to undertake a detailed hazard and vulnerability assessment for five of the proposed safer islands and will develop a hazard mitigation and vulnerability reduction action plan. Specific reference is made to developing the human resource and institutional capacity at the atoll and island levels to manage coastal zones. No reference is made, however, to developing plans for the resettlement of the population to be moved to the safer islands.

Subsequent to the publication of its NAPA, the Maldives went further in identifying resettlement as a potential adaptation strategy. President Mohamed Nasheed announced at the end of 2008 that the Maldives was establishing a sovereign wealth fund which could be used to purchase a new island for the country's population. According to Nasheed, "this trust fund will act as a national insurance policy to help pay for a new homeland, should future generations have to evacuate a country disappearing under the waves."<sup>1</sup> Hoping that the funds would never be used for this purpose, Nasheed used the announcement as a call for renewed action to reduce gas house emissions.

Anote Tong, president of Kiribati, has also made it clear that the population of his island might be forced to relocate en masse. His focus has been on identifying immigration possibilities for Kiribati nationals in nearby countries, particularly Australia and New Zealand. In a recent trip to New Zealand, he suggested that the best educated Kiribatis should emigrate first, in an orderly fashion, and then establish communities which others could join as the situation requires.

President Tong's efforts reflect a broader dilemma. A challenge for countries identifying planned resettlement as an adaptation strategy is determining who will move and when such migration will occur. Particularly in slow-onset situations in which livelihoods or habitat are slowly eroded, such decisions will have import not only for those who migrate but equally for those who remain at home. Moreover, decisions on resettlement also affect the communities into which people relocate. The next section discusses some of the dilemmas of planned resettlement initiatives.

# Managing planned resettlement as an adaptation strategy

Planned resettlement in the context of climate change is a relatively new idea, but it has a long history in the development field. The experience of planned resettlement programs raises many questions about the effectiveness of such initiatives in managing environmentally induced migration. As early as the 19th century, transmigration programs in Indonesia sought to move people from islands with high population density to those with more ample land and natural resources. After independence, the government of Indonesia accelerated these programs, moving thousands of settlers from the islands of Java and Bali to the outer islands of Papua, Kalimantan, Sumatra, and Sulawesi. These programs were highly controversial, with the indigenous populations of the outer islands accusing the central government of trying to extend its authority through its population redistribution policies. The movements had environmental consequences, often leading to destruction of rain forests and other environmental hazards, particularly in areas with less fertile farming opportunities than existed in Java. In some instances, the transmigration programs led to violent clashes between the original residents and the new settlers, even leading to secessionist movements and civil conflicts.

In 1985, in the midst of massive food shortages, the government of Ethiopia announced its intention to resettle 1.5 million people from drought affected areas to more fertile regions of the country. Within a year, 600,000 had been moved. The country also embarked on a villagization initiative that involved movement of peasants into larger settlements, presumably to ease distribution of services and support collectivization of agriculture. Both programs were criticized for the way in which the relocations occurred as well as the impacts on the affected populations. The govern-

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Science News, February 28, 2009, available at http://www.sciencenews.org/view/feature/id/40789/title/First_wave
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ment used heavy handed mechanisms that often involved significant violations of the human rights of those who were forced to relocate. Critics contended that the government was motivated principally by political concerns, to eliminate opposition groups engaged in insurgency campaigns. The programs generated large-scale flight and likely exacerbated the famine that killed thousands during the 1980s.

The most comparable experiences are the programs that resettle persons displaced by dams, reservoirs, urban renewal, mining and other development programs. In these cases, the homes and/or livelihoods of people are destroyed when areas are flooded or otherwise rendered uninhabitable. Under the worst case scenarios, when the long-term needs of the relocated are not taken into account, the displaced are at serious risk of "becoming poorer than before displacement, more vulnerable economically, and disintegrated socially."<sup>2</sup> Cernea cites eight inter-related risk factors associated with resettlement from development projects: landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity and mortality, loss of access to common property, and social disintegration.

In response to such findings, the World Bank and the regional development banks have promulgated guidelines in measuring the adequacy of resettlement plans. These guidelines are pertinent to the management of resettlement in the environmental context. The World Bank recommends that baseline surveys precede resettlement, identifying two types of surveys: a census of all affected persons and assets, and a survey of the socio-economic conditions of the affected persons. The baseline surveys are important to developing the resettlement plans and to measure the impact that resettlement ultimately has on the socio-economic status of the affected persons.

The Bank requires a Resettlement Action Plan, which consists of several basic features: a statement of policy principles; a list or matrix indicating eligibility for compensation and other entitlements or forms of assistance; a review of the extent and scope of resettlement, based upon a census/ survey of those affected by the project; an implementation plan establishing responsibility for delivery of all forms of assistance, and evaluating the organizational capacity of involved agencies; a resettlement timetable coordinated with the project timetable, assuring (among other things) that compensation and relocation are completed before initiation of civil works; and discussion of opportunities afforded those affected to participate in design and implementation of resettlement, including grievance procedures.

Although not a panacea capable of eliminating all of the problems cited above, consultation with the affected populations – those who are resettled and the communities they join – is an essential part of managing resettlement. The Inter-American Development Bank describes the benefits of an effective participatory process:

"Participation can 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. Effective consultation is also essential to avoid the creation of undue expectations and speculation."

The planning process should pay particular attention to restoration of livelihoods in the new location, provision of housing, security of persons, and other needs related to effective integration.

These resettlement guidelines are consistent with the Guiding Principles on Internal Displacement, which are based on international human rights and humanitarian law. The Guiding Principles were promulgated largely to address problems arising from conflict-induced displacement, but internally displaced persons include others "who have been forced or obliged to flee or to leave their homes or places of habitual residence." The Guiding Principles affirm that all persons have the "right to be protected against being arbitrarily displaced from his or her home or place of habitual residence." In the case of development-induced displacement, arbitrary displacement includes situations in which individuals are forced to flee for reasons "which are not justified by compelling and overriding public interests." In the case of natural disasters, such displacement is arbitrary "unless the safety and health of those affected requires their evacuation." In the worst case examples discussed in the NAPAs, it is likely that planned relocation programs would

<sup>2</sup>Michael Cernea quoted in W. Courtland Robinson (2003) *Risks and Rights:The Causes, Consequences, and Challenges of Development-Induced Displacement*, Occasional Paper, Brookings Institution.

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meet these standards, but the Guiding Principles also state that "the authorities concerned shall ensure that all feasible alternatives are explored in order to avoid displacement altogether. Where no alternatives exist, all measures shall be taken to minimize displacement and its adverse effects."

The Guiding Principles also reiterate the need for consultation with the affected parties, emphasizing that the free and informed consent of those to be displaced shall be sought. The authorities responsible for displacing persons are encouraged to involve those affected, particularly women, in the planning and management of their relocation. In particular, care should be taken to ensure that "proper accommodation is provided to the displaced persons, that such displacements are effected in satisfactory conditions of safety, nutrition, health and hygiene, and that members of the same family are not separated."

Guidance provided to state authorities regarding displacement in natural disasters is particularly relevant to the issues covered in this paper. "Human Rights and Natural Disasters: Operational Guidelines and Field Manual on Human Rights Protection in Situations of Natural Disaster," issued by the UN Emergency Relief Coordinator and the Secretary General's Representative on Internally Displaced Persons, makes clear that:

"the return of persons displaced by the disaster to their homes and places of origin should only be prohibited if these homes or places of origin are in zones where there are real dangers to the life or physical integrity and health of the affected persons. Restrictions should only last as long as such dangers exist and only be implemented if other, less intrusive, measures of protection are not available or possible."

Conversely, people should not be required to return to areas in which their safety may be comprised: "Persons affected by the natural disaster should not, under any circumstances, be forced to return to or resettle in any place where their life, safety, liberty and/or health would be at further risk."

Most of the adaptation strategies reviewed for this paper do not set out a process of consultation with the affected populations. An exception is the NAPA prepared by the Solomon Islands. The Human Settlement project envisions that the communities themselves will be deeply involved in adaptation assessments. Key vulnerabilities and adaptation options, strategies and measures will be identified. The Solomon Islands recognizes that the consultation process will help determine the effectiveness of any relocation strategy:

"The biggest risk is that land owners and resource owners may not agree to the terms and conditions of relocation and also may claim compensation to the amounts that could be prohibitive for the government. It is therefore imperative to engage the relocating people and the resource owners at the very early stage of planning. Such engagement and continuous dialogue will ensure the long term sustainability of this programme."

The NAPA also recognizes the important role of the government, noting that relocation of the most vulnerable populations will necessarily become the responsibility of the government because of problems associated with land resources, tenure, and management systems. The aim of the project is to develop and implement plans, including promulgation of specific legislation and legal frameworks to guide the process of relocation. It has little detail, however, on how the actual relocation would be accomplished, particularly if the consultative processes yield opposition from the affected populations.

#### Conclusions

As understanding increases of the various ways that environmental change affects migration patterns, and vice versa, governments are beginning to think through how to manage the implications of these interconnections. The National Adaptation Programmes of Action and other adaptation strategies often discuss the ways in which migration has been used as a coping strategy when environmental factors impinge on people's livelihoods and security. Many of them also reflect concerns that climate change-induced environmental hazards will intensify such migration. Increased rural to urban migration is seen as problematic, particularly when urban centers are unable to absorb large numbers of internal migrants who have lost their means of livelihood. Adaptation strategies often propose land use policies and programs that would have the effect of stabilizing populations in areas that might experience large-scale out-migration in the absence of such measures.

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Fewer adaptation strategies focus on migration as an explicit adaptation process in its own right, either to help preserve fragile eco-systems by reducing population pressures or to protect populations affected by natural disasters or rising sea levels. Where resettlement is referenced, there is little detail as to how it will be accomplished. The lessons of previous planned resettlement programs do not appear to have been integrated into planning for what are seen often as inevitable relocations. As this paper suggests, involuntary resettlement can be fraught with perils for both the migrants and the receiving communities, necessitating a process that involves far more consultation and planning than described in the adaptation strategies.

Given the current gaps, more attention needs to be placed on identifying and testing new frameworks for managing potential movements. Attention needs to be given to both sides of the environment and migration nexus: (1) identifying adaptation strategies that allow people to remain where they currently live and work; and (2) identifying resettlement strategies that protect people's lives and livelihoods when they are unable to remain. Since internal migration is the most likely outcome for those affected by climate change and other environmental hazards, highest priority should be given to policies and programs aimed at managing these issues within the most affected countries. Nevertheless, some international migration may well be needed, particularly for the citizens of island nations, necessitating identification of appropriate admissions policies in potential destination countries.

In moving toward more coherent frameworks, the lessons of the past will be useful. More systematic examination of previous planned resettlement programs – in the context of transmigration, villagization and development projects – would help ensure that climate change-induced resettlement programs do not fall victim to the same problems identified in these initiatives. Identification of best-case examples of resettlement – that is, programs that respected the rights of the resettled and resulted in an improved economic and social situation – is as important as identification of pitfalls experienced in programs that failed. Guidelines promulgated to protect those who are involuntarily resettled from development projects or who are displaced from natural disasters should be examined systematically to determine their applicability to the resettlement programs proposed in the adaptation strategies. Technical assistance and training to the ministries that may be responsible for resettlement is essential to ensure that all alternatives are exhausted before people are required to relocate, affected populations are involved in the planning, and all steps are taken to ensure appropriate preparations and implementation.

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The Institute for the Study of International Migration (ISIM), based in the School of Foreign Service at Georgetown University, applies the best in social science, legal and policy expertise to the complex and controversial issues raised by international migration.

PHOTO CREDIT: Floods in Ifo refugee camp, Dadaab,Kenya, UNHCR: B. Bannon, December 2006.

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#### List of papers

Developing Adequate Humanitarian Responses by Sarah Collinson

Migration, the Environment and Climate Change: Assessing the Evidence by Frank Laczko

Climate Change and Migration: Key Issues for Legal Protection of Migrants and Displaced Persons by Michelle Leighton

Climate Change, Agricultural Development, and Migration by Philip Martin

Climate Change and International Migration by Susan F. Martin

Climate Change, Migration and Adaptation by Susan F. Martin

Climate Change, Migration and Conflict: Receiving Communities under Pressure? by Andrea Warnecke, Dennis Tänzler and Ruth Vollmer

Assessing Institutional and Governance Needs Related to Environmental Change and Human Migration by Koko Warner

#### **Transatlantic Study Teams**

The GMF Immigration and Integration Program's Transatlantic Study Teams link the transatlantic debate on international migration flows with its consequences for sending and receiving regions. Through compiling existing data, policy analysis, and dialogue with policymakers, selected study teams gather facts, convene leading opinion leaders on both sides of the Atlantic, promote open dialogue, and help to advance the policy debate. Study teams are chosen by a competitive selection process, based on the overall quality of their proposal, its policy relevance, institutional strength, sustainability, and potential for synergies. The Transatlantic Study Team 2009/2010 is investigating the impact of climate change on migration patterns. Environmental deterioration, including natural disasters, rising sea level, and drought problems in agricultural production, could cause millions of people to leave their homes in the coming decades. Led by Dr. Susan F. Martin, Georgetown University, and Dr. Koko Warner, UN University, the team consists of scholars, policymakers and practitioners from the migration and environmental communities.

The German Marshall Fund of the United States (GMF) is a non-partisan American public policy and grantmaking institution dedicated to promoting better understanding and cooperation between North America and Europe on transatlantic and global issues. GMF does this by supporting individuals and institutions working in the transatlantic sphere, by convening leaders and members of the policy and business communities, by contributing research and analysis on transatlantic topics, and by providing exchange opportunities to foster renewed commitment to the transatlantic relationship. In addition, GMF supports a number of initiatives to strengthen democracies. Founded in 1972 through a gift from Germany as a permanent memorial to Marshall Plan assistance, GMF maintains a strong presence on both sides of the Atlantic. In addition to its headquarters in Washington, DC, GMF has seven offices in Europe: Berlin, Bratislava, Paris, Brussels, Belgrade, Ankara, and Bucharest.

The Institute for the Study of International Migration is based in the School of Foreign Service at Georgetown University. Staffed by leading experts on immigration and refugee policy, the Institute draws upon the resources of Georgetown University faculty working on international migration and related issues on the main campus and in the law center. It conducts research and convenes workshops and conferences on immigration and refugee law and policies. In addition, the Institute seeks to stimulate more objective and well-documented migration research by convening research symposia and publishing an academic journal that provides an opportunity for the sharing of research in progress as well as finished projects.

The UN University established by the UN General Assembly in 1973, is an international community of scholars engaged in research, advanced training and the dissemination of knowledge related to pressing global problems. Activities focus mainly on peace and conflict resolution, sustainable development and the use of science and technology to advance human welfare. The University's Institute for Environment and Human Security addresses risks and vulnerabilities that are the consequence of complex environmental hazards, including climate change, which may affect sustainable development. It aims to improve the in-depth understanding of the cause effect relationships to find possible ways to reduce risks and vulnerabilities. The Institute is conceived to support policy and decision makers with authoritative research and information.