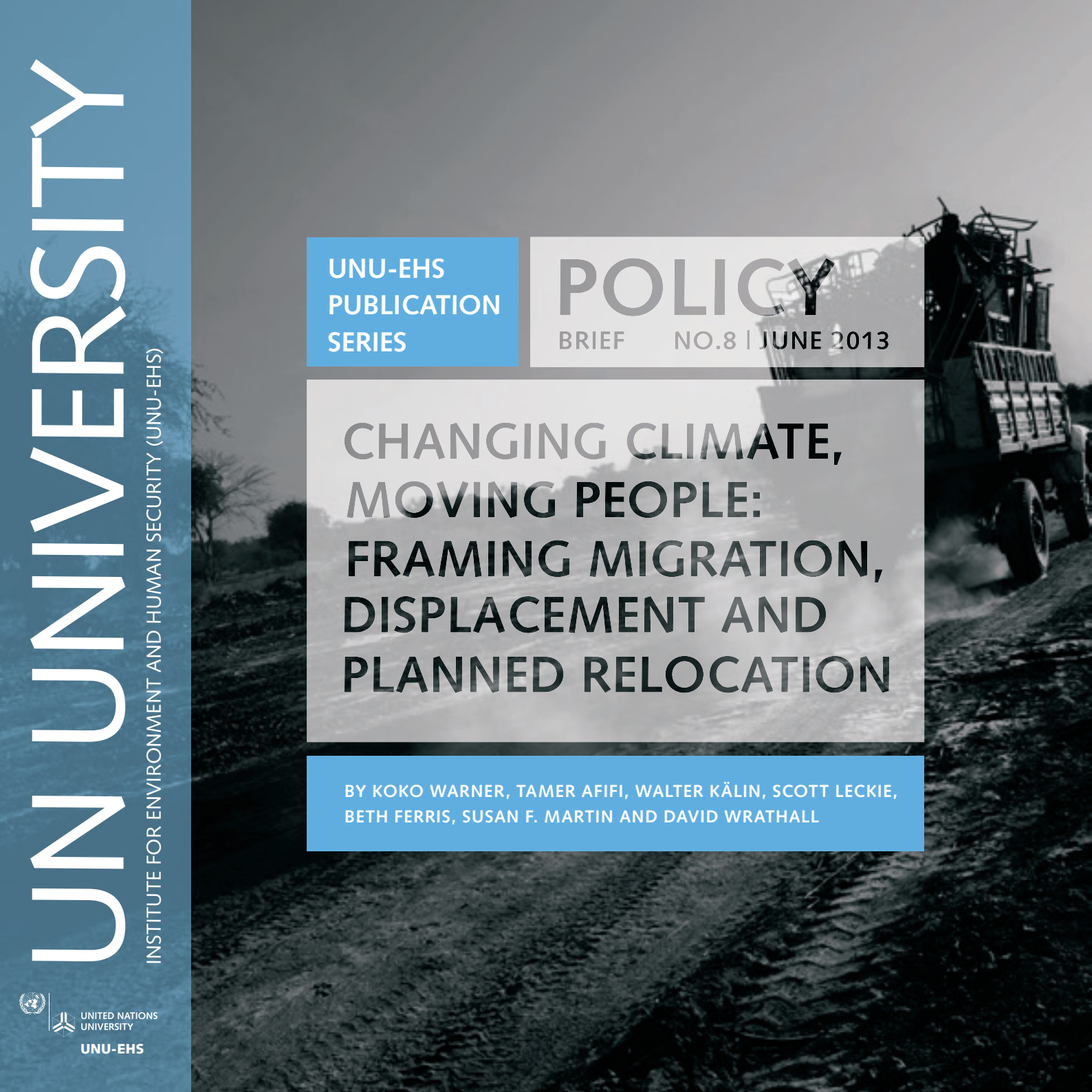

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CHANGING CLIMATE, MOVING PEOPLE: FRAMING MIGRATION, DISPLACEMENT AND PLANNED RELOCATION

BY KOKO WARNER, TAMER AFIFI, WALTER KÄLIN, SCOTT LECKIE, BETH FERRIS, SUSAN F. MARTIN AND DAVID WRATHALL

Changing climates, moving people: Framing migration, displacement and planned relocation

by Koko Warner, Tamer Afifi, Walter Kälin, Scott Leckie, Beth Ferris, Susan F. Martin and David Wrathall

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Foreword

In December 2010, the 16th Conference of Parties (COP16) of the United Nations Framework Convention on Climate Change (UNFCCC) agreed upon the Cancún Adaptation Framework. The framework introduced paragraph 14f which – for the first time in an internationally agreed climate policy – considered climate induced migration, displacement and planned relocation. Seven months later, in June 2011, the Nansen Conference on Climate Change and Displacement in the 21st century convened to address the climatic challenges facing our planet and their current and future implications for human displacement. The concluding Nansen Guiding Principles of the Conference focused on the need for, *inter alia*:

- shared responsibilities to respond to the humanitarian impacts of climate change;
- leadership and engagement of local governments and communities, civil society and private sector;
- regional frameworks and international cooperation to enable cross-border movements;
- increasing the local and national capacity to respond to disasters;
- further strengthening disaster prevention and preparedness;
- utilizing existing legal frameworks and protection regimes; and
- a more coherent approach to protection at the international level.

In October 2012, the Norwegian and Swiss governments launched the 'Nansen Initiative'. This is conceived as a state-owned consultative process, outside the United Nations, to build consensus – in a bottom-up way – among interested states about how best to address cross-border displacement in the context of sudden- and slow-onset disasters.

The UN University is delighted to be part of these processes, including sharing the outcomes of empirical research and to interact with government delegates and a wider community of experts. We equally appriciate the opportunity to draw on the expertise of the world´s leading voices on migration, displacement and planned relocation as co-authors of this publication. The purpose of the Policy Brief is to inform policymakers as well as researchers and all concerned individuals and institutions about distinctions and different policy needs related to human migration, displacement and planned relocation.

I hope that this document will be useful for future UNFCCC Climate Talks, the consultative processes of the Nansen Initiative, and to a wider body of decision makers and experts. The timing of this Policy Brief is notable, as the world of sustainable development, disaster risk management, humanitarian assistance and climate policy heads towards their respective post-2015 policy formulation. We are confident that the thoughts shared in this Policy Brief will support discussions moving towards these historic policy milestones.

Professor Jakob Rhyner
United Nations University
Vice Rector in Europe
Director, UNU-EHS

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Purpose of this document

Different policies are required for different types of human mobility related to climatic changes. Hence, it is necessary to distinguish between migration, displacement and planned relocation in climate policy and operations. The purpose of this Policy Brief is to help distinguish between human migration, displacement and planned relocation and present state-of-the-art thinking about some of the key issues related to addressing these in the context of climate policy.

Summary of recommendations

1. *The needs of affected people vary across types of human mobility: migration, displacement and planned relocation.* Climate policy should draw on state-of-the-art knowledge and experience to distinguish between migration, displacement and planned relocation to improve the resilience of affected countries and communities.

2. *Design anticipatory approaches that bridge current practice and future needs.* Emerging climate policy related to human migration, displacement and planned relocation can provide a stepping stone for transitions between immediate-term use of existing approaches to necessary longer-term paradigm changes about population shifts, governance of borders and mobility, livelihood viability and planning locally, regionally and globally.

3. *Distinguish between resilient and vulnerable migration.* Both "resilient" and "vulnerable" households use migration, but in markedly different ways that either enhance resilience or reinforce a downward spiral of vulnerability to climatic and other stressors. Focusing on household profiles and relative resilience or vulnerability is a key consideration for making adaptation investments and programming. Prioritization is needed to improve the adaptive capacity of vulnerable households and communities, and ensure that migration is a choice and not because people cannot access other adaptation options that would enhance their resilience.

4. *Make provisions for access to housing, land and property for climate change-related human displacement.* Established international norms around housing, land and property (HLP) rights can help encourage coordinated state action to help people displaced by climate change-related factors. An HLP rights approach to climate change-induced displacement can provide a clear and globally applicable means, grounded in law and good practice, of developing viable, appropriate and durable solutions. This can involve the acquisition of land and related progressive planning measures.

5. *When planned relocation is unavoidable, it should involve affected communities, provide for appropriate land acquisition and ensure long-term attention to improving living standards of moved peoples.* When resettlement related to climate change cannot be avoided, its scale should be minimized. Success factors include having sufficient lead time to enable careful, participatory planning processes, appropriate land acquisition and ensuring sustained and sufficient financing to resettle people in a way that improves rather than deteriorates living standards.

6. *Determine whether movements are voluntary or forced.* Forcibly displaced persons may require temporary and permanent solutions in their own countries or in the territory of other states. This may become the case where vast parts of a country have become uninhabitable so that it can no longer host its entire population, where sustainable solutions in the country of origin are not available, or where displaced persons cannot return in safety and dignity for other reasons.

7. *In the context of changing climatic conditions worldwide, climate policy should ensure that migration remains a matter of choice to improve resilience, and that displacement and planned relocation where necessary can be undertaken in safe, dignified conditions with durable long-term solutions.* Climate policy will influence the extent to which the mobility of future generations improves welfare or accelerates a downward spiral of deteriorating human security in the long-term.

Introduction

Recommendation: The needs of affected people vary across types of human mobility: migration, displacement and planned relocation. Climate policy should draw on state-of-the-art knowledge and experience to distinguish between migration, displacement, and planned relocation to improve the resilience of affected countries and communities.

Changing weather and climate conditions worldwide – in combination with livelihood and food production systems, political trends, and human welfare – have affect patterns of human mobility and human population distribution. Research since the 1980s has inquired about the relationship between Earth´s changing environments and the movements of people – from voluntary and forced migration, displacement, on to relocation (Castles, 2002). Early research tried to estimate or even predict the number of people that might be on the move in relation to things like climate change.[1] As early as 1990, the Intergovernmental Panel on Climate Change (IPCC) warned that significant levels of human mobility could occur as a result of changing climatic conditions (Brown, 2008).

A growing body of research has confirmed that processes such as climatic variability (including storms, drought, and other kinds of weather extremes), and shifts in climate patterns associated with glacial melt, sea level rise and desertification increasingly affect migration, displacement and (planned) relocation in many parts of the world (Guzman et al., 2009). Regions particularly sensitive to climatic stressors – whose societies often are very vulnerable to these and other stressors – include areas like low-lying islands and deltas, coastal zones, glacial-fed water systems and regions subject to persistent drought.

How could climate change affect human mobility worldwide?

During the past few years, consensus has grown that human mobility will be affected by, and in turn will affect, the ways in which countries adapt to environmental changes linked to climate change. There are four paths, in particular, by which climate change may affect human mobility either directly or, more likely, in combination with other factors (Martin and Warner, 2013):

- Changes in regional weather patterns (climate) that contribute to longer-term drying trends that affect access to essential resources such as water and negatively impact the sustainability of a variety of environment-related livelihoods including agriculture, forestry, fishing, etc.;
- Rising sea levels, desertification, permafrost melt and other climatic changes that render coastal and low-lying areas, drylands and other areas uninhabitable for human populations in the longer-term;
- Increased frequency and magnitude of weather-related extremes, such as heat-waves, floods, cyclones and storms that destroy infrastructure and livelihoods and require people to relocate for shorter or longer periods; and
- Competition over potentially diminishing or changing water and land resources that may exacerbate pressures which contribute to conflict, which in turn precipitates movements of people.[2]

Definitions and concepts

The literature on 'climate change/environmentally induced migration' has become more precise over the past three decades. In the mid eighties, the definitions often did not distinguish between internal and international, voluntary and forced, or short- and long-run human movements. In many cases, all of these categories were referred to as 'migration'.

Some early conceptualizations did not even distinguish between migration and refugee. For example, this distinction was not yet made in one of the first definitions, which was provided by El-Hinnawi (1985: 4 in Bates 2002: 466) discussed the phenomena as affecting "those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life".[3] Today, however, most literature avoids the expression 'environmental refugees', which has a legal definition under the 1951 Geneva Convention for Refugees that does not consider environmental or climatic factors as accepted grounds for obtaining refugee status.

The International Organization for Migration (IOM, 2007) defined environmentally induced migration as "…persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad". This definition encompasses both 'forced' and 'voluntary' migration, as it uses the expressions 'obliged to leave' and 'choose to do so', respectively.

Renaud et al. (2011) classify environment-related migration patterns according to the urgency of their situation by introducing a definition tree that distinguishes between environmental emergency migrants, environmentally forced migrants and environmentally motivated migrants. Environmental emergency migrants are those who leave their homes in order to save their own and their families' lives, whereas environmental forced migrants leave their homes to avoid 'the worst of environmental deterioration' in cases of rapid-onset hazards. Environmentally motivated migrants are those people who may respond to environmental degradation by migrating in the future. Renaud et al. do not only distinguish between forced and voluntary migration, but within the first category they make a distinction between emergency and forced migration, taking the severity and urgency of the case as the distinction factor. Environmentally motivated migrants are potential forced migrants, if the environmental situation does not improve or even worsens in the future.

The first two scenarios – associated with slower, incremental changes in regional weather and climate – have the potential to create conditions that contribute to large scale population movement. The third and fourth scenarios – associated with rapid-onset weather hazards like storms, cyclones, floods and resource depletion – already cause temporary population movement and situations in which people voluntarily seek or are compelled to find new homes and livelihoods over a lengthy period of time as conditions in their home communities worsen.

These human mobility patterns related to changing climatic conditions include internal and cross-border range from voluntary and involuntary migration (both short and long distances), to displacement and planned relocation. Some movements resemble familiar migration and displacement patterns, but other movements occur in circumstances of complex humanitarian crises (particularly where climate change exacerbates natural hazards like cyclones). Research also highlights the interactions between climatic drivers, local environmental factors and social contexts to shape mobility decision-making, processes and outcomes.[4] Recent work emphasizes that the people most exposed to environmental stressors – particularly farmers, herders, pastoralists, fishermen and others who rely on natural resources and the weather for their livelihoods – may be the least able to move very far away, if at all (Betts, 2010).

This paper first reviews recent developments in climate policy and human mobility, and then examines three mobility forms that have been specifically mentioned in international climate agreements, migration, displacement and planned relocation. The paper reviews the most converging and policy relevant conclusions from recent debates. Each of these three dimensions presents key challenges and potential policy implications so that, in the context of climate change, mobility confers an increasing set of opportunities and upward socio-economic prospects, rather than triggering a spiral of heightening social vulnerability. The paper concludes with an outlook in policy between today and beyond 2020.

I. Significance of recent developments in climate policy and human mobility

Recommendation: Design anticipatory approaches that bridge current practice and future needs. Emerging climate policy related to human migration, displacement and planned relocation can provide a stepping stone for transitions between immediate-term use of existing approaches to necessary longer-term paradigm changes about population shifts, governance of borders and mobility, livelihood viability and planning locally, regionally and globally.

The range of human mobility issues related to climate change and disasters is increasingly discussed at international and national policy fora, including the UNFCCC, the United Nations Convention to Combat Desertification (UNCCD), the United Nations International Strategy for Disaster Reduction (UNISDR), the Global Forum on Migration and Development (GFMD) and ongoing policy and operational work of the humanitarian and development communities.

A concrete measure of the growing consensus on the importance of these linkages between environmental change and human mobility was the adoption of the Cancún Adaptation Framework (CAF) during the COP16 negotiations of the UNFCCC, which included a first-time-ever mention of migration, displacement and planned relocation in an internationally negotiated piece of climate policy. The reference to human mobility was placed in the context of a broader range of adaptation issues found in Paragraph 14. Paragraph 14 begins with a general statement and specifies actions related to migration in subsection (f):

14. 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; (emphasis added)

The language adopted in Cancun focused on voluntary measures to enhance understanding, coordination and cooperation, rather than offering concrete solutions. The negotiations reinforced that the issue was important, but not controversial in terms of what was being asked.

In addition, CAF mandated for further work and particularly implementation on "loss and damage" (Cancun Adaptation Framework, paras 25.29) resulting in the 2012 Doha Climate Gateway Decision, which also specifically mentioned mobility. The decision, emphasizing precautionary measures and the need for combination of approaches in broader context of climate resilient sustainable development, discusses human mobility in paragraph 7 (vi):

7. Acknowledges the further work to advance the understanding of and expertise on loss and damage, which includes, inter alia, the following: (a) Enhancing the understanding of:
….

(vi) How impacts of climate change are affecting patterns of migration, displacement and human mobility;

The decision also highlighted work going on outside the UNFCCC process (IPCC Special Report on Extreme Events, Hyogo Framework of Action, WMO Climate Services for All, etc.).

The framing of human mobility in the climate negotiations is important for several reasons

Mobility in the context of the UNFCCC is acknowledged as having a link to climatic change and framed as a *phenomenon to be managed*. The Cancun Adaptation Framework (para 14(f)) and the Doha Climate Gateway Decision (CMP8, para 7(vi)) couch human mobility within the realm of adaptation to climate change and subtly introduces the thought that *adaptation may require societal transformations in the longer-term.*

This suggests that adaptation may be understood not only as marginal changes in the way people live in certain locations. Other than the UNFCCC, no other forum internationally or regionally has created a space recognizing a range of issues and possible activities related to human mobility in the context of climate change, and linking this to the upcoming climate finance regime.

These policy developments have significance for *implementation*. As the institutional arrangements for adaptation, as well as "loss and damage" continue to be shaped, human mobility will expand from a topic for discussion towards a topic for policy and operations. This will have meaning for development cooperation (particularly around livelihoods), humanitarian and disaster risk reduction work, urban and rural planning, etc.

While these climate policy decisions clearly refer to a spectrum of human mobility issues, discussions continue to lump issues together in homogenous terms such as "environmentally-induced migration". Nevertheless, the recognition in policy of three distinct categories is a promising development, and allows for a more nuanced discussion of policy alternatives for improving outcomes in distinct patterns of climate-driven human mobility.

II. Human migration: Patterns and emerging understanding

Koko Warner and Tamer Afifi
United Nations University Institute for Environment and Human Security (UNU-EHS)

Recommendation: Distinguish between resilient and vulnerable migration. Both "resilient" and "vulnerable" households use migration, but in markedly different ways that either enhance resilience or reinforce a downward spiral of vulnerability to climatic and other stressors. Focusing on household profiles and relative resilience or vulnerability is a key consideration for making adaptation investments and programming. Prioritization is needed to improve the adaptive capacity of vulnerable households and communities, and ensure that migration is a choice and not because people cannot access other adaptation options that would enhance their resilience.

Emerging scientific findings on climate change and migration

This text box offers examples of multiple-country studies on the topic, but acknowledges a rapidly expanding knowledge base which is beyond the scope of this Policy Brief to review. For a comprehensive bibliography of current literature on the topic, refer to "People on the Move in a Changing World: Comparing the Impact of Environmental Change on Migration in Different Regions of the World" (IOM and University of Neuchatel, 2012).

A clearer understanding of migration as an adaptive response to environmental stress is emerging from empirical research. One comparative project called Environmental Changes and Forced Migration Scenarios (EACH-FOR) (Warner et al., 2009) covered 22 case studies in 6 regions of the world to assess the contribution of environmentally-related factors on migration (Jäger et al., 2009). This research revealed that although migration is a traditional mechanism for managing risk, in some areas these patterns have changed due to the rapidly changing socio-economic and environmental conditions. Evidence of temporary, short-term and seasonal migration exists, but also there is a trend towards permanent migration. In the same year, the German Marshall Fund Transatlantic Study Team on Climate Change & Migration (2009–2010) investigated 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. The team addressed knowledge gaps and helped bring the topic to the attention of policymakers and other stakeholders in Europe, the US and in some affected countries.

When the Office of the United Nations High Commissioner for Refugees (UNHCR) has observed that environmental stressors (i.e. prolonged drought conditions, desertification, flash floods and land degradation) were increasingly affecting human movement within and across the Horn of Africa, it initiated a one-year project in collaboration with UNU-EHS (2011) that targeted refugees in Ethiopia and Uganda to find out whether climatic and environmental problems have lead to their movements in any point of time in their history, regardless of their refugee status that is linked to political and ethnic issues. The results of this research showed broader political conditions, breakdown in civil order as well as excessive state oppression, severely reduced their ability to cope with and adapt to climatic crises. Resource scarcity exacerbated by worsening weather conditions was often described as a multiplier or magnifier of pre-existing conflicts in refugees' countries of origin. The study concluded that the links between primary internal movement/displacement related to climate variability, followed by a secondary cross-border movement are complex and should also be more thoroughly investigated to examine what, if any, role climate factors play in the trajectory of an individual becoming a refugee in this climatically vulnerable region of the world.

These lessons and others come together in the UK's Foresight Project, which concluded that "environmental change will affect migration now and in the future, specifically through its influence on a range of economic, social and political drivers which themselves affect migration. However, the range and complexity of the interactions between these drivers means that it will rarely be possible to distinguish individuals for whom environmental factors are the sole driver ('environmental migrants')" (Black et al., 2011). The study further projected that complex

factors, including environmental ones, will interact and lead to different outcomes, including an impact on human migration. This impact of environmental change on migration might increase in the future. The Foresight project also draws attention to the 'trapped populations' who might not be able to migrate and escape the deteriorating environment due to the lack of means, accessibility and social networks that would otherwise confer migration alternatives.

More recently, UNU-EHS and CARE conducted research in eight case studies in Africa, Asia and Latin America (Where the Rain Falls project (Warner et al., 2012)), investigating the circumstances in which households use migration as a risk management strategy in response to changing rainfall variability and food insecurity. Most of the households interviewed were agriculture-based and the majority of these considered widening rainfall variability to be negatively affecting production and contributing to food and livelihood insecurity. Households reported using seasonal, temporal and even permanent migration to manage climatic risks, such as rainfall variability and food insecurity, which both have increased in the past two decades. The project distinguished between four household profiles, namely households who use migration to improve their resilience – and succeed in doing so (content migration); households that use migration as a 'survival' strategy without flourishing; households that use migration as a last resort but suffer from the erosive consequences (vulnerable migration); and households that cannot afford migration and stay trapped under the difficult climatic situation in situ. Noteworthy is that across the eight case studies, all the four household profiles existed but to various extents, and mediated through various local social contexts.

These findings coincide with other recent work showing the heterogeneous distribution of opportunities for migration across populations. Depending on context, in circumstances of environmental stress, women migrate differently from men, the young from the elderly, and the relatively poor from the relatively wealthy (Gray et al., 2012; Henry et al., 2004; Hunter and David, 2011). Consequently, the ability to derive benefits from mobility differs from household to household according to membership. This means that single-mother headed or childless households may be less able to employ migration as an adaptation alternative. Taken together these conclusions focus attention on the importance of household resilience vis-à-vis environmental stress. Resilient households generally have more alternative livelihoods, more alternatives for adapting in situ, and less livelihood sensitivity to climatic changes and environmental extremes. This brings into question the extent to which we can anticipate mass environmental migration even when populations face overwhelming stressors. Nevertheless, institutions beyond household scales also have critical significance for households' livelihood strategies, often influencing whether they need to employ human mobility as an adaptive measure (Martin and Warner, 2013). Local institutions, like kinship or religious affiliations, can play a crucial role in protecting people from sequences of environmental hazards. These are both influenced by and mediate local, national and international policies, such as humanitarian responses to environmental disasters.

Conceptual and empirical work has examined broad relationships between environmental factors and migration in different situations.[5] These studies have identified broad patterns as a point of departure for further, more nuanced work on the interactions of climatic and socio-economic factors.[6] Research since the mid-2000s had provided evidence that environmental factors do play a role in human migration[7] and emphasizes that some people who are more exposed to environmental stressors – particularly farmers, herders, pastoralists, fishermen and others who rely on natural resources and the weather for their livelihoods – may be the least able to move very far away, if at all.[8] In the decades ahead, these potentially "limited mobility" populations could face deteriorating habitability of their traditional homelands with fewer options for moving to more favourable places in safety and dignity. The implications of climate change for a wider scope of issues related to migration in the medium and longer term have driven a quest for better understanding the circumstances under which climatic factors affect human decisions about whether to leave, where to go, when to leave and when to return.

Patterns of migration associated with climatic changes

Newest empirical evidence from case studies across the world further conducted within the framework of the Where the Rain Falls project (Warner et al., 2012) illustrates these implications:

- Rural people overwhelmingly perceive climatic changes happening today in the form of rainfall variability, and these perceptions shape household risk management decisions. The most commonly reported changes relate to the timing, quality, quantity and overall predictability of rainfall, including: delayed onset and shorter rainy seasons; reduced number of rainy days per year; increased frequency of heavy rainfall events, and more frequent prolonged dry spells during rainy seasons. In most cases, these perceived changes correlate with an analysis of local meteorological data over recent decades.

- Largely agriculture-based households report that rainfall variability negatively affects production and contributes to food and livelihood insecurity. Levels of food insecurity varied significantly across the eight sites depending on such factors as: total amount and seasonality of rainfall; degree of agricultural intensification; extent of livelihoods diversification; and access of poor households to social safety nets/support services.

- Migration of different types is a common risk management strategy for households and communities facing climatic stressors. For example, voluntary migration – seasonal, temporal and permanent – plays an important part in many families' struggle to deal with rainfall variability and livelihood insecurity. This kind of migration has been reported to have increased in recent decades in a number of research sites. Rainfall has been observed to have a more direct relationship with household migration decisions in research sites where the dependence on rainfed agriculture, often with a single harvest per year, was high and local livelihood diversification is low. *Pressure on rainfall-dependent livelihoods is likely to grow as a driver of long-term migration in the coming decades if vulnerable households are not assisted in building more climate-resilient livelihoods in situ.* Migration in new field-based research has been observed to have the following characteristics: almost entirely within national borders; predominantly male, but with growing participation by women in a number of countries; largely by individual household members (but with some exceptions where entire nuclear families moved together); largely driven by livelihood-related needs in most countries.

Is human mobility an adaptive strategy, or an indicator of local constraints to adaptation?

Case study and modelling results illustrate the circumstances under which migration decisions occur – showing that both "resilient" and "vulnerable " households use migration, but in markedly different ways that either enhance resilience or reinforce a downward spiral of vulnerability to climatic and other stressors. Multiple studies have drawn attention to the importance of distinguishing between the households in terms of resilience and vulnerability; the more the resilience of the households and the more alternative livelihoods they have *in situ*, the less vulnerable they would be against the climatic changes.

"Resilient" households – those with more diverse assets and access to a variety of adaptation, livelihood diversification, or risk management options (through social networks, community or government support programmes and education) can use mobility (especially voluntary migration) in ways that enhance resilience. "Resilient households" use mobility in ways which improve their ability to withstand climate stressors. They use remittances to invest in education, health and climate-resilient livelihood opportunities and risk diversification. These households use voluntary migration as one of a variety of adaptation strategies, moving seasonally or temporally, often to non-agricultural jobs in cities or internationally.

Of concern however, research indicates that "vulnerable households" – those which have the least access to such options, few or no livelihood diversification opportunities, no land, little education – use (usually) internal migration during the hunger season as a survival strategy in an overall setting of erosive coping measures which leave or trap such households at the margins of decent existence. The movements of these vulnerable people have resemblance in some cases to forced migration.

"Vulnerable" households – often in countries with less food security and fewer options for diversifying livelihoods – use migration to survive, but not flourish. They move seasonally in their countries to find work – often as agricultural labour in other rural areas. In situations where food security is even more tenuous and where adaptation options are fewer or not pursued vigorously, households use migration as a matter of human security in what can be seen as an erosive coping strategy. This group often moves during the hunger season to other rural areas in their regions in search of food, or work to buy food for their families. And those who are too vulnerable to utilize mobility intentionally may become "trapped" populations which struggle to survive in their areas of origin and cannot easily use migration to adapt to the negative impacts of rainfall stressors.

Potential future relationships among rainfall variability, food security and migration

In order to understand the potential for rainfall to become a significant driver of human mobility in the future, it is important to identify the range of impacts that likely scenarios may have upon migration flows as shown in the next figure. Figure 1 shows that migration from vulnerable households in the Tanzania research site is sensitive to changes in rainfall patterns.

The modeling exercise shows that "vulnerable" households respond to changes in rainfall variability by using migration more – in the case of the extreme drying scenario (scenario 4), such vulnerable households used migration over two times more than the baseline. The number of migrants modelled as leaving vulnerable households under Scenarios 1 (drying) and 2 (wetting) both represent a significant increase over the baseline.

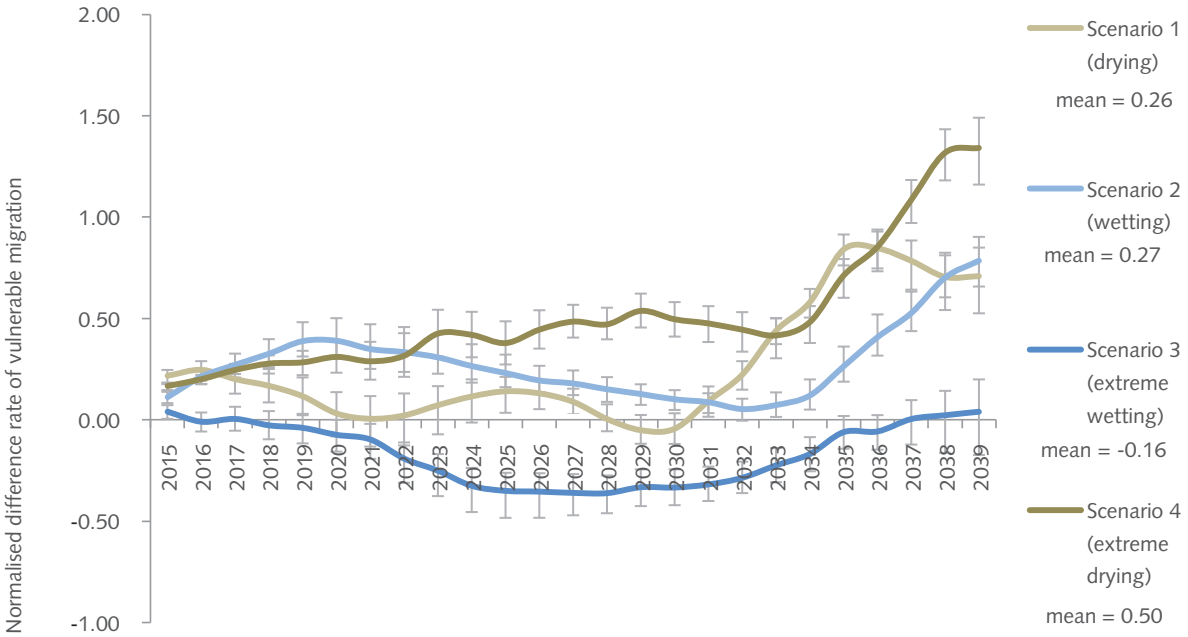

Figure 1: Five year moving averaged normalized difference in the rate of RABMM modelled vulnerable migration. Error bars indicate the envelope of changes modelled under five member ensembles. Source: Warner et al. (2012) and Smith (2013).

By contrast, "aspirational" migration from contented households shows much less sensitivity to changing assumptions about future rainfall patterns. Both wetting scenarios produce small increases in contented migration, while both drying scenarios show modest decreases. This underscores the observation that resilient households use migration in ways that reduce their sensitivity to climatic stressors over time. Hence resilient households could be expected to migrate less in response to climatic stimuli.

Outlook

The conclusions drawn from empirical research urge policies that are designed to focus on households that, for the systematic reasons identified above, are differentially vulnerable in the face of climate-driven stress. In order to build general social resilience, policy should focus on livelihood diversification, particularly on supporting and enabling a transition toward livelihoods that are not climate dependent. Populations identified as climate-vulnerable should receive priority in national strategies for primary and secondary education as well as vocational training. When environmental stress makes migration necessary, policy attention should focus on the livelihood security of migrants, in addition to generally improved services and social protections in destination areas. It is critical that the children counted among environmentally-induced migrant flows are targeted for specific health and education policy interventions to ensure that they do not slip off the intergenerational ladder of upward socio-economic mobility.

Agent-based modelling is a computational social simulation technique that enables the user to model the behaviour of individual decision-making entities as well as their interactions with each other and the environment. The Rainfalls Agent-Based Migration Model (RABMM) represents vulnerability and migration decision-making at two levels of agent analysis: the household and the individual, both of which can be generated from the household survey data collected in each case study location. The RABMM is designed to represent the degree of vulnerability of households to rainfall variability-induced changes in livelihood and food security, and the subsequent impact of these upon the migration of household members. The research identified a range of impacts that likely scenarios may have upon migration flows and showed that rainfall changes have the potential to become a significant driver of human mobility in the future. The initial application of the model to the Tanzania research site revealed the results discussed in the text (Warner et al., 2012; see also Smith, 2013).

III. Human displacement

Scott Leckie
Director and Founder, Displacement Solutions
(www.displacementsolutions.org)

Recommendation: Make provisions for access to housing, land and property for climate change-related human displacement. Established international norms around housing, land and property (HLP) rights can help encourage coordinated state action to help people displaced by climate change-related factors. An HLP rights approach to climate change-induced displacement can provide a clear and globally applicable means, grounded in law and good practice, of developing viable, appropriate and durable solutions. This can involve the acquisition of land and related progressive planning measures.

Emerging evidence and experience worldwide suggests that individuals and communities will be forced by the effects of climate change to change their places of residence. This can occur through processes of voluntary migration, planned relocation, and – particularly for the most vulnerable sectors of society – human displacement. Because of the systemic nature of climate change, the scale of climate displacement in all of its manifestations is likely to dwarf current levels of conflict-, development- or disaster-induced displacement involving the loss of homes, properties and land across wider geographies (see, for instance, Leckie et. al., 2012).

Displacement and climate change: expected patterns

In terms of when forced displacement due to climate change actually takes place, this is likely to manifest in essentially five primary ways, principally in the most impoverished countries. These are:

1. Temporary displacement: People who for generally short periods of time are temporarily displaced due to a climate event such as a hurricane, flood or storm surge but who are able to return to their homes once the event has ceased, such as many of the 18 million refuge seekers during Pakistan's Great Indus Floods of 2010.

2. Permanent local displacement: People who are displaced locally, but on a permanent basis due to irreversible changes to their living environment, in particular sea level rise, coastal inundation and the lack of clean water and increasingly frequent storm surges. This form of displacement implies that localized displacement solutions will be available to this group of forced migrants, such as higher ground in the same locality. This would include dwellers along Bangladesh's coastline who flee to higher ground in the immediate vicinity.

3. Permanent internal displacement: People who are displaced inside the border of their country, but far enough away from their places of original residence that return is unlikely or impossible. This would concern a family displaced from one region of a country to another region in country, for instance, from a coastline to an inland town or city, such as the ongoing resettlement from the Carteret Islands to the larger island of Bougainville in Papua New Guinea.

4. Permanent regional displacement: People for whom displacement solutions within their own countries are non-existent or inaccessible and who migrate to nearby countries willing to offer permanent protection. This would involve, for instance, a citizen of Kiribati or Tuvalu migrating on a permanent basis to New Zealand.

5. Permanent inter-continental displacement: People for whom no national or regional displacement solutions are available, and who are able to receive the protection of another state in another continent, such as a Maldivian who migrates to London.

Each of these categories distributes displaced persons across different policy jurisdictions, and thus entails unique legal implications for governments and international agencies that may be assigned to find durable solutions. Such responses, which can initially be understood in terms of short- and long-term options, have important implications for those affected and for those involved in ameliorating the emerging displacement crisis caused by climate change.

Organized or non-organized approaches to address the needs of climate change-related displacement?

International and national laws and the institutions in place to enforce them are arguably not yet capable of ensuring that the rights of climate displaced persons will be fully respected and protected. It is yet unclear where climate-affected communities can turn to seek adequate redress for their predicaments. Without appropriate action in support of the climate displaced population, millions of people run the risk of becoming both

homeless and landless, with limited prospects for establishing anything more than the most basic livelihood and economic opportunities. Such circumstances affect not only the rights of the people concerned, but may contribute to conflict and social instability in various forms.

How, then, can concerned actors best approach the phenomena of climate displacement from the perspective of state and international policy? According to basic tenets of international law and natural justice, everyone displaced by factors and circumstances beyond their control or responsibility must be treated as rights-holders, possessing rights under both national and international laws, with these rights generating corresponding obligations on behalf of the relevant governments concerned. Treating each person, household or community as holders of rights and thus subject to specific and targeted interventions and procedures designed to procure for them new land for lost land and new homes for lost homes entails complexities, difficulties and multi-layered elements.

The alternative approach comes down to how and to what degree spontaneous and voluntary migration can be facilitated over time in advance of displacement. The easiest, most affordable and most likely to succeed policy approach would simply be to open migration alternatives and allow people to adapt on their own terms to negative environmental changes. This laissez-faire policy approach is certainly understandable, particularly for poor, indebted and cash-starved countries, as most of those heavily affected by climate change and climate displacement are. Whether such approaches, however, are always in the best interests of the populations concerned, remains to be seen, particularly when viewed through the lens of human rights.

Housing, Land and Property rights offers guidance on addressing climate change-related displacement

Using HLP rights as one means for encouraging concerted state action in support of the rights of affected persons and communities has immense potential and utility if done correctly, adequately resourced and in a timely manner.

An HLP rights approach to climate change-induced displacement can provide a clear and globally applicable means, grounded in law and best practice, of developing viable rights-based solutions to this growing crisis that ensures that these rights are protected for everyone in need of them. The basic human rights principle of the inherent dignity of the human person means that each and every person, family and community that is forced from their homes and lands, against their will, must have access to some form of 'effective remedy' – both substantive and procedural – which respects their rights, protects their rights and, if necessary, fulfils their rights as recognized under international human rights law. In effect, everyone whose HLP rights are affected by climate change needs to have a means of remedying these denials through the provision of appropriate and durable HLP solutions to their status as climate change displaced persons, and more often than not this will involve the acquisition of land and related progressive planning measures. In heavily-affected countries such as Bangladesh the motto "New land for lost lands, new homes for lost homes" encapsulates both the needs of those already displaced who are seeking rights-based remedies for their plight, as well as revealing what is increasingly expected of governments in protecting the rights of their citizens.

The assertion of these rights and the duty of relevant states to intervene to assure them expand as vulnerability increases. As is the case with many human rights, (in particular economic, social and cultural rights), there is an important presumption that individual rights holders will do everything within their financial and resource capacities to secure for themselves the attributes found within the rubric of each existing right to which they are entitled. The duties of states to respect and protect rights are primarily "negative duties": these require governments to create the conditions within society that maximize the ability of the population to secure rights without significant active state involvement. When individual efforts are not capable of securing access to rights protections, as the case may be in instances of climate displacement, the state must then intervene to provide the protection needed to enable this individual to access the full spectrum of rights, including of course, housing, land and property rights.

Outlook: Housing, Land and Property

It is often argued that the spectre of permanent, non-reversible displacement caused by climate change and rising sea levels is a phenomenon that has yet to be clearly defined enough for states and their people to enable them to take the measures required to secure the long-term HLP rights of everyone affected by climate-induced displacement. However, this is not true. Already, Bangladesh, Papua New Guinean atolls such as the Carteret, Morelock, Tasman and Nugeria atolls, states such as Tuvalu, Kiribati, the Maldives, the Solomon Islands and others have begun to permanently resettle people because of land lost to rising seas, subsidence and salinization of fresh water supplies.

Problematically, the record of treatment thus far faced by those who have arguably already been displaced due to climate change does not bode particularly well for the millions yet to be displaced, and although land-based solutions to climate displacement hold considerable promise, these approaches are proving difficult to implement in practice. Nonetheless, a series of people-driven initiatives are underway in several of the most heavily-affected countries that may lead the way in revealing that proactive planning and subsequent new planning legislation may hold out by far the best prospects for those displaced due to climate change. Indeed, evidence shows that unless governments in countries that generate climate-induced displacement and those neighbouring them fundamentally improve law, policy and practice in this regard, it is clear that initiatives driven by climate displaced people themselves may be the only way to ensure that rights-based solutions to climate displacement become part of official national and international strategies designed to protect the HLP rights of climate displaced people.

IV. Planned relocation and climate change

Elizabeth Ferris
Senior Fellow at the Brookings Institution and Co-director of the Brookings-LSE Project on Internal Displacement in Washington, D.C.[9]

Recommendation: When planned relocation is unavoidable, it should involve affected communities, provide for appropriate land acquisition and ensure long-term attention to maintaining living standards of moved peoples. When resettlement related to climate change cannot be avoided, its scale should be minimized. Success factors include having sufficient lead time to enable careful, participatory planning processes, appropriate land acquisition and ensuring sustained and sufficient financing to resettle people in a way that improves rather than deteriorates living standards.

Climate change is expected to require the planned relocation of communities as regions become uninhabitable because of the effects of global warming. While considerable attention has been directed toward the first two categories, there is still a large gap around planned relocations and community resettlement. And yet there is a substantial body of experience in planned relocation of communities in the context of development projects known in the field as development-forced displacement and resettlement (DFDR). These cases are a close analogue for the types of planned relocation we can expect in association with climate change, and this section summarizes some of the key lessons.

Categories of planned relocation in the context of climate change

There are several different sub-categories of people who may need to be relocated as a result of the effects of climate change, including:

- people who need to be relocated from areas prone to sudden-onset natural disasters which are increasing in severity and intensity as a result of climate change (e.g. flood areas);
- people who need to be relocated because their livelihoods are threatened by slow-onset effects of climate change (e.g. increasing drought frequency, salinization of water resulting from sea level rise);
- people who need to be relocated because their lands are needed for mitigation measures (e.g. expansion of forests as carbon sinks) or adaptation projects (e.g. water reservoirs); and
- people who need to be relocated because their country or parts of their country could become unsuitable for habitation or supporting livelihoods related to the negative effects of climate change (e.g. small island states facing sea level rise).

Existing guidelines for planned relocation, based on development-related relocation

The underlying principles that have emerged from this experience have contributed to resettlement guidelines. These guidelines do not yet incorporate climate change considerations, but include the following:

- Relocation should be avoided where feasible.
- If possible, free and informed consent of affected people should be obtained before ordering relocation. Forced relocation should be used as a measure of last resort.
- Where it is not feasible to avoid relocations, the scale of displacement should be minimized and resettlement activities should be conceived and executed as full-fledged sustainable development programmes.
- Meaningful information of, consultation with and of the populations to be relocated should be an integral part of the process.
- Relocated persons should be assisted to regain their productive activities and to restore and improve their livelihoods and incomes compared to the levels they enjoyed before the displacement.

Planned relocation in practice: Lessons learned

In terms of existing experience, several tiers of stakeholders have garnered lessons learned about planned relocation. Development actors, particularly the multilateral development banks, have many years of experience in relocating communities in order to implement development projects which may be relevant in the context of climate change. The multilateral development banks have played the leading role in developing safeguards to prevent or minimize the impoverishment of communities resettled in projects which they finance. Academic researchers too have developed risk factors and guidelines.

Risk factors associated with relocation

In moving toward more coherent frameworks, the lessons of the past will be useful, particularly in the context of those countries that foresee the possibility that planned relocation, including international movements, may be needed. More systematic examination of involuntary relocation programmes undertaken in the context of development projects would help ensure that climate change-induced resettlement programmes do not fall victim to problems identified in these initiatives. Michael Cernea cites eight interrelated risk factors associated with relocation from development projects: landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity and mortality, loss of access to common property, and social disintegration.[10] Under the worst case scenarios, when the long-term needs of the relocated have not been taken into account, the displaced have been at serious risk of "becoming poorer than before displacement, more vulnerable economically, and disintegrated socially." (Robinson 2003: 1).

Securing appropriate and sufficient land for relocation

In DFDR, governments are generally required to secure land for the resettlement of affected communities. But in practice, government authorities often declare that substitute land is unavailable, and resort to compensation rather than resettlement. This transfers the burden of finding land onto the shoulders of the displaced people themselves. In the case of climate change-related displacement, there are likely to be particular difficulties in finding suitable land for resettlement of communities from areas rendered uninhabitable because of the effects of climate change. First there simply may not be sufficient land available, for example, in Asian mega-deltas where potentially millions of people may need to be resettled because of rising sea levels. Secondly, there is likely to be increased pressure on the availability of suitable land for resettlement sites. Thus, if fishing communities need to be resettled because of the erosion of coastlines and sea level rise due to climate change, it is unlikely that it will be easy to find alternative sites for them – at least in coastal areas which would enable them to continue their traditional livelihoods. Similarly, if large areas of a country are deemed unsuitable for habitation because of drought, the overall availability of land is likely to drastically diminish and land will become much more expensive.

Involving affected communities in planning and implementation of relocation

In particular, much more is needed beyond physical relocation of affected communities. Relocated people must be assisted to replace their housing, assets, livelihoods, land, access to resources and services and to enhance, or at least restore their living standards.[11] In spite of the guidelines of World Bank and multilateral banks to ensure that, after relocation, the resettled populations are at least as well off as they were before resettlement; the record of DFDR is not a positive one (see for example Cernea and Mathur, 2008; Scudder, 2005). Although there is an absence of empirical data, in many – perhaps most – cases of DFDR, communities are less well off after resettlement than before their relocation. This raises particular concerns for resettlement used in response to the effects of climate change. As Barnett and Weber explain, "[m]oving communities in anticipation of climate change may precipitate vulnerability more than it avoids it. If community relocation is absolutely unavoidable, then its social and political costs can be minimized by allowing adequate time for community consultation and planning." (Barnett and Webber, 2010: 54). The following paragraphs spell out some of the lessons learned from DFDR for relocations made necessary by the effects of climate change.

Sufficient time for planning

The lead time required for most development projects allows planning for resettlement of communities affected by the project. The question arises as to whether there will be a sufficient planning period in the case of climate change. Will government officials and communities recognize in advance the point at which areas become uninhabitable, or when it is time to move? Furthermore, in the case of land made uninhabitable by consequences of climate change, the optimal time for resettling people is far from clear. In some cases, governments may try to relocate people before areas become uninhabitable, but in the absence of adequate planning and funding, this could result in increased vulnerability of these groups (Cernea and Mathur, 2008; Scudder, 2005). Moreover, there is a real danger that such relocations may not be carried out with the principal goal of protecting people at risk, but rather that 'powerful actors will use the excuse of reducing community exposure to climate change in order to conduct forced migrations, for political or economic gain.' (Cernea and Mathur, 2008; Scudder, 2005: 53).

A clear lesson from the experiences of DFDR is the importance of a sufficiently long lead time to plan resettlement. This suggests that governments of countries likely to be affected by climate change, if they have not already done so, need to begin thinking about the possibility that planned relocations will be an essential component of their adaptation planning. And they need to begin planning such relocations at least several years before the move is planned. This process of planning can and should be supported by adaptation funding mechanisms.

Factors affecting success in planned relocation, based on lessons learned

In order to learn from the past experiences with DFDR, it is important to identify the reasons why past policies have failed, and particularly to understand the nature of the gap between normative frameworks (which are generally adequate) and implementation on the ground (which is generally negative). But it is also important to identify the factors which have made resettlement successful.

Criteria for evaluating planned relocation

The literature on DFDR by and large uses the criteria of comparing the social and economic characteristics of resettled communities with their pre-displacement situations rather than looking at the broader human rights implications of DFDR. Human rights principles – such as freedom of movement and non-discriminatory access to public services – have generally not been used as criteria for evaluating the success or failure of DFDR. However although development actors, such as the World Bank, the Asian Development Bank and others, have been reluctant to use human rights language, their concern with 'vulnerabilities' may simply be a different way of approaching similar issues.[12] Thus in successful cases of resettlement, such as Xiaolangdi (discussed below), considerable emphasis was placed on restoring livelihoods and meeting the specific needs of vulnerable sectors of the population, such as the elderly and people with disabilities.

Improve the living standards of relocated communities

For example, the resettlement of 190,000 people by the Xiaolangdi dam[13] in China from 2001–2004 suggests that resettlement schemes do not always have to result in the impoverishment of resettled populations. In this case, most of the resettled population not only restored but improved their living standards. There were a number of reasons for the project's success, particularly (a) the emphasis on restoration of livelihoods, (b) community participation in the process, (c) attention to the host community, (d) comprehensive technical studies, (e) solid oversight and supervision from the World Bank, and (f) strong government commitment and capacity. Finally, Xiaolangdi

also suggests that successful resettlement requires substantial financial commitments. The cost of the resettlement project was US$840 million[14] of which 35 per cent ($295 million) was for infrastructure development, land acquisition and commercialization. This represents a per capita cost in the range of $5,000 per person resettled.

Political and institutional capacity

Among the key determinants for the success of planned relocations appear to be the necessary political capacity and funding to enable not only the needed studies, but also to support participatory processes.[15] If adaptation strategies are to include planned relocations, then funding needs to be made available to support basic institutional capacity-building and international guidelines (to avoid a repetition of some of the worst DFDR experiences) to guide government actions and to support government efforts to plan – on a contingency basis – what would be needed in the event that relocation of communities is necessary as a last resort.

Appropriate and sustained funding for relocation efforts

While many major development projects have enjoyed financing by the World Bank and regional development banks and have included resettlement costs in the overall budgets for the projects, relocation of communities because of the effects of climate change will not generally be carried out in the expectation of realizing increased revenues which can support the resettlement project; rather the funds would likely have to come from government budgets. Moreover, it is not at all clear that governments seeking to relocate populations from areas made uninhabitable by negative effects of climate change will seek to access international development funds through the World Bank and thus be subject to these guidelines. Nor is it clear that the climate change finance will include international safeguards for those resettled through funding from these new mechanisms.

If international financing is not available to supplement national resources for such projects, it seems unlikely that governments in many affected developing countries will have the necessary resources to plan and implement resettlement plans that uphold the rights of communities. In fact, it is precisely those governments that are likely to experience increased financial pressure on other fronts as a result of climate change (e.g. decline of tourist or fishing industries, lower tax revenues, perhaps increased political turmoil) that might be forced to consider resettlement as a solution to deal with the effects of climate change. If planned relocations are to be used to resettle people from areas made uninhabitable by climate change, then substantial investment will be needed to ensure that the necessary technical assistance is provided.

Outlook

The record of development-forced displacement and resettlement suggests that when resettlement cannot be avoided, its scale should be minimized. Particular attention should be paid to ensuring sufficient financing to resettle people in a way that respects their rights, to having sufficient lead time to enable careful planning, to giving particular attention to sensitive issues around land acquisition, and to learning from the experiences of DFDR. In particular, there is a need for strong political commitment and for care in maintaining livelihoods of affected communities and ensuring community participation in the decisions that affect their lives.

V. General considerations for governments and national policy processes

Now that migration, displacement and planned relocation have been highlighted in the UNFCCC climate negotiations and other fora, policymakers increasingly ask "what do governments need to know about the potential impacts of climate change and human mobility in order to prepare their own appropriate legal, institutional and governance approaches?" Even in the best circumstances, human mobility, in its various forms, is an essentially disruptive aspect of human organization, but also entails socio-economic opportunities to both movers and non-movers alike.

The general aim of policy ought to influence the extent to which mobility improves human welfare in the long-term, so that the children of migrants are better off than their parents. Some policy considerations to minimize harm and maximize benefits are outlined here.

Current scientific knowledge on the dimensions of human mobility in the context of climate change provide some basic guides for policy. The first step is guaranteeing that peoples becoming mobile through circumstances beyond their control or responsibility be afforded recognition as rights-holders under both national and international law, and that rights be recognized in practice. This starting point creates a foundation for potential beneficial outcomes.

Further, the returnability test ought to form the basic standard for policy around mobility forms induced by climate stress: is it appropriate to return movers to their places of origin? For cases where this test fails, a policy mechanism that aims at cushioning, influencing or otherwise supporting adaptive mobility is highly desirable. Further, migration is often made in the context of disintegrating livelihoods and though it may be technically voluntary, still forms part of an erosive adaptive strategy. Thus a policy focus on livelihood diversification and general resilience in agro-farming systems could avert the types of mobility that lead to poor outcomes. Lastly, policy can focus on protecting specific households whose mobility alternatives in the context of environmental stress do not afford upward socio-economic prospects, such as the landless poor and those who have no alternatives for mobility at all, the "trapped" populations.

With respect to planned relocation, because of the problematic track record with development-induced relocation, a general principle is that resettlement is the last policy alternative before all others have been exhausted. Where unavoidable, resettlement should be voluntary and participatory in design, implementation and monitoring. Long and stable financial commitments are essential. Likewise, as research indicates that the first years of resettlement inevitably involve social stresses in the best of circumstances (and trauma in the worst), planned relocation must have the explicit aim of improving long-term outcomes. This requires budgetary commitment for long-term services such as livelihood re-training, and planning for physical and psychological health. Lastly, rights and protections ought to be afforded also to those who decide not to participate in community resettlement, who decide to stay and may face increasingly adverse conditions.

VI. Changing climates, moving people: Distinguishing voluntary and forced movements of people

Walter Kälin
Envoy of the Chairmanship of the Nansen Initiative

Recommendation: Determine whether movements are voluntary or forced. Forcibly displaced persons may require temporary and permanent solutions in their own countries or in the territory of other states. This may become the case where vast parts of a country have become uninhabitable so that it can no longer host its entire population, where sustainable solutions in the country of origin are not available, or where displaced persons cannot return in safety and dignity for other reasons.

One of the critical dimensions of mobility is the extent of voluntariness in the decision-making: are movements voluntary or forced? As systems move toward states that are uninhabitable and unproductive, populations face mounting difficulties remaining in place, and this specific dimension is highly relevant in determining a role for policy. Paragraph 14(f) of the 2010 Cancún Adaptation Framework clearly distinguishes between (forced) displacement, (voluntary) migration and planned relocation (which can be voluntary as well as forced) as the three relevant types of population movements that may occur in the context of climate change and be triggered by effects such as windstorms, flooding, drought and desertification or rising sea levels. The distinction has obvious implications for affected people: To decide as an individual, family or group to migrate to another place as part of a strategy to deal with the challenges of climate change may be an opportunity to find a better life and thus be perceived as a positive option that leaves open the possibility to return at any time. In contrast, to be forced to move against one's will and abandon housing, land and property is in most cases a devastating experience.

An essential distinction

The distinction between forced and voluntary movements of people is a cornerstone of legal regimes at international and domestic levels: People are protected against forced displacement and relocation with only few exception to the prohibition of obliging people to leave their homes and habitual places of residences, and where forced movements occurs, affected persons often receive humanitarian assistance and special protection, for instance against being returned as long as dangers last. In the context of sudden- and slow-onset natural disasters, people forced to flee become internally displaced persons if they find refuge within their own country and are protected under the 1998 United Nations Guiding Principles on Internal Displacement and relevant domestic and regional law, whereas internal migrants are expected to make it on their own.

When people cross borders, state sovereignty in the area of admission and removal of foreigners is more limited where displaced persons are concerned, compared to the situation of people who migrate voluntarily. Thus, migrants who decide to voluntarily move away from areas negatively affected by climate change have no right to be admitted by another country and such country may decide at any time that such people are no longer allowed to stay. If they flee to other countries, however, they need to be admitted, allowed to stay at least as long as the danger lasts and be protected against forcible return: Unlike for refugees fleeing persecution or armed conflict, such guarantees do not yet exist in international law but there is an obvious need to fill this gap, an issue addressed by the Nansen Initiative.

A difficult distinction

While the distinction between forced and voluntary movements is important, they often cannot be clearly distinguished in real life, but rather constitute two poles of a continuum, with a particularly grey area in the middle, where elements of choice and coercion mingle (Hugo, 2010). However, law must always draw clear lines (e.g. between what is permissible and what prohibited), and must therefore necessarily qualify movement as either voluntary or forced. Thus, it is necessary to define criteria relevant for distinguishing between those who voluntarily leave their homes or places of habitual residence because of the effects of climate change, and those who are forced to leave by such effects.

"Voluntary" – contrary to what the term suggests – does not mean to be able to decide in complete freedom. Rather, voluntariness exists where space to choose between realistic options still exists. "Forced" on the other hand characterizes situations where realistic options to choose from are no longer available. Thus, we can speak of voluntary movements where the element of choice is preponderant, whereas displacement or forced relocation takes place where the space for choice is.

It is sometimes suggested that people fleeing sudden-onset disasters should be looked at as victims of (forced) displacement, whereas those leaving areas affected by slow-onset disasters would qualify as (voluntary) migrants. Others feel that the starting point should be the degree of vulnerability caused by the effects of climate change before people leave. Such an *ex ante* (pre-movement) perspective requires to resort to a vulnerability assessment as well as an assessment of causalities between climate processes or events on the one hand and the decision to leave on the other in order to determine the character of the movement.[16] For purposes of law and policy, others favour an *ex post* (post-movement) perspective looking at whether people are in a situation that makes it impossible for them to return to their homes after they left for reasons linked to environmental changes (Kälin and Schrepfner, 2012; Kolmannskog, 2009).

A feasible distinction

The element of choice is obviously lacking in two situations: (i) life-threatening sudden-onset disasters or sudden-onset disasters causing such a degree of destruction that life becomes impossible there in the immediate aftermath of such disaster; and (b) relocation ordered and if necessary enforced by authorities.

Whether people are moving voluntarily or not in the context of slow-onset disasters and how long they can be considered to be displaced in the aftermath of a sudden-onset disaster is more difficult to determine. Here an *ex ante* perspective is useful and appropriate, asking the following question: Under what circumstances should those displaced by negative effects of climate-related disasters not be expected to go back to their place of residence – or in the case of cross-border displacement – to their country of origin, and therefore qualify for some form of assistance and protection, whether temporary or permanent? In other words, the point of departure should not be the subjective motives of individuals or communities behind their decision to move, but rather whether, in light of the prevailing circumstances and the particular vulnerabilities of those concerned, they can be required to return where they came from. This 'returnability' test helps to better identify those in need of protection in another country. This test emphasizes the prognosis – whether it would be possible and safe to return.

The returnability of the persons concerned should be analysed on the basis of a three-pronged test that asks whether it is legally permissible, factually feasible and morally reasonable to oblige the person concerned to return to his or her country of origin or permanent residence:

1. Legal impediments: The criterion of permissibility
   International human rights law prohibits return of persons to a particular country where there are substantial grounds to believe that an individual would be exposed to inhuman treatment or grave dangers to life if sent back to that country. Arguably, this prohibition could be made fruitful for cases where a rejection at the border or return of persons who were able to cross the border would expose an individual to an imminent danger for life and limb related to the disaster causing their displacement or to the absence of an adequate provision of protection and assistance at the place of origin. In the case of internal displacement, it is recognized that people must not be sent back to a place where their life, safety, liberty or health would be at risk (United Nations, 1998).

2. Factual impediments: The criterion of feasibility
   Return may be factually impossible due to temporary impediments, such as when roads are cut off by floods. In the case of cross-border displacement, return may also be impossible for administrative reasons if the country of origin refuses readmission for technical or legal reasons: during an emergency, a country may lack the capacity to absorb large return flows, or it may prevent readmission of persons whose travel documents or proof of citizenship were destroyed, lost or left behind when they fled.

3. Humanitarian impediments: The criterion of reasonableness
   Even where return would be permissible and feasible, people should not, on the basis of compassionate and humanitarian grounds, be required to go back to a place where no assistance or protection is available for them, or if what is provided falls far below international standards of what would be considered adequate. The same is true where authorities do not provide any kind of durable solutions to the displaced that are in line with international standards and would allow them to resume normal lives, especially where areas of land have become (or have been declared) uninhabitable and people have been unable to find an acceptable alternative themselves.

Outlook

If the answer to one of these questions – is return *permissible*? Is it *feasible*? Can it *reasonably be required*? – is 'no', then individuals concerned should be regarded as forcibly displaced persons in need of protection and assistance as displaced persons. In the case of cross-border displacement, they should be admitted and granted at least temporary stay in the country where they have found refuge until the conditions for their return in safety and dignity are fulfilled. Permanent solutions on the territory of other states must be found particularly where vast parts of a country have become uninhabitable so that it can no longer host its entire population, where, as in the case of low-lying small island states the whole state territory disappears or where sustainable solutions in the country of origin are not available, or where displaced persons cannot return in safety and dignity for other reasons.

VII. Multilateral climate policy and a forward look

Recommendation: In the context of changing climatic conditions worldwide, climate policy should ensure that migration remains a matter of choice to improve resilience, and that displacement and planned relocation where necessary can be undertaken in safe, dignified conditions with durable long-term solutions. Climate policy will influence the extent to which the mobility of future generations improves welfare or accelerates a downward spiral of deteriorating human welfare in the long-term.

Multilateral policy opportunities

Climate policy discussions on human mobility provide opportunities to further articulate policy options at appropriate levels (sub-national, national, regional, international) and along the spectrum of human mobility. Arguably, few other arenas emphasize discussion, action/planning and financial resources for implementation as does the UNFCCC. Existing institutional arrangements to manage voluntary migration and mobility related to natural disasters manifest many gaps, as do arrangements to manage forced migration, displacement or movement under other adverse conditions related to climatic stressors (Warner, 2010). Few coordination or planning mechanisms are yet in place to address relocation related to climatic stress (most are development project-related). The Cancun Adaptation

Framework and work on human mobility under the SBI Work Programme on loss and damage provide initial inroads into these areas in coming years.

2013 to 2015

Policy milestones between 2013 and 2015 could include further work on migration, displacement and planned relocation. The UNISDR Hyogo Framework of Action will be examined and possibly renewed in the post-2015 time period, and could include considerations of natural-hazard related human movements. Similarly the post-2015 development agenda may consider human mobility related to climatic hazards and stressors.

The Conference of the Parties of the UNFCCC decided in the Doha Climate Gateway Decision (Dec. 2012, COP18) to establish an institutional arrangement to address loss and damage. The 2012 Doha Climate Gateway Decision includes elements of an international mechanism to assess, address and coordinate both adaptation efforts and management of issues that may be beyond (certain definitions of) adaptation including human mobility such as displacement and relocation. Of interest for discussions on human mobility, that decision recognized the importance of understanding "How impacts of climate change are affecting patterns of migration, displacement and human mobility" (7a(vi)). Additionally, the decision notes the desirability of "Involving vulnerable communities and populations, ..., in the assessment of and response to loss and damage" such as some of the emerging empirical work does (para 6f). The decision further commends understanding "How loss and damage associated with the adverse effects of climate change affects those segments of the population that are already vulnerable owing to geography, gender, age, indigenous or minority status, or disability, and how the implementation of approaches to address loss and damage can benefit those segments of the population" (para 7a (iii)). Finally, the decision recognizes the implicit links between climate change impacts of issues like human mobility, and potential negative relationship to climate resilient development (para 7(v)).

The work of the Adaptation Committee has now advanced to a draft three year work programme including the development of guiding principles for adaptation and efforts to coordinate and increase policy coherence for items included in the Cancun Adaptation Framework. The decision was made in autumn 2012 about the location (South Korea) and implementation of the Green Climate Fund, as a main vehicle for funding activities outlined in the Cancun Adaptation Framework. The National Adaptation Planning processes are moving forward and nations are in the process of integrating climate policy into wider national planning efforts. Further, the presence of human mobility in one policy forum (UNFCCC) has and will continue to influence discussions in other arenas, including the United Nations Security Council, the Global Forum on Migration (GFMD), the high level dialogue on migration and regional fora among others.

Between 2015 and 2020

Further policy on climate induced human mobility may develop within the UNFCCC context. The key will be to align Party appetite and needs with a range of appropriate and politically feasible "asks" – as noted above there is sensitivity around issues of liability and compensation, assignment of blame or historical responsibility. Research and operational organizations (especially in the United Nations system) should avoid asking for overly complex arrangements or for things that require Parties to use large amounts of political capital to achieve. Calls for large new international agreements may prove difficult to achieve unless country appetite for internationally binding agreements increases from its current low level. A policy window may open in this period to aim at specific complex forms of migration and displacement, highlighted in recent research, which will mix internal and cross border movements, as well as raising

questions when people cannot return to their places of origin because of environmental reasons (sea level rise, desertification, water issues, etc.). A current focus on dialogue, building regional understanding and cooperation, and helping states understand potential impacts of migration and displacement on their current institutional frameworks would be likely to move policy toward agreements on complex forms of migration during the period between 2015 and 2020.

Likewise, ambitious action on adaptation, including on issues related to human mobility, may influence the outlook for mobility moving forward. For example, the need for large-scale, unplanned human mobility may be prevented through effective adaptation measures, particularly in the areas of sustainable agriculture and rural livelihoods diversification. It will become increasingly important to ensure that poorer countries and communities become institutionally and operationally equipped to support widespread adaptation including livelihood diversification to manage climatic risks and shifts in population distribution (including various types of mobility), and measures to ameliorate tensions that could arise around food security, resource availability and issues around national borders. Right now we are setting trajectories and laying the ground for new or adjusted institutional forms to deal with a broader range of climatic impacts that are inducing human mobility, and will shape mobility itself as a consequence.

Beyond 2020

In scenarios of the world beyond 2 °C, the impacts of climate change combined with other megatrends – such as world population growing to a projected 9 billion by 2050, changes in technology and other unforeseen shifts in society – could require a new approach or forum for particular discussions such as migration, displacement and planned relocation. Thus, in coming decades, the way countries manage adaptation will drive patterns of population distribution in areas of the world that are highly vulnerable to climate change. Such areas include mountain regions, densely populated deltas and arid and semi-arid locations where rain-fed crop and livestock production are already under pressure. A more nuanced understanding of how climatic and other variables interact to affect migration, displacement and planned relocation will help shape adaptation investments to ensure that human mobility contributes to increased resilience to climate change. Policy to address migration, displacement and planned relocation must evolve to manage these changes, if the aim is making mobility an adaptive alternative that enhances and not undermines climate resilient development.

Endnotes

[1] See some attempt to place estimate numbers on current and future environmentally induced migration, such as: Myers, 2005; Christian Aid, 2007; International Organization for Migration, 2007a.

[2] See Raleigh et al., 2008; Renaud et al., 2007; Brown, 2008; Hugo, 2008; Kniveton et al., 2008.

[3] El-Hinnawy (1985) introduced the first definition for 'environmental migrants' in a United Nations Environmental Programme (UNEP) report. His definition has been refined and made more comprehensive by other authors and institutions, such as the International Organization for Migration (IOM) in 2007.

[4] Black et al., 2011; Findlay, 2011; Foresight, 2011; Kniveton et al., 2012; Jäger et al., 2009; Lilleør and Van den Broeck, 2011; Maldonado et al., 2013; Piguet, 2012; McLeman and Hunter, 2010; McLeman et al., 2010; Warner et al., 2012; Warner et al., 2000.

[5] Jäger et al. (2009) synthesized the results of the "Environmental Change and Forced Migration Scenarios" project (EACH-FOR, www.each-for.eu) – the first global survey of its kind employing fieldwork to investigate environmental change and migration in 23 case studies; Warner et al. (2009) ("In Search of Shelter") brought EACH-FOR results to policy-makers, particularly in the UNFCCC process.

[6] Hugo, 2008; Brown, 2008; Morrissey, 2009; Tacoli, 2009; Laczko and Aghazarm, 2009; Jónsson, 2010; Martin, S. F., 2010; Martin, P., 2010; Afifi, 2011.

[7] Jäger et al., 2009; Warner et al., 2009; Foresight, 2011.

[8] Betts (2010) "Survival Migration: A New Protection Framework". Global Governance, 16(3), 361–382.
Black, R., S. R. G. Bennett, S. M. Thomas, and J. R. Beddington (2011) Climate change: Migration as adaptation. Nature 478 (7370): 447–49.

[9] This contribution is drawn from Elizabeth Ferris, Protection and Planned Relocations in the Context of Climate Change, UNHCR Legal and Protection Policy Papers, March 2013, PPLA 2012/04.

[10] Michael Cernea, "Risks, Safeguards and Reconstruction: A Model for Population Displacement and Resettlement," in M. Cernea and C. McDowell, eds., Risks and Reconstruction: Experiences of Resettlers and Refugees (Washington, DC: World Bank, 2000); Courtland Robinson, Risks and Rights: Causes, Consequences, and Challenges of Development-induced Displacement (Washington, DC: Brookings Institution, 2003).

[11] World Bank, 'Operational Policy on Involuntary Resettlement 4.12' (OP 4.12). Available from http://beta.adb.org/documents/safeguard-policy-statement?ref=site/safeguards/main.

[12] Some harbingers of progress in the use of human rights language in the official documents of development agencies have started to appear. For instance, in the Export Credit Agencies (ECAs) of OECD countries have introduced, for the first time, into the most recent version of their 'Common Approaches' Guidelines (adopted in November 2011) an explicit provision about 'respect and protection of' human rights 'as a requirement in evaluating Bank's requests for credit guarantees.' M. Cernea, 'Population Displacement and Export Credits,'

6 December 2011, available from http://www.brookings.edu/opinions/2011/1206_population_displacement_cernea.aspx.

[13] Discussion of this case based on the Rural Development and Natural Resources Sector Unit, East Asia and Pacific Regional Office, World Bank, 'Implementation Completion Report (IDA-26050) on a Credit in the Amount of SDR 79.9 Million (US$100 million equivalent) to the People's Republic of China for the Xiaolangdi Resettlement Project,' 29 June 2004, report no. 29174.

[14] The cost of the project was initially estimated at $571 million, the higher actual figure reflects an increase in the number of resettlers and consequent increased cost of physical investment as well as an increase in market prices and compensation rates.

[15] For a discussion of some of the negative cases, see the summaries of the cases of Banaba Island and Ethiopian resettlement in the mid-1980s in E. Ferris, Planned Relocations above note 9.

[16] An *ex ante* perspective is favoured by Fabrice G. Renaud, Olivia Dun, Koko Warner, Janos Bogardi, A Decision Framework for Environmentally Induced Migration, International Migration Vol 49, 2011, pp. 16ff: They propose to assess the level of negative impact of slow-onset hazards on livelihoods in order to whether a person qualifies as "environmentally motivated migrant" (voluntary) or as "environmentally forced migrant".

[17] This prohibition was derived by the European Court of Human Rights from article 3 of the European Convention on Human Rights and the United Nations Human Rights Committee from article 7 of the International Covenant on Civil and Political Rights.

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Tel.: + 49-228-815-0200, Fax: + 49-228-815-0299
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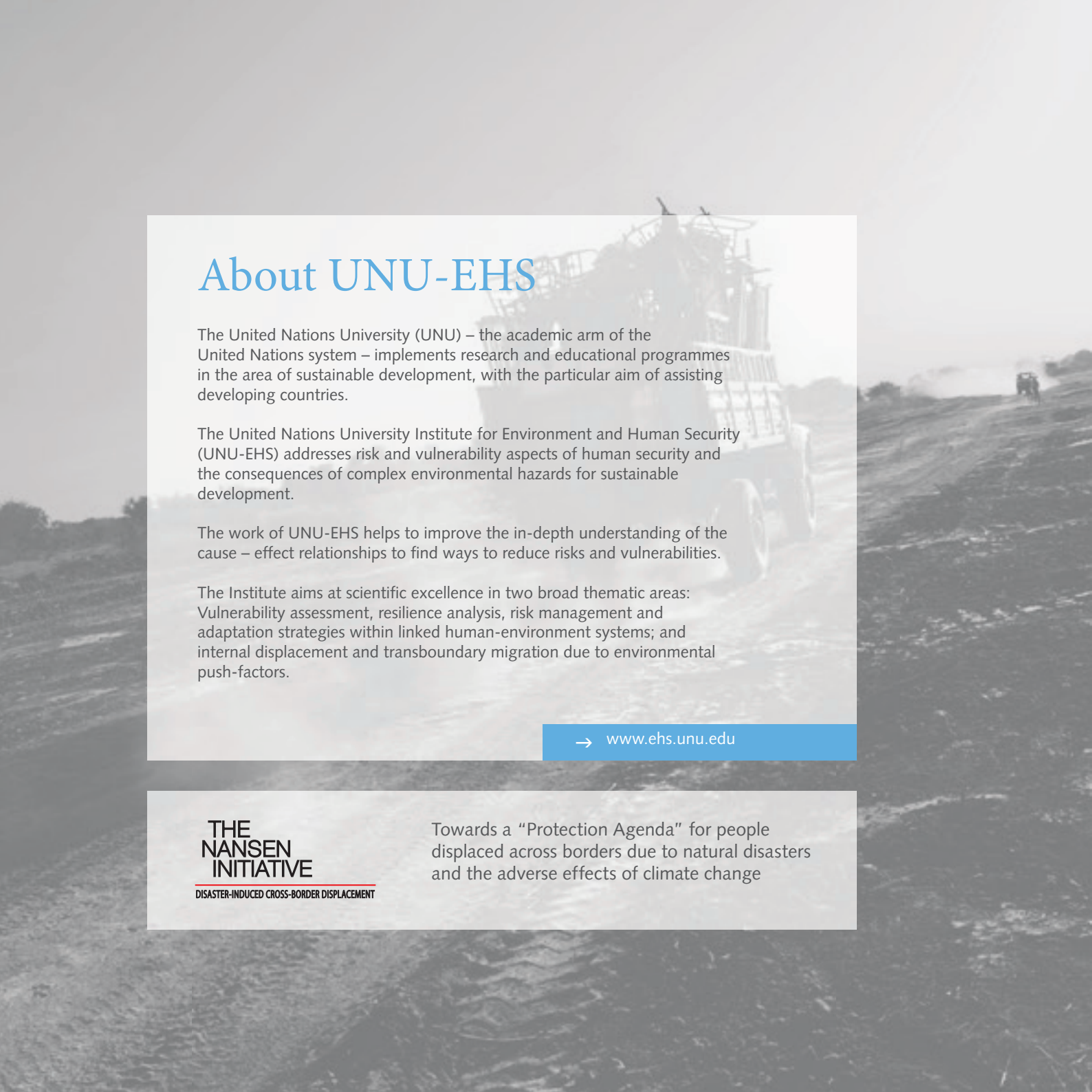

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