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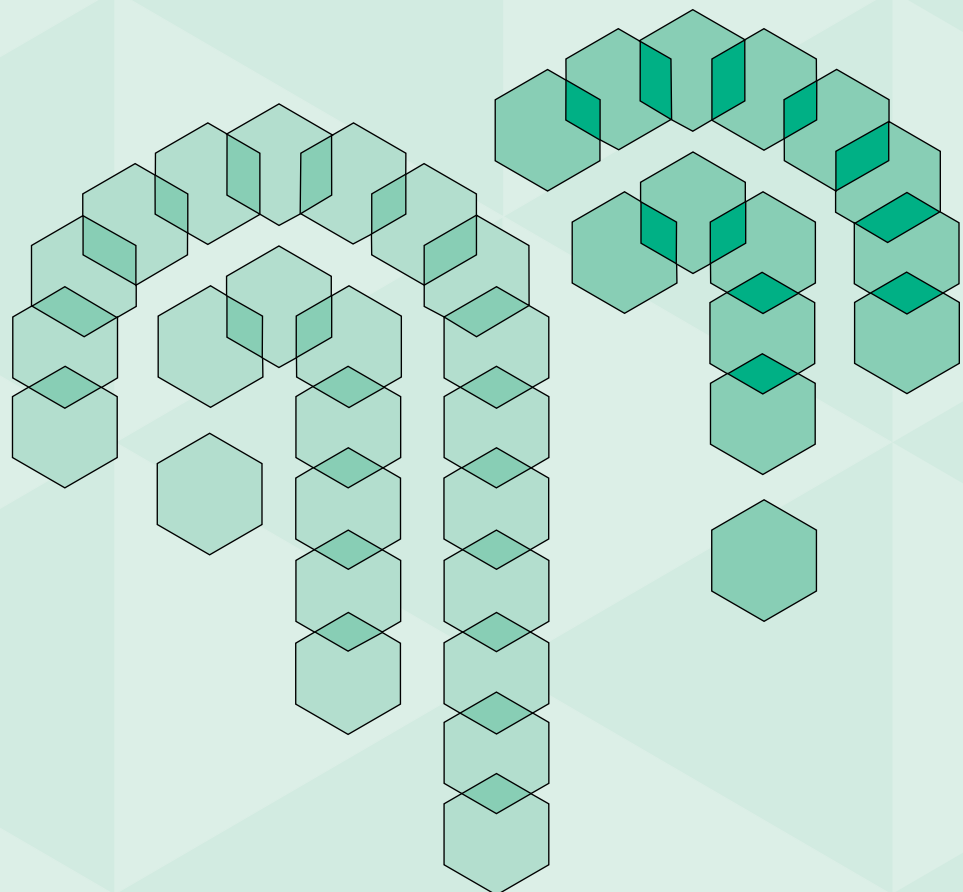


**Munich Re
Foundation**
From Knowledge
to Action

Climate Change and Migration: Rethinking Policies for Adaptation and Disaster Risk Reduction

Edited by

Michelle Leighton, Xiaomeng Shen, and Koko Warner



SOURCE

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Michelle Leighton

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Prof. Michelle Leighton shaped the programme for this year's Academy, and Prof. Anthony Oliver-Smith, Prof. Janos Bogardi and Prof. Mohamed Hamza co-taught and facilitated the Academy, and helped participants accomplish one of the main outcomes of the Academy – a research brief on policy options for protecting environmental migrants. We thank Dr Koko Warner, Cosmin Coredea, and Vikram Kolmanskog for facilitating the group discussions during the Academy. We appreciate the collaboration of experts Jose Riera (Policy Division, United Nations High Commissioner for Refugees (UNHCR)), Alina Narusova (Policy Division, IOM), Simon Tonelli (Council of Europe's Migration Division) and Sami Zeidan (DG-Climate Action, European Commission).

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The partnership with the MRF makes the MRF Chair on Social Vulnerability and the annual Summer Academy possible. The Foundation's generous funding of the Summer Academy created a forum in which these and other contributions on social vulnerability were discussed and debated. We are grateful to Thomas Loster, Chairman of the MRF, for his vision in convening a space for young scientists and experienced scholars and practitioners to expand the frontier of applied science.

Climate Change and Migration: Rethinking Policies for Adaptation and Disaster Risk Reduction

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Michelle Leighton, Xiaomeng Shen, and Koko Warner

*Outcomes of the fifth UNU-EHS Summer Academy of the
Munich Re Foundation Chair on Social Vulnerability*

25 – 31 July 2010, Hohenkammer, Germany

Foreword

Greenhouse gas emissions are considerably changing atmospheric conditions, leading scientists across the world to conclude that a profound process of global climate change has been set in motion. These changes are expected to exacerbate the intensity and frequency of extreme weather events such as storm surges, flooding, and hurricanes which are rapid in their occurrence and have a high impact on human security and people's livelihood. However, this is not the only implication of climate change, as slow onset disasters such as drought or desertification have also manifested social and economic consequences while being less visible in the mass media. According to a report of UNCCD (2010), 50 million people are at risk of displacement in the next ten years if desertification continues unchecked.

Since the beginning of humankind, migration has always been an adaptation strategy for people to cope with the wide range of environmental changes. However, we are faced with much greater challenges than ever before: the global population has increased from 2.5 billion to 6.9 billion people in the past 60 years (UN/DESA 2008); we are experiencing more significant environmental change, especially caused and expedited by climate change. In addition, globalization facilitates people's mobility by creating easier access to the transportation infrastructure, and also to information by the mass media. Hence, the scale of environmentally-induced migration is likely to take on a new dynamic and dimension. The IPCC report of 2007 cited expert sources estimating that tens of millions of climate change induced migrants may be expected in the years leading up to 2050. Those who decide or are forced to leave their places of origin to seek alternative livelihoods may encounter discrimination or other abuse, or could be perceived as criminals if they become undocumented workers in another country. The act of movement of people in response to environmental change is so far not defined uniformly, nor are these migrants sufficiently protected by international law or conventions. The gaps in protection present key challenges for governments, particularly for both sending and receiving countries, where migrants cross borders to protect their lives or to seek alternative livelihoods.

The 2010 Summer Academy, "Protecting Environmental Migrants: Creating New Policy and Institutional Framework", aimed to develop policy options for decision makers to better address the needs of such environmentally induced migrants. This SOURCE issue presents the outcomes of the 2010 Summer Academy and the selected papers of PhD students from different academic backgrounds. These papers cover various aspects of the complexity of protection issues for environmental migrants and analysis of current protection regimes. Using case studies conducted in both developing and developed countries, these papers identified legal and institutional gaps and explored possible policy options for decision makers.

It is one of the goals of the UNU-EHS, and especially for me as the new Director of the Institute, to facilitate interdisciplinary knowledge exchange and to support young scientists in developing potential solutions to a growing global problem. I hope this publication will serve as a departure for further academic discussions and improved policy options for the protection of environmental migrants.



Dr Jakob Rhyner
Director UNU-EHS

Foreword

Social vulnerability has been a central topic for discussion at the Summer Academies. In 2010 the fifth academy, in collaboration with UNU-EHS, took place. We have long been concerned with the complexities of climate change, environmental changes and migration and the social consequences for people living in vulnerable areas. Such people are frequently forced to migrate when the environmental conditions they live in deteriorate.

Migrants rarely enjoy the protection of the law. They are rarely given a warm welcome, no matter where they go, and they have to find a new home under the most hostile of conditions. At the 2010 Academy we asked what legal mechanisms are in place to protect migrants. In considering this point, it is important to distinguish between national migration and cross-border migration. The international community has so far been slow to grasp the political reality of environmental migration. According to IPCC estimates, migration will increase drastically with climate change. People are already having to migrate in Alaska, Canada, Papua New Guinea or on the low-lying islands of the Pacific. Many experts, including Lord Stern of Brentford, believe that by 2050 there will be up to 200 million environmentally induced migrants. In order to cover as many aspects as possible in our investigations, the experts invited to Hohenkammer came from a wide range of disciplines: social scientists, geographers, and PhD students specializing in international law, European law, and human rights.

Proceedings at the Academy were chaired by Professor Michelle Leighton, Director of the human rights programmes, Centre for Law and Global Justice at the University of San Francisco, and a renowned expert in international law on these issues. The questions tackled were every bit as diverse and multifaceted as the formats selected in which to discuss them: workshops, learning sessions, roundtables, presentations and group work gave participants the opportunity to learn more about the topic, discuss the problems involved, and come up with possible solutions.

Because it is important that researchers bring their findings to policymakers, we also invited experts from important political institutions that have been examining migration and its effects for some time. The debates and working sessions were attended by José Riera, Senior Policy Advisor at UNHCR, Geneva, and Simon Tonelli of the European Committee on Migration (CDMG), Brussels. Both highlighted the importance of the Summer Academy's work and praised the results that the young scientists produced. They also encouraged the participants to take their ideas to important committees and events like the Global Forum on Migration and Development (Mexico, November 2010) and the World Climate Summit (UNFCCC COP16, Mexico, December 2010) in order to develop them further.

It will be very gratifying if the results of the Summer Academy can indeed find their way into political discussions and have some impact there. The essays in this SOURCE are a cross-section of contributions from the Academy participants. They mark the first steps in a field of research and action that deserves much more attention than it has been given so far.



Thomas Loster
Chairman MRF

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Introduction

Climate change due to greenhouse gas emissions is now, at some level, a fact. IPCC and other scientific bodies have modelled a number of future scenarios estimating changes in weather patterns, ocean currents, and (more recently) ecosystems. Average atmospheric temperatures are increasing and with this increase scientists expect (and in some cases may already be observing) more rapid melting of the earth's ice sheets, sea level rise, and greater seasonal variability in rainfall. They are documenting more frequent storms and intense flooding in some areas, and severe and prolonged droughts in others, predicting further water scarcity, diminished food production, and unemployment. With the increase in natural disasters, vulnerable communities (those with weak support systems, governance, and capacity to respond) are most at risk. Many may be displaced or increase their reliance on migration as a coping strategy for survival. The rise in humanitarian crises presents enormous challenges for poorer countries and the international organizations called on for assistance. These challenges are exacerbated by the lack of consistent policies, standards, and practices in disaster planning related to human displacement and migration. As the findings of the Academy and case studies presented in this volume reveal, human mobility is not always adverse to community development but in some circumstances may help build resilience. Better understanding the opportunities and impacts of migration, and how to protect those displaced by disaster, can help governments to improve their climate adaptation strategies. So, too can improving cooperation among neighboring states with shared natural resources and among countries of migration origin and destination. To do this effectively, governments will need to rethink existing disaster planning, migration policy, and institutional frameworks.

The findings and recommendations in this introductory chapter are the result of the 2010 Summer Academy on Social Vulnerability organized by UNU-EHS and MRF from 25 to 31 July 2010 in Hohenkammer, Germany. They provide a foundation for further consideration of how governments can better manage displacement and migration related to climate disasters. The papers that follow this introductory chapter in Sections 1

and 2 below are the selected work of Academy participants who undertook specific case studies as part of their graduate or post-graduate work and in preparation for the programme. In some circumstances they refined their analysis to incorporate their learning experience. The compilation of works is not meant to represent a comprehensive study of all issues relevant to climate-related migration. Rather, the individual studies provide a unique, in-depth focus on various aspects of the issue and on multiple regions where climate change impacts may be significant. They suggest new avenues for research, policy, and law that may be relevant to decision makers in affected regions, and bring a greater depth to the issues discussed by the Academy.

Overview of Academy Findings

In 2010, the Academy brought together twenty PhD researchers from 13 countries with international scholars to consider issues of climate-related migration and future policy needs. The findings were derived from focused workshops and from the results of four roundtable sessions convened with experts from UNHCR, IOM, the European Commission, and the Council of Europe. The sessions explored a myriad of issues on human displacement and migration related to climate variability and disaster, with a particular focus on identifying the gaps in current legal and institutional frameworks to protect vulnerable populations, and suggested ways that policymakers can seek to close these gaps. The Summer Academy prepared a synthesis of these meetings in a separate report that can be accessed via the UNU website. This overview presents a summary of the Academy's findings and its recommended policy reflections, in a format that responds to a series of questions posed by international experts.

What are the Key Challenges for Governments and Humanitarian Organizations in Addressing Climate-Related Migration?

In less than a decade, by 2020, 75 to 250 million people in the region are expected to be living in areas suffering increased water stress due to climate variability¹. Food security will become a much more serious challenge. By 2050, the number of people living in over-stressed river

systems, which are important for agriculture and human livelihood, will probably increase by three to five times the current level, reaching between four and seven billion. Some countries, especially those with an expected significant population increase, are likely to lose between 30 and 60 per cent of their agricultural production².

The deepening of problems for developing countries in water scarcity, food insecurity, spread of disease, job losses, and human displacement may increase the population's vulnerability to disasters, and lead to migration. Those dependent on subsistence agriculture are at greatest risk of livelihood loss from slower-onset disasters, such as drought and desertification, and more immediately from potential rapid-onset hazards leading to disasters. Rapid-onset hazards, such as storm surges, floods and hurricanes, can cause the destruction of homes and infrastructure, displacing populations and leading to additional humanitarian crises. Even before the worst impacts of disasters occur, people may migrate in anticipation of livelihood loss. The dearth of studies in this area makes it difficult to disaggregate pure environmental factors from other socio-economic factors that drive migration. Nonetheless, research suggests that some people are already engaging in migration as a coping strategy and response to climate shocks.

The potential for increased migration and human displacement presents key challenges for governments; for those with growing internal population movements as well as those serving as the source and destination countries when migrants cross borders. People forced to move as a result of climate change impacts may encounter discrimination or other abuse in the areas in which they settle. They may be viewed as criminals if they are forced to move to and work in another country without legal documentation. The movement of a greater number of people may also create additional stress on the natural resources of other communities or on urban infrastructure, and this too may engender conflict.

While the needs of those affected by climate change and the level of protection and assistance required in any disaster is context-specific, few national or international standards have been adopted to protect climate-related migrants. There is both a lack of standards and financial resources to assist governments in managing

current and additional migration flows due to increasing climate variability or disasters. This could change. There is increasing international recognition that climate variability plays a role in motivating migration and that migration should be considered within adaptation planning. While decision makers, including those within the climate change negotiations, have not deepened their consideration of the issue, many humanitarian experts and organizations have begun to analyse the gaps in policy, research, and institutional governance. There is a need to evaluate the most appropriate migration management strategies that could serve as models to help countries better prepare for and/or adapt to migration impacts. Where countries already face humanitarian and human rights challenges, the use of governance approaches that can more humanely and effectively address the needs of persons displaced, or who migrate due to climate events, is particularly critical. To better plan for adaptation programmes and assist with the short and long-term needs of those affected, government planning should identify and incorporate best practice and international standards related to displacement and migration management.

As a foundation for moving forward, governments and aid agencies should consider the adaptation needs of affected communities through the lens of potential migration impacts. For example, governance strategies and programmatic planning should better recognize and seek to understand how migration is used by communities as a coping strategy for current or anticipated climate-related impacts. The challenge will be to construct adaptation programmes that are sufficiently dynamic to include investigation and research into these areas, and to incorporate the findings into official planning and policy response on an on-going basis. This type of dynamic action-oriented research can help to clarify the role that climate variability and disaster play in migration decision processes – processes that are often complex and difficult to deconstruct.

There is also a need to better understand how ecosystem change may influence the interaction of human social organization and economics more generally, i.e. to see how these relationships are influenced by government stability and its provision of welfare and justice at all levels of

society – the household, local, national, regional, and international levels. Thus, a further challenge in managing the burdens of human migration or displacement, and building community resilience to disaster, is identifying the policies that can enhance stability and social justice. In some cases, governments may need to consider new laws and policies that can support positive migration or resettlement, and incorporate international standards.

The policy reflections discussed below were identified by participants as those that can help governments to better manage internal displacement and international migration, and presuppose that governments with populations that are vulnerable to displacement and migration may need substantial technical or financial support from the international community. Certainly, there is a critical need to facilitate and support future dialogue among governments and international experts on these issues and to provide better guidance to governments in adaptation planning.

What Policy Reflections Can Help Governments to Manage Internal Migration Flows Related to Climate Change?

Past experience in pre-disaster and post-disaster management demonstrates that governments face enormous challenges in identifying and adopting successful strategies for regulating population movements due to climate disasters and in undertaking resettlement before or after disasters occur. In part, this is due to a lack of standards, institutional planning and cohesion, and financial resources.

Many existing institutional structures in developing countries do not have the capacity to handle the impact of human displacement or to help communities build resilience. Communities themselves may lack the social capital necessary to improve their resilience or ability to recover. A series of slow-onset disasters in consecutive growing seasons caused by prolonged drought, for example, can deplete the social capital of a farming community as significantly as a rapid flood or hurricane. This may, in turn, create significant vulnerability to the next disaster, and make migration a more feasible survival strategy.

Disaster planning has not consistently or significantly included a deeper understanding of the

socio-economic factors that contribute either to building or weakening the resilience of communities. In some cases, resettlement schemes related to infrastructural development and disaster relief have resulted in further impoverishment for those affected. Moreover, disaster relief has tended to be short-term, leaving inadequate time for some communities to fully build resilience to future disaster. Corruption in some areas has hampered agency and community planning processes.

Disaster risk reduction and adaptation planning is likely to be more successful if it incorporates information on community vulnerability to migration, the local cultural context and scientific knowledge, and more effective local participation. Each community may be different in terms of whether it is adversely affected by migration or is receiving benefits, whether existing migrant remittances are helping to build resilience or fracturing community ties. Government institutions that plan for and respond to disasters should have the capacity to assess this information and incorporate the data into early warning systems that can facilitate their work with communities on disaster preparedness and planning. Many institutions need additional structural support to ensure that at each level the local, state, and national government agencies coordinate their work. The success of institutional planning and response may also depend upon increasing the level of long-term disaster assistance to particularly vulnerable countries.

To better assist governments and communities to integrate migration concerns in adaptation planning, the following policies and institutional tools are proposed as priorities for consideration:

- **Adopt socio-cultural and environmental impact indicators that incorporate migration data and trends.** Tools currently exist to build indicators on vulnerability. These indicators can help to identify the communities most vulnerable to disaster impact displacement and migration due to extreme climate events, and to help identify appropriate resettlement options if necessary in consultation with communities of origin and those of the potential destination community. Indicators will be most successful if they consider how vulnerabilities may vary across communities, particularly in regard to gender and sociological factors.

- **Incorporate the guiding principles on Internally Displaced Persons (“IDP”) into national law.** Domestic law should clarify how the standards apply to persons affected by both rapid-onset and slow-onset disasters, such as drought and desertification. At present, many governments have yet to incorporate these principles into law and their application has been inconsistent among vulnerable communities. There is also some speculation as to how the IDP principles affect voluntary, drought-related population movements.
- **Reorient work of institutions on disaster preparedness and response to include potential climate-related migration factors.** Agencies engaged in disaster risk and adaptation planning should re-evaluate their current programmes to identify capacity gaps in both slow-onset and rapid-onset disasters. Planning should be reoriented to include climate-related displacement and migration. Improved coordination in this area can strengthen synergies in reducing risk and responding to impacts.
- **Professionalize resettlement personnel.** Professional and standardized training programmes should be adopted for disaster response and resettlement personnel. These should be based upon international good practices. Adaptation and other funding for disaster preparedness should be provided to governments in need of assistance to support such programs.
- **Designate a responsible agency or institution with authority to coordinate migration and resettlement in response to disaster (particularly weather-related extremes).** This agency should coordinate with other adaptation planning and disaster prevention agencies on incorporating migration data into planning efforts.
- **Build national research and data collection capacity to support long-term development of information on community migration and displacement trends.** Scientific research and data collection on migration as a coping response to climate variability has not been collected consistently, accurately, or on a scale over time that is relevant to national-level planning. This information can significantly enhance official planning and response ef-

forts. Collecting accurate data is often resource and time intensive, and therefore should be built into long-term adaptation planning programs with durable financial support.

What Policy Reflections Can Help Governments to Manage International Migration Flows Related to Climate Change?

Although the majority of population movements related to climate change are likely to be internal, it is believed that some portion will also cross neighbouring borders, or add to the growing number of migrants already moving longer distances, such as from regions in northern Africa to Europe. At present, there are limited opportunities for legal or regularized international migration, particularly for those without professional skills who are living in climate-vulnerable communities. There are also significant gaps in the immigration law and policies of receiving countries related to the protection of people displaced by environmental disasters. Few countries have established immigration protection for those affected and, even where it exists, it is unclear what type of weather-related extremes such protection would cover. These gaps can exacerbate the humanitarian crises and level of human suffering. As climate variability contributes to more prolonged droughts in regions such as Sub-Saharan Africa, and intensifies storms and floods in others, such as Asia and the Pacific, these gaps become particularly acute for people who have been forced to move across borders even temporarily.

To address these gaps, governments will need to consider additional migration management policies and strategies that relate to both climate adaptation and protection of migrants. At the regional level, it will be beneficial for governments to coordinate policies on both natural resource protection and climate-related migration, particularly where a region shares natural resources and ecosystems upon which communities depend for their livelihood, and where seasonal migration is already being used to cope with climate variability.

The following policy reflections and institutional tools are recommended as priorities for government consideration and adoption.

- **Develop adaptation strategies on a regional level that include cross-border resource management and migration as a potential component of adaptation.** Land formation, land use, and other biophysical features that span borders may be determinative of adaptation needs, and collaborative management may be an effective measure to address climate change impacts. Successful resource management is often influenced by cross-border social, cultural, and economic linkages. Seasonal migration across neighboring borders may already be playing a role in affecting the natural resource base and resilience of communities to withstand future climate shocks. Understanding the benefits or challenges of migration not as a failure of adaptation but as a potential component development will be important to effective adaptation planning, and may require bilateral or regional cooperation. Institutional support and financing for such cooperation is a critical challenge. Global adaptation funding should therefore incentivise cooperation among neighbouring countries, for joint regional projects in this area.
- **Establish Migration and Displacement Vulnerability Assessments (“MDVA”). Governments should undertake MDVAs to assist in identifying the role of migration as a positive or negative influence on adaptation.** These assessments could be developed with the assistance of international agencies, such as the United Nations Office for Coordination of Humanitarian Affairs (UN OCHA), which already monitors potential humanitarian situations. Vulnerability assessments could include a number of criteria, such as environmental stressors, income patterns, and livelihood base that are important for effective government planning and migration management.
- **Provide opportunities to the most vulnerable climate-affected communities for migration within a broader co-development scheme.** Where appropriate and feasible, states should consider adopting circular labour migration schemes that incorporate development programmes and the investment of remittances in communities vulnerable to climate disasters. These programmes could offer community members the opportunity to work in another country and to learn skills that could help to build resilience within their community upon their return home. This scheme should build upon and scale-up existing labour-migration models to cover a larger segment of vulnerable populations. A useful model is the Colombian Temporary and Circular Labour Migration Scheme (TCLM). Under this programme, Colombians facing recurring natural disasters are offered employment opportunities, business training, and education in Spain, and can send remittances home while their community recuperates. The scheme includes a co-development component in which people who do not migrate are given social and financial support. Essentially, this is a co-development scheme which views migrants as agents for development.
- **Establish a Temporary Relocation Scheme (“TRS”) for climate-displaced migrants where some migration or displacement across borders will be inevitable.** Governments should consider establishing a TRS mechanism to allow individuals to apply for legal temporary status in a destination country while still in their home country if: they are displaced by certain extreme rapid- and/or the slow-onset climate disasters (e.g. high-impact storms and prolonged droughts); and they have no opportunity to relocate elsewhere in their country. States could consider establishing an open-ended scheme or one based on a quota for such disaster victims. Any scheme established should include an appropriate framework for duration, employment, and assistance. This mechanism could serve to reduce irregular migration by providing temporary legal avenues for those most critically affected. It could also be an important mechanism to assist countries with potential mass displacement across borders from unanticipated natural calamities.
- **Extend the stay of deportation for migrants or provide Temporary Protection Status (“TPS”) for those who cannot return to their home country.** Governments should clarify national law to ensure that a stay of deportation is possible for those living in a host country who cannot safely return to their home country and where no internal flight alternative is

possible, or survival is threatened upon return due to their vulnerability. In this context, the extended stay of deportation would be consistent with international law, granting limited rights and legal status where return would jeopardize a person's survival.³ Supporting evidence of the nature of disaster could be provided through a review of national Migration and Displacement Vulnerability Assessments ("MDVA") or similar evaluations, referred to above. A certification process could also be established to verify disaster threats and ensure that receiving countries have access to such information in determining legal status.

- **Consider the establishment of a new legal status akin to asylum under refugee law for those fleeing long-term, life-threatening environmental disasters.** Governments should consider establishing a new legal status for affected persons in immediate need of refuge to ensure broader and more equal treatment of affected victims and burden-sharing among the source and destination states affected by climate change and population displacement. This underscores the global community's recognition that the impact of human rights and humanitarian concerns imposed by climate disasters fall on the poorest countries of the world, and that states contributing to climate change share responsibility for assisting impacted communities. It further recognizes that in some cases a compelling public interest exists to provide a legal framework of protection for persons who are forced to move temporarily or permanently. Similar to asylum criteria, the status could be granted on the basis that the person has fled – or cannot be returned to – his or her place of origin due to an environmental disaster related to climate change. This legal status may be necessary to assist persons threatened by permanent climate disaster such as those needing relocation from sinking islands.

What Are priority Areas for Future Policy Dialogue?

- The implementation of appropriate migration policies and institutional reflections, as with other areas of climate adaptation, presents a number of challenges for governments and

humanitarian agencies. States would benefit from fostering further dialogue among international experts and with affected communities, particularly to document and exchange standards and tools of good practice. Within the UNFCCC climate negotiating text on adaptation, the Cancun Adaptation Framework (paragraph 14(f)) highlights the importance of addressing the impacts of migration and displacement related to climate change. The UNFCCC process presents an opportunity for governments to facilitate beneficial dialogue and guidance for governments on these issues beyond the Cancun meeting. Governments should provide support to a process of dialogue among states, humanitarian agencies, and NGOs, with a view to building the capacity of governments to better integrate migration and displacement into national and regional programs on adaptation.

The following areas for future dialogue are viewed as priorities:

- How can governments incorporate migration management and displacement standards into adaptation programs and planning at the national and regional levels? The main question concerns guidance on good practices in migration management and alternatives for managing environmental stressors with a mix of human mobility, livelihood options, and social capital.
- How can governments support more in-depth qualitative and quantitative research, the collection of necessary demographic, socioeconomic, and environmental data on different patterns and scenarios of climate change, migration, and displacement?
- How can national lead agencies for adaptation, humanitarian, and emergency response planning institutions best collect, document and exchange information with affected communities on local practices, migration experiences, and future projects?
- How can the diaspora communities be involved as effective partners in addressing climate change adaptation planning processes?

- How can effective disaster risk reduction and conflict mediation policies be implemented to reduce the likelihood of emergency movements with accompanying humanitarian consequences?

Given the understanding among most experts that migration related to climate variability is context-specific (climate shocks may drive migration in some households and communities, while in others they may not), further research into vulnerability, appropriate impact assessments, and fostering inter-ministerial agency collaboration will be important in improving future policy development in this arena.

¹ World Bank (2008): *Adaptation and Mitigation of Climate Change in Agriculture*. <<http://go.worldbank.org/3Y6KXLNFH0>>, 11 November 2010.

² Cline, W. (2007): *Global Warming and Agriculture: New Country Estimates Show Developing Countries Face Declines in Agriculture Productivity*. <<http://www.cgdev.org/content/publications/detail/14425/>>, 11 november 2010

³ *International human rights law serves as the basis of criteria where the return of a person to desperate conditions would breach the right to life or amount to inhuman or degrading treatment. In certain cases, return may arguably be prohibited, for example where land is uninhabitable and cannot support life, or there is little possibility of survival. The Inter-American Commission on Human Rights has stated: The realization of the right to life, and to physical security and integrity is necessarily related to and in some ways dependent upon one's physical environment. Accordingly, where environmental contamination and degradation pose a persistent threat to human life and health, the foregoing rights are implicated. Report on the Human Rights Situation in Ecuador OEA/Ser.L/V/II.96Ch 8, Yanomami case (case 7615 of 5 March 1985), referenced in the Annual Report of the Inter-American Commission on Human Rights, 1984 – 85.*

Section One

Improving National Governance and Regional Cooperation in Managing Displacement and Migration: Selected Case Studies

Rapid-Onset Disasters

Vulnerability and Population Displacements due to Climate-induced Disasters in Coastal Bangladesh

Dulal Chandra Roy

Abstract

Climate change is one of the greatest challenges for the world today. The intensity and frequency of climate induced disasters have increased in recent years. Low-lying and coastal countries like Bangladesh are the most vulnerable to the adverse effects of climate change. These countries are already experiencing disasters such as floods, cyclones, tsunamis, etc. with millions of population displacements over the past years. The climate induced migrants are often discriminated against, and face different socio-economic and cultural problems during or after the displacements. In many cases, the existing policies and institutional frameworks are not sufficient to protect the displaced people. Therefore, there is an urgent need to review the existing policies and institutional frameworks for protecting the climate induced migrants. In this paper, the author discusses vulnerability and population displacement issues, reviews existing policy frameworks, and suggests necessary policies and institutional frameworks with regard to extreme climate-induced disasters in coastal Bangladesh.

Key-words: Climate change, Sea level rise, Vulnerability, Displacements, Environmental migrants, Bangladesh

Introduction

Climate change has emerged as the greatest threat facing mankind today (Clime Asia 2009). The adverse effects of climate change undermine economic development, human security, and people's fundamental rights (UNDP 2007). They worsen the poverty situation and obstruct the achievements of the Millennium Development Goals (MDGs) of the least developed countries. These countries are highly vulnerable to climate induced disasters (Vashist and Das 2009).

Disaster research findings show that the frequency and intensity of extreme natural events have increased in recent years (UNDP 2004). Additionally, global climate change and sea level rise may affect low-lying and coastal countries,

displacing millions of people from their homes, their occupations, and their livelihoods (World Bank 2007). IOM has estimated that there will be 250 million people who could be described as climate or environmental migrants by 2050 (IOM 2009). The findings of a joint report by UN OCHA, the Internal Displacement Monitoring Centre (IDMC), and the Norwegian Refugee Council (NRC) show that at least 36 million people were displaced in 2008 by sudden-onset natural disasters (IDMC and UN OCHA 2009). Among them, 20 million people were displaced due to extreme climate-related events. As the frequency and intensity of weather-related events are increasing, the number of displaced people is expected to rise in coming years.

UNFCCC recognizes that Small Island Developing States (SIDS), low-lying and coastal countries, Africa, and the Least Developed Countries (LDCs) are particularly vulnerable to the impacts of climate change (UNFCCC 2007). The Global Climate Risk Index 2011, which was developed by the German-based organization "Germanwatch", recognized Bangladesh as the country most vulnerable to extreme weather events and the one most affected in the period of 1990-2009 (Harmeling 2010). On the other hand, UNDP (2004) identified Bangladesh as the most vulnerable country in the world to tropical cyclones, and the sixth most vulnerable country to floods.

Millions of people in the coastal areas of Bangladesh are under threat of climate change and climate variability problems. According to a recent report, over 35 million people will be displaced from 19 coastal districts of Bangladesh in the case of a one metre sea level rise this century (Rabbani 2009). IOM (2009) has indicated in a report that many people have already migrated to the urban slums from the coastal zones of Bangladesh due to frequent cyclones, storm surges, river erosion, etc.

The recent Cyclone "Aila", which hit the coast of Bangladesh on 25 May 2009, caused a huge loss of property and infrastructure, and displaced a large number of people from their homes (DMB 2009). A survey by Oxfam found that the damaged coastal embankments in the severely affected areas had still not been repaired, even though a long time had passed (Oxfam 2010). As of November 2010, a large number of displaced

people had been living in the makeshift houses on the damaged embankments without adequate food, safe drinking water, proper sanitation facilities, etc.

To protect these displaced people, the relevant policies and the institutional frameworks should be reviewed urgently to identify the key gaps in protection needs. In this paper, the author reviews the vulnerability and population displacement issues, identifies the critical gaps and challenges, and suggests important policy or institutional frameworks. This paper focuses on examples from Bangladesh, specifically the experiences of Cyclone 'Aila' 2009 as a means of identifying challenges and solutions for other developing countries.

Vulnerability of Bangladesh to Climate-Induced Disasters

Since Bangladesh has around 160 million inhabitants, it is highly vulnerable to climate change and sea level rise (Rabbani 2009). The geographical location and low-lying characteristics of the country make it more vulnerable and susceptible to different natural and climate induced disasters. It is the third most vulnerable country in the world to sea level rise in terms of the number of people, and among the top ten countries in terms of percentage of people living in low-lying coastal zones (Pender 2008).

At present, almost 40 million people live in the coastal areas of Bangladesh. The vulnerable coast of Bangladesh is particularly exposed to cyclones and storm surges. Due to sea level rise, the coastal areas are at great risk. Loss of coastal lands to the sea is currently predicted to reach three per cent by the 2030s and six per cent in the 2050s (Tanner et al. 2007). Therefore, this is likely to generate a steady flow of displaced people over time.

Over the past few years, several natural disasters such as cyclones, storm surges, floods, droughts, etc. have caused enormous loss of life and property in Bangladesh. Table 1 shows the major natural disasters in Bangladesh by the number of affected population during the last 30 years. It can be seen that in the 1988 flood alone, a total of 45 million people were affected, including a large number of internal displacements.

Disaster type	Time	Number of affected population
Flood	June, 1988	45,000,000
Flood	June, 2004	36,000,000
Flood	May, 1984	30,000,000
Flood	July, 1987	29,700,000
Drought	July, 1983	20,000,000
Storm	April, 1991	15,438,849
Flood	May, 1998	15,000,050
Flood	July, 2007	13,771,380
Flood	June, 1995	12,656,006
Flood	January, 1993	11,469,537

Table 1: Major natural disasters by affected population in Bangladesh during the last 30 years (Source: EM-DAT 2010)

These disasters also affected the economic development of the country to a large extent.

Bangladesh has also been highly vulnerable in terms of number of people killed in natural disasters in past years (see Table 2). In the 1991 cyclone, a total of 138,866 people were killed, with millions of injuries, huge loss of property, damage to the physical infrastructure, socio-economic disruption, etc. Among other extreme events, the super cyclone "Sidr" in 2007 killed 4,236 people and caused great damage to agriculture, fisheries, forestry, health, water supply, sanitation, and other sectors.

The IPCC estimates that climate change will contribute to 0.6 metre or more of global sea level rise by 2100 (Harvey and Nicholls 2008). According to a World Bank report, Bangladesh will face 30 cm and 50 cm sea level rises in 2030 and 2050 respectively (Faisal and Parveen 2004). A recent study has revealed that sea levels in the Bay of Bengal have risen much faster over the past few decades. As a result, low-lying and small islands are at great risk. Recent satellite images show that the New Moore Island or South Talpotti (the uninhabited territory) in the Bay of Bengal has disappeared due to sea level rise (Rahman 2010). It is predicted that other small islands in the Bay

Disaster type	Time	Number of people killed
Cyclone	April, 1991	138,866
Cyclone	May, 1985	15,000
Cyclone	November, 2007	4,236
Flood	June, 1988	2,379
Flood	July, 1987	2,055
Flood	May, 1984	1,200
Flood	July, 2007	1,110
Flood	July, 1998	1,050

Table 2: Major natural disasters by number of population killed in Bangladesh during the last 30 years (Source: EM-DAT 2010)

of Bengal, such as South Talpotti, may disappear in the coming decades.

The coastal areas are particularly vulnerable to tropical cyclones and associated storm surges. The cyclones that occurred in 1970, 1985, 1991, 1997, 2007, and 2009 caused great loss of life and property, and displaced millions of people in the coastal areas (Akter 2009). As shown in figure 1, in the 1991 cyclone, around 15 per cent of the population of the coastal area and 4 per cent of the population in the context of the country as a whole were displaced from their homes.

In addition, a large number of people have been displaced over the years due to floods and river erosion. More than 500,000 inhabitants of the Bhola island in Bangladesh lost their homes when the island was permanently submerged by floods in 2005 (Chhabara 2008). A vast number of families lost their homes and were compelled to move to urban slums in metropolitan areas such as Dhaka, Rajshahi, Khulna and Chittagong (IOM 2009). Dhaka's slum population is estimated at 3.4 million, and is expected to grow as 400,000 migrants arrive each year from rural and coastal areas as a result of natural-induced disas-

ters (World Bank 2009). Along with the internal displacements, 12 to 17 million people have reportedly migrated to the adjacent states of India, mostly in West Bengal, Assam and Tripura since the 1950s (Reuveny 2005).

The Consequences of Cyclone "Aila" 2009

Cyclone "Aila", which struck on 25 May 2009, caused enormous loss of property, infrastructure, social and economic disruption, environmental degradation, etc. in the coastal areas of Bangladesh. A total of 190 people were killed and around 4.82 million people were affected in a total of 11 coastal districts (see Table 3).

The cyclone and tidal surges collapsed the coastal embankments at several points and inundated vast areas (DMB 2009). The houses, livestock, assets, crops, etc were washed away by the floodwaters. Over 1,700 km of flood embankments were damaged by the cyclone and tidal surges. The people, who lost everything, left their homesteads and took shelter in the makeshift houses on roads, damaged embankments, in markets, schools, or even in the open (Sarawat 2009).

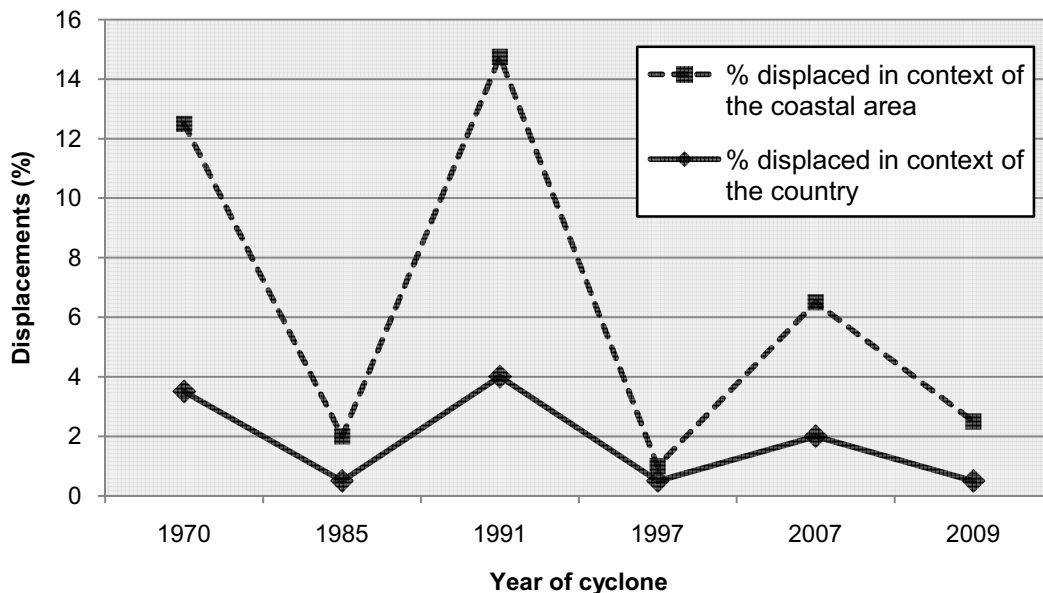


Figure 1: Percentage of displaced people in recent cyclones in the context of the coastal area and the country (Source: Akter 2009)

Affected districts	Number of deaths	Number of affected people
Satkhira	59	563,783
Khulna	57	546,630
Noakhali	24	1,163,071
Bhola	18	584,970
Barishal	11	292,105
Patuakhali	8	615,785
Laxmipur	7	17,071
Bagerhat	4	497,036
Pirojpur	1	248,470
Chittagong	1	13,630
Barguna	-	284,079
Total (11 districts):	190	4,826,630

Table 3: Number of deaths and affected people in 2009 Cyclone 'Aila' (Source: DMB 2009)

The embankments, built in the 1960s, had been a source of protection to the coastal people from the rivers and tidal flooding (Sarawat 2009). For the last 20-30 years, these embankments had been cut at several points to allow the saline water to enter the land for shrimp cultivation. In addition, these embankments had not been maintained properly for the past years by the responsible authorities. As a result, these vulnerable embankments collapsed easily during the recent Cyclone 'Aila', and huge areas were inundated.

The precarious situation created by Cyclone 'Aila' resulted in increased migration to the cities and other areas. More than 400,000 people were reportedly displaced by the cyclone in the coastal areas of Bangladesh (Wapedia 2010). According to the ECHO (European Commission's Humanitarian Aid Office) partners' assessment, about 40,000 people migrated due to Cyclone 'Aila' from the Koyra upazila (sub-district) of Khulna District in Bangladesh (ECHO 2009).

Figure 2 shows the number of displaced families in Dacope and Koyra upazila in different periods of 2009 and 2010. According to the estimation of IOM in November 2009, the numbers of displaced families in Dacope and Koyra upazila were 11,118 and 5,533 respectively (IOM 2010). As of April 2010, some displaced families had re-

turned to their homes, but around 7,705 families in Dacope upazila and 2,809 families in Koyra upazila could not return. Along with the internal displacements, a number of affected families from the coastal areas have reportedly migrated to neighbouring countries such as India (Gain and Ray 2010).

As per the information of November 2010, many IDPs were still living on the damaged embankments and other high strips of land. The poor became extremely poor, and many non-poor were thrown into poverty and food insecurity by the destruction caused by "Aila" (Mallick 2009). As the drinking water sources and latrines were greatly damaged, people were living in unhealthy and unhygienic conditions without adequate food, pure drinking water, or proper sanitation facilities (Dhaka Mirror 2010). The IDPs also faced the problems of physical insecurity, stress due to traumatic experiences, lack of livelihood opportunities, loss of documentation, etc. (CRG 2006). In addition, educational activities of the schools, colleges, and other institutions in the affected areas were disrupted to a great extent.

The responses from the Government of Bangladesh to overcome this disaster were not adequate or well-coordinated (Ahmed 2010). The government provided 20 kilograms of rice monthly for each affected family through Vulner-

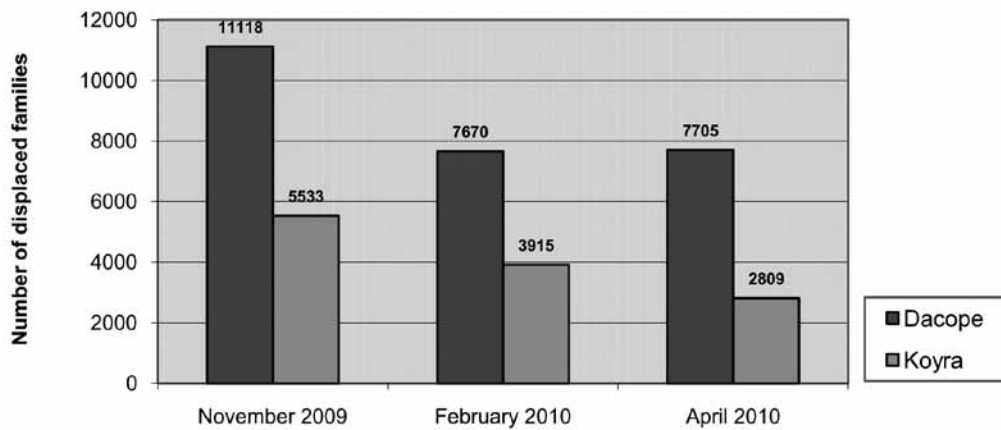


Figure 2: Number of displaced families in Cyclone 'Aila', which affected Dacope and Koyra Upazila (Source: IOM 2010)

able Group Feeding (VGF) cards. This was not sufficient to maintain these families (IOM 2010). The government also made a number of attempts to repair the damaged embankments with the help of the local authorities and the community people. However, due to the lack of timely initiatives, adequate funding and coordination among the concerned agencies, the embankments had not been repaired even after a long time had passed. Some repaired embankments collapsed repeatedly due to water pressure during new moon tides (NNN-IRIN 2010).

A number of international organizations, such as ECHO, Oxfam, and Caritas undertook emergency responses and relief operations in the affected areas. IOM made two field assessments in the affected areas in response to Cyclone 'Aila' and at the request of the government and the Inter-Agency Standing Committee (IASC) of the United Nations (IOM 2009). Based on these assessments, IOM undertook a project to assist over 24,000 displaced families, providing temporary shelter support and other essential non-food items. To facilitate the implementation of the project, IOM opened a temporary office in the affected areas. It closely coordinated with the local administration and partner NGOs to ensure effective and rapid implementation of the project.

Existing National Policies and Institutional Frameworks in Bangladesh

Bangladesh, being one of the most vulnerable countries, has adopted a number of policies and institutional frameworks over recent years. These

measures have been undertaken to combat frequent natural disasters and the adverse effects of climate change. However, recent research findings and experiences suggest that these policies and institutional frameworks need to be reviewed to address gaps in knowledge and challenges for protection of the climate induced migrants (NRC 2009).

The institutional framework of Bangladesh consists of different disaster management committees at different levels comprising government, non-government, voluntary, and other relevant stakeholders. The National Disaster Management Council (NDMC) headed by the Prime Minister is the highest-level forum for the formulation and review of disaster management policies. The Inter-Ministerial Disaster Management Coordination Committee is responsible for implementing disaster management policies and the decisions of the NDMC, and is assisted by the National Disaster Management Advisory Committee.

The Ministry of Food and Disaster Management is the focal ministry for disaster management in Bangladesh. Its Disaster Management Bureau (DMB) is mainly responsible for coordinating national disaster management interventions across all agencies. In 2000, the government published 'Standing Orders on Disaster', which provides a detailed institutional framework for disaster risk reduction and emergency management, and defines the roles and responsibilities of different agencies and committees. In addition, the Ministry of Environment and Forest is responsible for addressing climate change

challenges, including international negotiations. Under its Department of Environment (DOE), a climate change cell has been established to support the mainstreaming of climate change into national development planning. It has developed a network of 34 focal points in different government agencies, research institutions and other organizations (MoEF 2008).

Bangladesh National Environmental Policy (1992) and the Coastal Zone Policy (2005) deal with the adverse effects of disasters and environmental problems. In 2005, the Government of Bangladesh launched its National Adaptation Programme of Action (NAPA), which highlights the main adverse effects of climate change and identifies adaptation needs. Bangladesh supports the Bali Action Plan, which identified a set of actions essential to achieve a secure climate future. The plan was introduced in the 13th Conference of Parties (COP 13) to the UNFCCC, held in Bali in December 2007. In response to the Bali Action Plan, the Government of Bangladesh launched the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2009.

Currently, the Bangladesh Government is undertaking a development project aimed at building 207 eco-villages for re-housing the climate change victims and creating self-employment opportunities (Daily Purbanchal 2010). In these eco-villages, a total of 10,650 families affected by recent climate induced disasters may be rehoused. Though the above policies and programmes have been adopted by the government, there are still many gaps in knowledge and challenges in protecting the vulnerable people of Bangladesh.

The Gaps in Knowledge and Challenges Regarding Policies and Institutional Frameworks

The national policies and institutional frameworks of Bangladesh are not sufficient to protect climate induced migrants (Akter 2009). The national policies concerning climate change and environmental issues such as the National Environment Policy 1992, the Coastal Zone Policy 2005, NAPA 2005, the Bangladesh Climate Change Strategy and the Action Plan 2008 point out the problems due to climate change. However, there are no clear indications of how population displacement problems will be addressed in these

policies. In addition, there are no detailed action plans with a timeframe to tackle this problem.

Experiences from the 2009 Cyclone 'Aila' indicate that weaknesses and inefficiency exist in managing natural disasters. The concerned authorities were not able to repair the damaged embankments caused by the cyclone for a long time. There were no proper and adequate rehabilitation programmes for the displaced people. In addition, there was lack of accountability and transparency in implementation of emergency responses and rehabilitation programmes. In many cases, negligence and corruption of the local disaster management authorities and local leaders were reported in relief and emergency management programmes (Ahmed 2010).

Various study findings show that the existing United Nations and international policies for protecting internally displaced persons are insufficient (NRC 2009). As per the normative frameworks under the 1998 UN Guiding Principles on Internal Displacement, the respective states have the primary responsibility to help internally displaced persons. However, there are challenges on the ground to ensuring the protection of internally displaced persons. This is because the affected countries are sometimes unable to protect the displaced people, and in some cases even deny the entry of international protection and assistance agencies, referring to the principle of national sovereignty and non-interference.

The international migration policies do not adequately support the protection of environmental or climate migrants. As the numbers of climate or environmental migrants are expected to rise in coming years due to climate change and sea level rise, developed countries may face demands to accept climate refugees from vulnerable and affected countries. Accepting climate refugees already faces opposition in some countries. For example, India has planned to fence off Bangladesh by erecting a 2,500 mile long barbed-wire barrier to prevent the entry of terrorists and illegal immigrants (Chhabara 2008; Buerk 2006).

A gap between disaster research and practice exists. Disaster management strategies are often not adopted on the basis of intensive and in-depth disaster research and analysis. The lack of proper vulnerability assessment to climate change impacts in vulnerable communities is a

major drawback. Additionally, there are the challenges of raising necessary funds and implementing adaptation programmes for the most vulnerable countries.

Recommendations and Conclusions

The problems and challenges identified from the examples of Bangladesh may be of concern and relevance to many other developing countries facing similar situations. It is true that some Bangladeshi issues are different from other countries, given their cultural and geopolitical situations. Despite these differences, most of the recommendations made here may be applicable to other vulnerable and developing countries.

Existing policies of vulnerable countries should be reviewed and re-evaluated for better disaster preparedness and emergency responses. NAPA of the respective countries should include explicit and effective strategies for addressing climate induced migrations. In addition, adequate assessment of vulnerabilities in terms of different social, cultural, and environmental impact indicators is needed within the vulnerable communities. Proper vulnerability assessment can assist governments and other relevant authorities to take appropriate action for disaster risk reduction.

Synergies among disaster risk reduction, climate change adaptation and development should be developed ensuring representation, participation, and coordination of different stakeholders in the community. Poverty reduction strategies of the climate vulnerable countries must take into account the impacts of climate change. Necessary measures should be undertaken to protect the vulnerable population and their livelihoods. An integrated approach involving many different ministries and agencies, civil society, and the business sector is needed to tackle climate change in these countries.

The gaps and weaknesses in existing institutional frameworks for disaster responses and rehabilitation activities should be properly addressed. In Bangladesh, the coastal embankments damaged by Cyclone 'Aila' 2009 need to be repaired and rebuilt urgently to protect the internally displaced persons and their livelihoods. Affected and displaced people need greater rehabilitation and resettlement support from the government as well as international communities.

Expert help and local knowledge should be incorporated in the resettlement programmes.

The capacity of the governments and other concerned organizations to plan and implement adaptation programmes should be strengthened. Proper educational and training programmes will have to be undertaken for building capacities and raising public awareness. People-friendly and timely early warning systems should be established, taking into account regional variability. Additionally, proper implementation of the relevant policies and guidelines needs to be ensured for better protection of displaced persons.

Recent natural disasters indicate that Bangladesh and other vulnerable countries, which are under the threat of sea level rise and climate change, may face more climate refugees in coming years. Therefore, international migration policies and programmes should be reformulated in the light of the influx of climate refugees. Countries and humanitarian agencies should review their legal and institutional frameworks, and identify any legal gaps in protection. More research activities and systematic monitoring of displacements are needed in this regard.

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Community Resilience and Hurricane Ida: How Marginalized Salvadorans Lacking NGO and Governmental Support Cope with Climate Shock

Elizabeth Tellman

Abstract

El Salvador is extremely vulnerable to disasters due to many factors, including poverty, deforestation, urbanization, and mass internal migration during the Civil War (1980 – 1992). The low capacity of the national and local governments to address social vulnerability and respond to disasters left El Salvador again exposed to Hurricane Ida in 2009. This paper explores vulnerability and capacity in response to the landslides caused by Ida. It does so using three nested scales: national, municipal, and communal. The case study highlights the lack of both governmental and non-governmental response in two communities forced to rely on their own resources of social capital and emergent organization in the aftermath of Ida. Comparative quantitative analysis of the two communities identifies the social factors of the more resilient community, as well as the roles of remittances and migration for post-Ida reconstruction. El Salvador must foster and replicate local and international good practices in Community-Based Disaster Management to successfully adapt to climate change.

Key-words: Resilience, El Salvador, Disasters, Vulnerability, Climate change adaptation

Introduction

El Salvador appears as one of the countries most vulnerable to natural disasters by nearly all metrics used to form top 10 lists in the World Bank's 2005 Natural Disaster Hotspots analysis. Exposed to earthquakes, droughts, floods, landslides, and volcanoes, it is not surprising that in the most recent UN report (UNDAC April 2010), 88.7 per cent of the territory is considered at risk from one or multiple threats. Even more alarming, the high population density and location of the capital San Salvador exposes 95.4 per cent of the population and 96.4 per cent of the GDP to natural disaster.

The main factors contributing to increasing vulnerability to disasters include population density, urbanization, deforestation, and pov-

erty. In terms of demographics, the small area (21,040 km²) and high population (6.2 million) make El Salvador the most densely populated country in Central America (290 persons/km²) (UN data 2009). The population is concentrated in urban areas, a trend stemming from mass migration during the Civil War (1980 – 1992). The Civil War displaced 737,000 people internally and 1.5 million externally, with the dominant internal migration trend being rural to urban as the poor fled the violent countryside (Mendoza 1999). Urbanization has had lasting effects, changing the geography of poverty; 58 per cent of El Salvador's poor now live in cities (FLASCO et al. 2010).

This unplanned migration not only caused hasty and unsustainable development in cities, but also had negative environmental effects in rural areas. The need for food often caused cultivation unsuitable for soil types, which combined with the napalm and bombs dropped during the war provoked land degradation, increased deforestation and exaggerated drought and flood cycles (Wisner 2001). El Salvador now has the second highest level of deforestation in Latin America, with only two per cent of original forest cover remaining. Moreover, deforestation has had serious consequences for El Salvador's natural capacity to mitigate flooding¹, one of the disasters that disproportionately affects the poor.

Although poverty has decreased by a third since the Civil War, it is once again on the rise. Poverty actually rose from 40 per cent to 46 per cent in 2007 – 2008, and GDP was negative in 2009, decreasing by 2.5 per cent (Banco Central de Reserva El Salvador 2010). El Salvador remains one of the 10 poorest countries in Latin America, and is in danger of slipping further into poverty if disasters increase as predicted (UNDAC 2010). Undoubtedly, the country's social, economic, and environmental vulnerabilities will be further aggravated by climate change. Historically, 96.4 per cent of economic impacts of disasters in El Salvador are due to climatic events, and just one climatic shock can devastate the economy (UNDAC 2010). One such shock in 2009 was Hurricane Ida.

During 7 – 8 November 2009, a low pressure system on the tail of Hurricane Ida resulted in heavy rains of 355 mm that fell in four hours, rivalling the deluge of Hurricane Mitch (1998), whose 400 mm rains over four days caused

20,000 deaths in Central America. Official data cites 275 dead or missing, and over 75,000 persons displaced in five of the country's 14 departments (Proteccion Civil 2009). A drought earlier that year left crops exceptionally vulnerable to climatic stress, such that the untimely arrival of torrential rains caused by Ida in the heart of the bean harvest completely destroyed the already vulnerable crop, causing total damage valued at \$996 million dollars (Marroquin 2010). The damage placed Ida as the third most economically disastrous event in El Salvador's history, with an estimated 90,000 Salvadorans directly affected (EM-DAT 2010).

Hurricane Ida was not an isolated incident. Predicted increases of El Niño years in the Southern Oscillation, which will exaggerate flooding in the future, will make climate change adaptation extremely difficult for El Salvador (Turcios and Amaya 2007). Predicting adaptability to climate change depends on analysing El Salvador's current vulnerability and capacity to handle climatic events and how it can improve resilience on the community level.

Conceptualizing Vulnerability, Resilience, and Social Capital

Vulnerability analysis crosses between political economy and political ecology to understand who is vulnerable, how they are vulnerable, and why (Eakin and Luers 2006). Social relations create vulnerability as well as capacity, and understandings of both recognize socio-enviro reciprocity, "the environment as a socially mediated force...just as society expresses itself environmentally." (Oliver-Smith 2004: 12). The paper draws heavily on Wisner et al. (2004) and their pressure and release model and access models to understand disaster causation, magnitude, aftermath, and coping mechanisms. This paper draws upon the concepts of resilience from the same authors (Wisner et al. 2004) to emphasize that mere "recovery" to the status quo after disasters is unacceptable. The pressure and release model dictates that resilience, or the increased capacity for a community to absorb future climate shocks, is necessary for disaster reconstruction that addresses the roots of social vulnerability (Wisner et al. 2004).

The paper also explores non-material, sociological phenomena of resilience, recognizing that

"social capital is a necessary glue for adaptive capacity, particularly in dealing with unforeseen events...social capital substitutes local management for state control" when the state fails, as it did in the aftermath of Hurricane Ida in El Salvador (Adger 2003: 400). Social capital has been previously documented in El Salvador as fundamental in disaster risk reduction (Lavell 2004) and as a "positive feature for adaptation processes" (Schipper 2006). Sociological resilience has been documented elsewhere in Vietnam, Peru, Honduras, and Nepal (Moench and Dixit 2004; Adger 2003; Comfort et al 1999). Even so, many risk models do not include the capacity to adapt, ignoring diverse coping strategies of social groups and communities that may include pooling resources, migrating, or using social capital to access external networks (Adger 2003). Evidence of social capital is most obvious when a "shock" disturbs the system, as explored in the aftermath of Hurricane Ida in El Salvador. (Smit and Wandel 2006).

The "shock" of Hurricane Ida and responses is examined using three nested scales, national, municipal, and communal. Beginning with the macro level, the first section analyses vulnerabilities of the state exposed by Hurricane Ida. The second section explains the specific history leading to the vulnerability of the municipality of Santiago Texacuangos to Hurricane Ida as well as its capacity in Ida's aftermath. The third section explores local intricacies of vulnerability and capacity in a case study of two small communities in Santiago Texacuangos, Santa Maria de la Esperanza, and Joya Grande. The fourth section contains statistical analysis of the case study, comparing and contrasting different coping strategies post-Ida. The fifth and final section focuses on national gaps in disaster risk reduction, and international good practices that El Salvador can learn from to fill such gaps.

National Level Analysis: Hurricane Ida and the Landslides of November 2009

The loss in human life, infrastructure, and crops from Hurricane Ida goes beyond social and environmental vulnerability and was in large part due to the institutional vulnerability of the national government. Disarticulation between science and government always happens to some extent in disaster governance (Hillhorst 2004).

However, El Salvador's Civil Protection Agency, created in 2005 to "prevent, mitigate, and effectively attend to natural and anthropic disasters" (Proteccion Civil 2010), had not even read the disaster emergency manuals prior to November 2009, according to a representative from IOM (personal interview 2010). This led to civil protection, responsible for managing the country's early warning systems (colours in order of increasing danger: green, yellow, orange, and red, a national emergency). Although civil protection had enough climatic information from (OV-Servicios Nacionales de Estudio Territorial, the national meteorological institution) to raise the alert level as early as 12:25 p.m. on 7 November, civil protection maintained the "green" alert², which was not elevated until 6 a.m. the following morning (La Pagina 2010). When the warning was finally raised to "orange" on 8 November, hundreds had already died. The Human Rights Department of El Salvador blames inadequate state bureaucracy for failing to activate warning and evacuation systems until the morning after the disaster had struck. The state permitted the death of citizens whose lives could have been saved (PDDH 2010).

Even if the warning systems had been activated, little could have been done due to the failure of civil protection to create municipal commissions. Such commissions would have been responsible for relaying information to local communities, yet only 100 commissions out of 262 municipalities had been formed pre-Ida, leaving more than half the nation without written emergency plans. However, even if local and national committees were previously formed and activated during Ida, there is minimal funding for disaster risk reduction. Mayor's offices have no budget for disaster projects. The national fund for disaster prevention, PROFOMID (Fondos de Presupuesto de Mitigación de Desastres/Funds for Disaster Prevention), has a budget of only \$4 million; miniscule in comparison to the amount of damage caused by Ida. The lack of government response exposed the institutional inadequacy of the state to handling disasters, the consequences of which play out unfavourably at the municipal level. The next section explores how Hurricane Ida affected one specific municipality, with its specific set of vulnerabilities.

Vulnerability on the Municipal Level: Santiago Texacuangos

The backdrop to the case study area is the municipality of Santiago Texacuangos, which lies 30 minutes south of the capital on the south edge of the volcanic crater lake Llopango. The region is 30.52 km² in area, with a dense population of 534 people/km². Settlements are scattered throughout ravines, with altitudes ranging from 478 to 934 metres. The fragile soil is classified as tierra blanca joven, consisting of white volcanic ash 10,000 years old from the Llopango eruption. The estimated population in Santiago before the Salvadoran civil war was 8,965 in 1971 (COSUDE 2003), yet this nearly doubled to 16,295 by 1992 and continued to grow to 23,212 by the year 2000 (COMURES 2000). The in-migration to the area caused rapid land use change, as forest cover was converted to chemical agriculture. Though the soil of the area is suitable for coffee cultivation, the war migration influx (see Figure 1) and 2001 coffee crisis have made coffee unviable as a crop, and only 17.2 per cent of the soil is considered to be used appropriately, putting 88 hillsides at risk of landslides (COSUDE 2003). Clearly, rapid land use change put many of the inhabitants at risk, and they would suffer accordingly in November 2009.

Santiago Texacuangos has historically suffered from earthquakes, but not landslides. The first recorded landslide was in 1929, with only one life lost (Desinventar 2010). Curiously, the next recorded landslides were in 1998 (Hurricane Mitch), 2007, 2008, and 2009 (Hurricane Ida), reinforcing how recent deforestation has made the area vulnerable (COSUDE 2003). The most recent landslides after Hurricane Ida in November 2009 caused 18 deaths and destroyed 65 houses according to official statistics, making this municipality the third most affected in the country (Proteccion Civil 2009; Ministerio de Vivienda 2010). An unquantifiable amount of agricultural assets were lost, and soil erosion will prevent cropping for up to 10 years in some areas. Such environmental damage is rooted in the pre-existing environmental vulnerabilities of deforestation and dense population.

In addition to environmental problems facing the area, Santiago Texacuangos suffers from corrupt local governance, made explicit in times of disaster. Disaster governance and distribution of

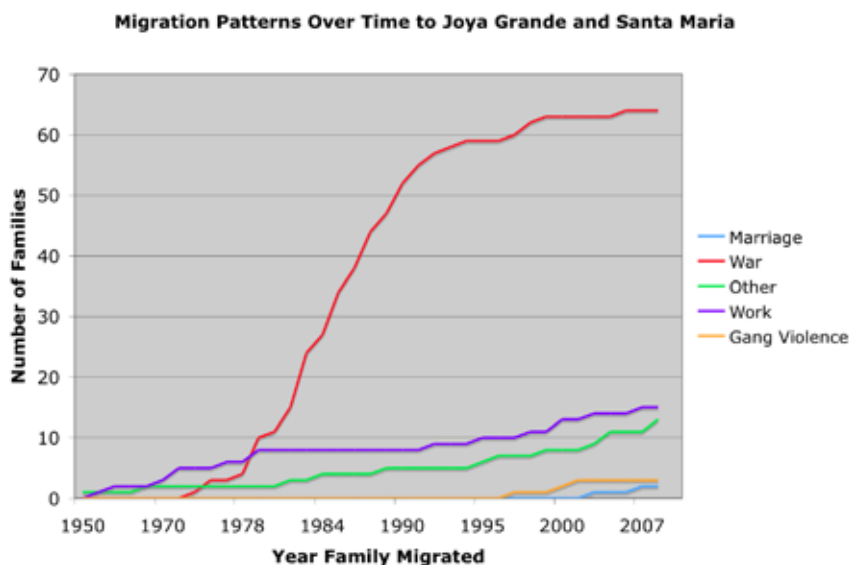


Figure 1: Migration patterns from two communities in Santiago Texacuangos, Santa Maria de la Esperanza and Joya Grande, over time, with the majority migrating in the late 80s, at the peak of the civil war. N=107 (Source: author)

aid is highly political, because “disasters reinforce existing power relations when people with resources manage to profit from the potential over more vulnerable people” (Hillhorst 2004: 61). Corruption of aid happens everywhere from El Salvador to Mozambique (Hillhorst 2004) as local actors jockey for position to gain access to both material resources and political capital. The dominant political parties in El Salvador today [FMLN, Farabundo Marti Liberación Nacional (politically left) and ARENA, Alianza Republicana Nacionalista (politically right)] were opposing armies during the Civil War from 1980 – 1992. The continued political polarity today reduces capacity in disaster response in El Salvador, as coordinating aid across governance scales (local-municipal-national) complicates distribution and decision-making (Boyce 1995). Politicized humanitarian aid in Santiago Texacuangos particularly proves this point.

While the national government had stockpiles of beans and water in central reserves, “too much” aid was sent to other regions of the country while communities in Santiago Texacuangos were left out of the distribution. The aid game became political as official aid requests sent into the national government by the mayor’s office exclusively contained lists of names and communities that supported the ARENA party, while perceived “FMLN” communities were left out of the aid lists. Community leaders took matters

into their own hands, accessing political networks through the local FMLN party to contact NGOs and get aid to non-ARENA communities. When the Ministry of Public Works had not come to open roads blocked by landslides, members of the FMLN party mobilized 700 volunteers from across the country to remove earth, shovel by shovel, so aid could reach isolated communities. This network played an essential role in supporting emergent resilience and leadership in the aftermath of the November 2009 landslides for Santiago Texacuangos, exhibiting the power of “networking social capital” (Adger 2003). Some communities gave up on the local government and instead tapped their own networks, leveraging support from NGOs for food aid, crop reconstruction, and trauma therapy.

Disaster victims expressed the need for a local NGO, since they felt unsupported by the municipal government. However, instead of feeling frustrated with government corruption and lack of response in the 2009 landslides, interviews with these victims who were still in shelters months later, in January 2010, reveal frustrations that, “We have no local NGO in Santiago Texacuangos; that is why no one has come to help.” There is a culture of relying on NGO and humanitarian aid in post-disaster El Salvador, according to local community leader Don Ramon (Alvarado 2010). The government enforces NGO dependency, a common theme in neoliberal Latin

American states like El Salvador where the state is the “promoter” instead of the “doer” of development (Tedesco 1999). Schipper fears that states evade responsibilities of development by passing on such tasks to NGOs, which may, “promote unsustainable systems by merely preventing their collapse,” enabling El Salvador to avoid investing in disaster prevention by relying on continued foreign aid for reconstruction (Schipper 2006: 20; Anderson and Woodrow 1998). The \$150 million in international aid post-Ida far surpasses the national \$4 million disaster prevention budget, for example.

Effective disaster response requires more than foreign aid and NGOs; only 10 per cent of survival in emergencies is due to external factors, proving that communities are always the first responders (Duffield 1993, cited in Hillhorst 2004). Don Ramon identifies the importance of community capacity: “A community without organization is a community drowned in poverty” (Alvarado 2010). At the local level, latent social capital both “binding” (community organization) and “networking” (ability to reach out to external actors) appears in disasters, supporting theories that emergent organization is more common than social chaos (Adger 2003; Wisner et al. 2004). The extent to which “emergent organization” prevails over “social chaos” depends on highly local contexts, explored in the following case studies.

Methods to Compare Social Resilience in Two Communities

Participant observation during Ida and its aftermath made apparent that the key to community resilience against this disaster was cognitive (not material) infrastructure. All communities in Santiago Texacuangos seemed to be floundering in November 2009, except one, Santa Maria de la Esperanza. Though not the most damaged community, it received large amounts of aid relief and many development projects. Meanwhile, Joya Grande, just a few kilometres down the road, and the community most severely affected by Ida in the municipality, received very little aid. This case study attempts to understand the different histories and realities of these two communities via surveys (72 of 350 households in Joya Grande and 41 of 70 households in Santa Maria) to empirically test observations and make statistical generalizations about each community with a

confidence interval of 10³. Survey questions draw on previous research in community-based disaster risk management (Bollins and Hidajat 2006; Wisner 2006) and from focus groups with community leaders, who identified relevant indicators in vulnerability and capacity. Household surveys designed to measure these relevant indicators provide statistics to test three hypotheses: First, that community organization is the most significant factor in climate shock resilience; second, that remittances are important coping strategies in the reconstruction process; and third, internal migration is an undesirable or unattainable adaptation strategy for the poor.

Santa Maria de la Esperanza: Empowered and Resilient

The first community in the case, Santa Maria de la Esperanza, was founded in 1982 with the support of two North American nuns, Maura Clarke and Ita Ford, who purchased land just before their assassination by the state in 1980. The community was designed for refugees fleeing persecution in the northern countryside (see Figure 2), who share a common identity in Catholicism and liberation theology and a strong belief that each person deserves and should fight for human rights. Seventy households and 28 years later, 91 per cent of the community retains their Catholic identity. Community participation is high, as 92 per cent of households attend general assembly meetings and nearly half (49%) have a chair position on one of the many committees. Women hold positions on the Junta Directiva, or community governance board, the legal form of local elected governance in El Salvador. Though 25 per cent of households are single mothers or grandmothers, 50 per cent of the remaining households claim to have equal power sharing between men and women, including share of decision-making and household chores. Residents in Santa Maria have access to information via an internet café, which is unheard of in any other rural community in the region. The community administers its own water system, a community coffee farm, and a community store, all of which generate employment and profits administered by a community fund. Communal work is administered in mandatory mingas, or workdays once a month, and community members who do not attend pay a \$5 fine – the average daily wage of a Salvadoran worker – into a community fund.

During the disaster, Santa Maria lost three lives, four houses, water and irrigation systems, and suffered uncountable loss in bean crops and soil fertility. However, by the following morning, nearly the entire community was sheltered in the church, pooling resources, and cooking meals. Within two days, the community had covered its needs, and was directing aid to other communities. Within one week, the community made contacts with NGO Geologists of the World to assess environmental risks and plan safe spaces to build new housing and use community funds to rebuild the water system. Within two weeks, volunteer psychologists from CRISOL (Psicólogos para Intervención en Crisis, Solidaridad) chose Santa Maria de la Esperanza as their only site for psychosocial intervention. Within one month, organic farming had started, and within three months, the community fund had recovered enough to purchase radios for its emergency committee. Most recently, Santa Maria transported water to communities such as Joya Grande, whose water systems broke during Tropical Storm Agatha. Clearly, the community has a high level of resilience and quick recovery, contrary to the second community in the case study, Joya Grande.

Joya Grande: At Risk and Disorganized

The second research site, Joya Grande, does not share Santa Maria's strong identity and cohesion within the 350 families that make up the community. Though the majority of migration to Joya Grande occurred during the war (see Figure 2), refugees were not necessarily connected to movements centred on Catholicism, liberation theology, or the FMLN (Farabundo Marti Liberación Nacional) army. Joya Grande's religious mix is fairly evenly divided between Catholics, Evangelicals, and non-believers. Though nearly every family abstained from answering the political preference question out of fear it would jeopardize eligibility for aid from the municipality, focus groups agreed that Joya Grande is evenly divided politically between FMLN and ARENA (Alianza Republicana Nacionalista) with a nearly 99 per cent voting rate.

Community participation is low. Only 53 per cent of households are represented at general assemblies, and only 140 persons came to elect the community representative to the municipal civil protection and disaster prevention commission. Only 22 per cent of those surveyed claim to have

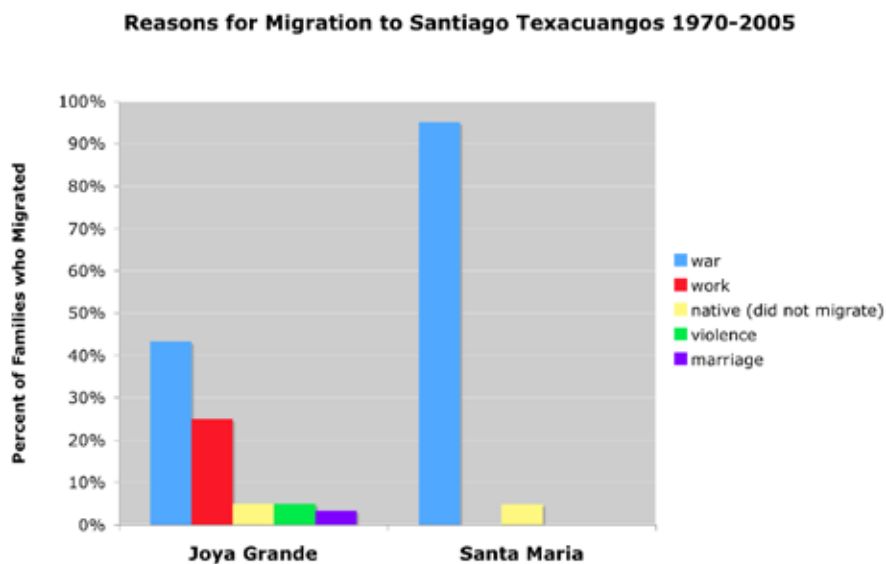


Figure 2: Shows homogeneity of motivation for migration to Santa Maria. N=72 and 41 (Source: author)

positions on three committees that rarely meet. Three men run the legal Junta Directiva and make community decisions, while competing with yet a second ARENA-supported but illegal Junta Directiva.

Joya Grande does not share Santa Maria's gender equality, as no woman in the community holds any sort of recognized leadership position. Like Santa Maria, 20 per cent of households are headed by single mothers, yet of the remaining households, 90 per cent are considered to be run by men. Joya Grande has no community fund and does not manage its own water supply, meaning it must wait for slow centralized government support to fix its water issues. There is no organized work system, and community members say that the community is not united and rarely works together to solve community problems.

The disaster was devastating to Joya Grande, with 50 houses and five lives lost. Two restaurants collapsed into the lake, and landslides buried cars, clothes, the school, and the health clinic. Families who suffered no damage to their home lost their livelihoods. While nearly impossible to accurately assess all damage, residents agreed that Ida was by far the most devastating disaster ever to hit Joya Grande.

Recovery in Joya Grande was slow, partially due to the massive devastation, but also due to the lack of community organization. There was no attempt to ask for NGO or government aid,

and although humanitarian relief came slowly from organizations like the United Nations, Plan International, and the Red Cross, no long-term projects were implemented. The only long-term project, the World Food Programme's six month food for work programme, was organized by a community leader from Santa Maria. Psychological attention came four months after the disaster and was only available to children. Water systems were not fixed until months later, and the last temporary shacks were built five months after the disaster. Joya Grande is still waiting for a geological risk and map study of the kind Santa Maria had within a week after the landslides. Joya Grande lacks the social resilience that is so evident in Santa Maria. The next section uses quantitative methods to analyse resilience by examining major differences in how each community recovered from the disaster.

Summary of Findings: Community Organizing, Remittances, and Migration

This section examines the role of community organization, the role of remittances, and internal migration as coping mechanisms post-Ida in these geographically similar communities with distinct histories. The major observed difference between the two communities was the effectiveness of community organization in Santa Maria, and the evident disorganization in Joya Grande. Santa Maria's superior organization is confirmed in an independent samples t-test comparing the perceived effectiveness of each Junta Directiva,

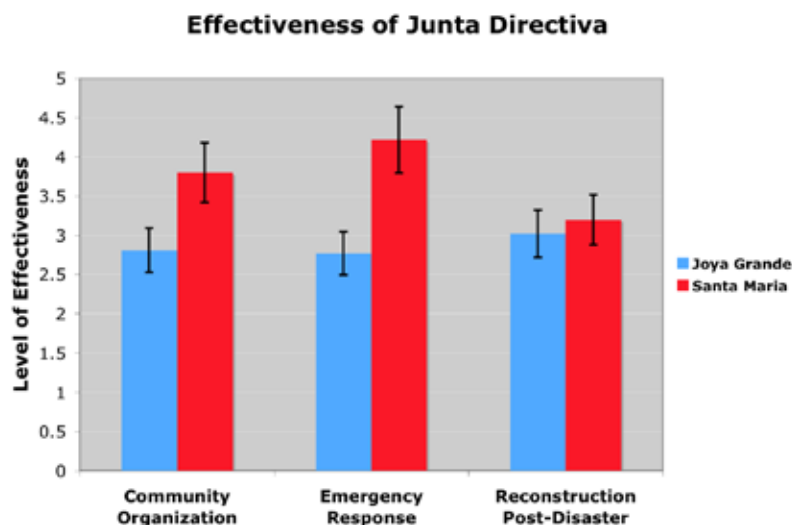


Figure 3: 1=non-existent, 2=very poor, 3=satisfactory, 4=good, 5=excellent. Independent Samples T-test. Community Organization ($t=-4.743$, $df=96$, $p=.001$, equal variances assumed); Emergency Response ($t=-6.931$, $df=92$, $p=.001$, equal variance not assumed); Reconstruction ($t=-.632$, $df=77$, $p=.529$ equal variances assumed) (Source: Author)

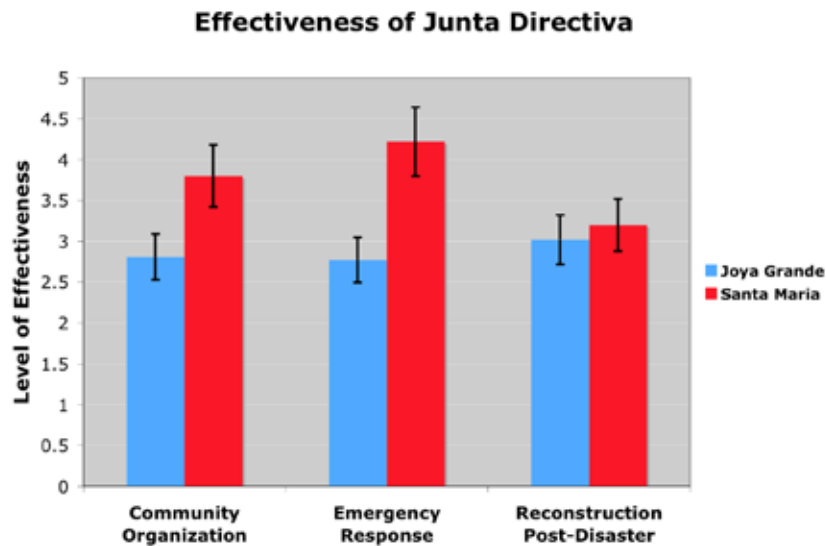


Figure 4: Independent Samples T-test. Political Parties ($t=2.004$, $df=8.623$, $p=.077$, equal variance not assumed); Junta Directiva ($t= -3.301$, $df=47$, $p=.002$, equal variance); Community ($t= -3.956$, $df=53$, $p=.001$, equal variance assumed); Family ($t=-.747$, $df=72$, $p=.458$, equal variance assumed); Total ($t=1.205$, $df=104$, $p=.231$) (Source: Author)

on general community organizing, emergency response, and reconstruction in figure 3.

Santa Maria's local governance is significantly more effective in general organization and disaster response than that of Joya Grande, though reconstruction efforts proved to be insignificant. Reconstruction is the longest and most challenging stage of the disaster cycle because humanitarian aid ends when the media focuses on the world's next major disaster. In this case, Santa Maria lost important reconstruction projects as NGOs funnelled aid away from El Salvador and towards the Haitian Earthquake in January 2010. Still, residents of Santa Maria note their more effective local governance in responding to the community's needs during Hurricane Ida. However, Junta Directivas are not the only form of social support.

Households also ranked eight different types of support: family, neighbours, churches, Junta Directivas, political parties, their community, municipal government, and NGOs on a scale of 1-5 (1=no support whatsoever, 2=little support 3=more or less supported, 4=well supported, 5=excellently supported). The three sources of support that were significantly different between the two communities and all of which ranked higher in Santa Maria are political parties, Junta Directiva, and community as graphed in figure 4.

The political party support given to Santa Maria is also not surprising given its history with the FMLN. The most notable and significant support factor is community organization and cohesion. "Binding" social capital like local leadership and solidarity were key to recovery after Ida and will continue to be a determining factor in climate change adaptation for resilient communities like Santa Maria. However, the one support factor both communities considered of utmost importance was family. Family will always be the first line of support in disasters, especially in places like Santiago Texacuangos where the government and NGOs may arrive late or never. For countries in the Global South such as El Salvador, family support often comes in the form of remittances from abroad.

Although remittances are often an important component of disaster relief for Salvadorans, the 2008-2009 financial crisis reduced the amount of cash Salvadorans abroad could afford to send after Hurricane Ida. Reduction in remittances has a huge economic impact, since the largest single portion of El Salvador's economy (17%) rests on remittances from the United States (Ratha et al. 2010). Halliday's work on remittances and the 2001 earthquake suggests a surge in remittances provided essential relief assistance to affected communities in El Salvador (2006). Other research (Clarke and Wallsten 2003) in Jamaica

after Hurricane Gilbert suggests that remittances act as disaster insurance, and the higher the damage per household, the higher the remittance sent. The most recent example of remittance as insurance may be Haiti, discussed in the final section concerning TPS as disaster relief. Despite the evidence and expectation of increased remittances after Ida, remittances did not increase on the national or local scale (Banco Central de Reserva El Salvador 2010). Part of this is due to the global recession due to the 2008-2009 financial crisis, as remittances decreased by 12 per cent in El Salvador (Orozco 2009; Ratha et al. 2010). The other element is the local context; only five per cent of households in the communities studied in Santiago Texacuangos reported receiving any remittances. Of these few families, only 35 per cent of these houses received a remittance boost after the disaster, and only 15 per cent of remittance-receiving households reported plans to use remittances as their primary resource to rebuild their house. Leaders in Joya Grande specifically mentioned that the drop in remittances this past year had negatively affected the community, while leaders in Santa Maria assumed almost no one receives remittances. The reality is that remittances did not play a large part in Ida reconstruction or as a coping mechanism for either community, probably due to the recession.

Disasters do not directly increase international migration in El Salvador, but may increase internal rural-urban migration (Halliday 2006). There is no government census of either internal migration, environmental migration, or migration caused by disasters. However, other studies (Halliday 2006) indicate increased urbanization after the 2001 earthquakes. The case study indicates that after Hurricane Ida several families from Joya Grande and Santa Maria migrated to urban areas such as Llopango and Apopa, poor slums on the outskirts of San Salvador with marked levels of poverty and "social exclusion" (FLASCO et al. 2010). Housing in the neighbouring village of Shangallo was offered to several families in Joya Grande, though not a single family accepted the offer, as Shangallo is characterized by high rates of crime, gangs, and HIV/AIDS. Salvadorans forced to choose between the threat of natural disaster and daily disasters of crime and extortion seem to be choosing the former; trading a familiar vulnerability for an unfamiliar one is riskier. A little less than half (47%) of households in both communi-

ties expressed a desire to migrate within El Salvador if they had the chance, on the condition that their new home would be in a community free from both disasters and gangs. Considering the cheapest land is exposed to multiple environmental risks or in gang territory, internal migration to safer, more expensive land seems out of reach for the rural poor from Santa Maria or Joya Grande, who have a monthly income of \$100-200. In this local context, neither internal migration nor remittances provide community disaster resilience. Strong community organization and catalyzing social capital seem to provide the quickest road to recovery and the best insurance against disasters for communities in Santiago Texacuangos.

National Reforms to Build Local Resilience

In order to foster resilience at the local level, El Salvador must reform its legal frameworks and disaster risk reduction system at the national level. Important reforms include passing key environmental legislation and reforming the civil protection system to foster local social resilience. Civil society has long called for a Ley de Ordenamiento Territorial, a national environmental zoning law. This law would be the first step in legally regulating housing construction and soil use that could slow deforestation and build ecological resilience to disasters in places like Santiago Texacuangos. There is no legal mechanism to ensure that internal migration or relocated communities rebuild houses in risk free areas based on environmental assessment or risk mapping. The environmental zoning law should include requirements for construction permits as well as environmental, cultural, and social impact assessments. Four of the 18 deaths in Santiago Texacuangos were caused by poor siting of a Catholic retreat centre above four houses, whose retention wall had no water filter system and collapsed, burying four people alive. Legal frameworks with real enforcement could prevent disaster-caused deaths such as these. However, strengthening El Salvador's weak disaster governance system will require more than just adding environmental zoning laws.

Civil protection's 2009-2014 plan is well framed and makes reference to Hyogo principles, but lacks adequate coordination, communication, and funding mechanisms (UNDAC 2010). The meagre \$4 million dedicated to disaster mitigation when matched against the average tempo-

rary shelter costs of \$2,000 per family post-Ida makes clear that investing in prevention could significantly reduce relief costs (IOM, personal interview 2010). However, funds post-Ida have not been spent on reconstruction, let alone invested in reducing vulnerability. As of 13 May 2009, of the \$150 million in Ida reconstruction funds, a mere \$8.5 million (5%) have been spent (Avalos and Mejia 2010). Not only lack of funds, but lack of efficient investment of funds available is a recurrent problem with the Salvadoran Government⁴. Identifying vulnerable communities and investing in social resilience is crucial, and requires coordination at the local level.

Civil protection has failed to achieve local coordination. When the “vulnerable communities” list was released in April 2010, not a single community from Santiago Texacuangos was on the list (Protección Civil 2010). Not only can the government not identify vulnerable communities, but communities cannot identify the government ministry charged with disaster risk reduction. Even after Ida in November, only 40 per cent of households in Joya Grande and Santa Maria could identify that civil protection was related to disaster management. If vulnerable Salvadorans cannot identify the government agency that mitigates disasters and handles emergency response, the system fails to be participatory. Civil protection has a framework that lends itself to being participatory and community-based, because the system’s foundation is local communal commissions, who then coordinate at the municipal, departmental, and finally national levels. Civil protection needs to strengthen communal commissions, fostering exchanges to share good practices in Salvadoran community resilience from places like Santa Maria and the Bajo Lempa. The Bajo Lempa had no fatalities during Hurricane Mitch in 1998 due to advanced community early warning systems, and has experience with community-based disaster management to share that should not be compartmentalized. The civil protection system should capitalize on local knowledge, horizontally strengthening the system by building community to community relationships and ultimately increasing “linking” of social capital.

International Good Practices: Learning from Cuba and TPS

El Salvador, as well as other countries in Central America and the Caribbean, could build resilience from the grassroots by learning from Cuba’s disaster risk reduction and capitalizing on remittances for reconstruction. The most successful country with transferable knowledge on disaster management for Central America is undoubtedly Cuba. Only 16 people were killed in the six hurricanes that hit Cuba between 1996-2002. Cuba has the national framework to reduce social vulnerability and therefore vulnerability to disasters. Legal protections like environmental land zoning are in place, and emergency plans are updated every year after hurricane season, complete with an annual national emergency drill. The government coordinates NGOs in disaster relief efforts such as housing via government departments whose organizational structure reaches down to the neighbourhood level. The popular participation in annual community risk mapping and neighbourhood vulnerability assessments that take place before a disaster results in high levels of preparation, leadership, and community education (see Thompson and Gaviria (2004) for more details on effective community-based disaster management in Cuba). Cuba understands how to build local sociological resilience, and it has effectively reduced the impacts of disasters. El Salvador should examine Cuba’s model to learn how to upscale experiences of sociological resilience such as those found in Santa Maria.

The case studies exemplified that communities like Santa Maria that fare well in emergency response often struggle in long-term reconstruction. One way to increase efficacy of local reconstruction, is to give communities more financial resources via remittances. Although the 2009 recession meant that remittances did not play a role in disaster reconstruction, Ida was a special case in terms of the insignificance of remittances, which played a large role in the reconstruction of El Salvador after the 2001 earthquakes. Protecting migrations abroad after a disaster should be a priority not only because of the human rights perspective, but also because it fosters community resilience at home since remittances can be used for reconstruction. The TPS is a stay of deportation mechanism that grants immigration protection to citizens of countries who cannot

handle the return of their own nationals and request protection after an environmental disaster for up to 18 months with possibilities of extension. The most recent TPS status granted to Salvadorans from the 2001 earthquakes was extended to 9 September 2010, covering 229,000 Salvadoran Nationals in the USA, nine years after the earthquake. TPS was also granted to Nicaraguans and Hondurans in the United States after Hurricane Mitch. The recent examples of TPS for Haiti, a country whose GDP is 25 per cent remittances, could amount to \$360 million to support victims and reconstruct the country according to estimates by Ratha et al. (2010). If TPS is extended, which it probably will be, based on past history, Haiti could receive \$1 billion in remittances over three years, or even more if the Haitian Government would issue what Ratha terms Diaspora bonds to encourage Haitians overseas to invest in \$1,000 bonds to rebuild Haiti, though SEC regulations in the US would have to allow a temporary exemption to allow its marketing. The role remittances can play in disaster recovery could be more effective than international aid from developed countries, and programmes like TPS should be taken seriously as methods of grassroots recovery and of allowing migrants to be legally involved in reconstructing their own families and communities. Community resilience in all phases of the disaster cycle needs to be supported by migration policies in receiving countries in order to facilitate participatory reconstruction.

Conclusion

The increasing likelihood of El Niño years, tropical storms, and hurricanes for vulnerable Central American countries like El Salvador are causes for concern. The low capacity of the state to deal with vulnerable populations before, during, and after times of disaster will make climate change unbelievably challenging for El Salvador. However, climate change adaptation should start with disaster mitigation and prevention, recognizing that community resilience is social, not material. The experience of Santa Maria is not unique, and similar experiences of social resilience have been documented across the globe. Community-based disaster management should be a priority, and must be implemented horizontally via community-community knowledge transfer networks and vertically by forming local civil protection com-

missions as prescribed by law. The most effective way to reduce vulnerability of internal migrants would be to pass the environmental zoning law, so that rural disaster refugees do not mistakenly relocate to another high-risk or urban area. International migrants should be protected by a stay of deportation mechanism such as TPS to aid in participatory reconstruction of their own communities. Building local resilience to disasters is now the surest way to build resilience against climate change for Salvadoran communities.

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¹ The largest river basin in the country, the Lempa, has diminished in capacity from 11,260 m³ to 4,482m³ from 1985-1993 (Trujillo et al 2000).

² "Green" alerts do not mandate any government action or authorize spending, and prohibit the opening of emergency shelters and evacuations, which cannot be legally activated until "orange" alerts or higher.

³ The size sampled in surveys relative to the entire community population is large enough that we can generalize statistics obtained in the sample population to the entire community with 90% confidence.

⁴ Major past disasters such as the January and February 2001 earthquakes caused a staggering amount of economic damage (exceeding 1.5 billion) and claimed over 1000 deaths (EM-DAT 2010). The devastation was surprising given that \$9 billion in aid poured into El Salvador after Hurricane Mitch (1998), which unfortunately was not invested in planning, urbanization, or social infrastructure. Likewise, \$1.4 billion in aid from the 2001 earthquakes was focused on infrastructure, not on reducing social vulnerability (Wisner 2001).

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United States Environmental Migration: Vulnerability, Resilience, and Policy Options for Internally Displaced Persons

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Abstract

This paper explores the complex process of environmental migration in the United States of America (U.S.) focusing on vulnerability to and resilience following this migration. It will be reviewed how internal environmental migration has resulted from many environmental changes and disasters in the U.S., and the potential for increased movement from both gradual-onset and sudden climate impacts will be discussed. Drawing on evidence from previous disasters, it is argued that environmental migration is a social phenomenon in which environmental changes are filtered through social structures to force the most vulnerable populations to permanently migrate and, once displaced, these populations face numerous barriers to becoming resilient. With this understanding of U.S. environmental migration, Domestic disaster, social service, and discrimination policy are analysed to determine how displaced populations' resilience, related to housing, economic resources, health, and discrimination, is addressed. It is concluded that although current policies show potential for increasing the resilience of forced and permanently displaced populations, incorporation of international standards for internally displaced populations is necessary to ensure the broadest protection and assistance and to fully address the social-demographic consequences of environmental change.

Key-words: Resilience, Vulnerability, Disaster, Displacement, Environmental migration, U.S. Policy

Introduction

The potential for large-scale permanent relocation of populations from areas vulnerable to sea-level rise, droughts, floods, and extreme weather events – including relocation of entire island nations – underscores the urgency of studying environmental migration and creating safeguards to protect displaced populations. Within this discussion, the U.S., like other wealthy nations, is viewed as an aid and refuge provider for populations displaced from less wealthy and more

physically vulnerable nations. Because the U.S. will experience fewer climate change impacts and has the financial resources to mitigate or adapt, environmental migration within the U.S. is under-researched and even considered unimportant for “international concern, cooperation, and assistance” (Biermann and Boas 2010: 65).

The ability to mitigate or adapt means that most populations affected by climate impacts in the U.S. will be able to remain in their communities, unlike populations in other parts of the world. Yet, a small but significant number of those affected in the U.S. will be forced to permanently migrate. The U.S. has previously experienced internal environmental migration (e.g. the Dust Bowl and Hurricane Katrina) and potential climate impacts and demographic forces are predicted to increase this migration (Gutmann and Field 2010). Based on literature from past displacements, it is shown how U.S. society shapes social vulnerability to environmental migration, meaning that the most vulnerable are more likely to be represented among those permanently displaced from climate impacts. Also it is shown how social vulnerability then affects the resilience of IDPs, making the most vulnerable the least able to bounce back from the climate impact and the forced migration. Finally, by focusing on who is most vulnerable, four main barriers to IDPs' resilience (housing, economic resources, health, and discrimination) are discussed in the light of current disaster, social service, and discrimination policy. While these current policy arenas have potential, it is concluded that the incorporation of international standards, specifically the United Nations Guiding Principles on Internal Displacement, is necessary to fully support IDPs' resilience.

United States Environmental Migration

Environmental migration means the migration of persons due to sudden or gradual changes in their environment (Biermann and Boas 2010). Within the U.S., four main climate change impacts may induce environmental migration – droughts, sea level rise, floods, and extreme weather events. These are likely to affect three geographic areas – the south-western U.S., flood zones, and areas along the Atlantic and Gulf coasts (Field et al. 2007). This migration is not a deterministic response from climate induced environmental changes, but works indirectly through the loss

of homes, crops, and livelihoods (Perch-Nielsen et al. 2008). In the U.S., gradual-onset environmental changes, such as droughts and sea level rise, will disproportionately impact resource-dependent populations through “environmentally induced economic change” (Gutmann and Field 2010: 14). This terminology emphasizes economic resources as the mechanism compelling migration. The 1930s “Dust Bowl,” a drought throughout the Great Plains (Oklahoma, Texas, Kansas, Colorado), is the most dramatic U.S. example of environmentally induced economic change that generated large-scale migration of farm labourers. In the present situation, farm labourers in the south-west, fishers along the coasts, tourism employees, indigenous populations, and other natural resource extractors and labourers will be compelled to migrate for work if climate impacts affect their economic sectors; whereas wealthier, land-owning, and non-resource-dependent populations will have greater choice in whether they migrate (Field et al. 2007; McLeman and Smit 2006; Molnar 2010). While many communities may be impacted by climate change, only indigenous Alaskan populations have received attention, though policies and resettlement plans have yet to be implemented (Kolmannskog 2009; Raleigh et al. 2008).

Sudden-onset disasters – floods, hurricanes, tropical storms, and waves – also cause displacement in the U.S. through the destruction of homes, property, and employment. Unlike migration due to gradual-onset events, sudden disasters cause “distress migration” in which affected populations temporarily evacuate to escape from immediate harm (Hunter 2005; Raleigh et al. 2008). Hurricane Katrina in 2005 is depicted as an exception to the temporariness of distress migration, with New Orleans recovering to only 80 per cent of its previous size by 2009 (GNOCDC 2010). However, many disasters in the U.S. have induced large-scale and permanent migration. For example, Levine, Esnard, and Sapat (2007) identified five disasters besides Hurricane Katrina that caused large, forced and sometimes permanent migration: Hurricane Andrew (Florida 1992), the Mississippi river floods (Iowa, Illinois, and Missouri 1993), the Loma Prieta and Northridge earthquakes (California 1989 and 1994), and Hurricane Floyd (North Carolina, South Carolina, and Virginia 1999). Rivera and Miller (2007) also noted large, permanent migrations from the 1927

Louisiana flood and the 1948 Portland, Oregon flood, and Gutmann and Field (2010) included the San Francisco earthquake (California 1999). Permanent migration even occurs in small disasters, such as a tornado that caused a two per cent permanent out-migration from a town of 3,000 (Gutmann and Field 2010).

As these examples show, environmental migration does occur in the U.S. Environmental migration, like other disaster impacts, is a social phenomenon – environmental factors create the initial “push” but the underlying causes of migration are “political, economic, social, and demographic processes” that leave certain populations more vulnerable to disaster impacts (Hugo 1996: 118). Social vulnerability to disaster and environmental impacts “results from social inequalities and historic patterns of social relations that manifest as deeply embedded social structural barriers that are resistant to change” (Phillips and Fordham 2010: 4). When disaster impacts are filtered through the U.S. social structure, they create “...multiple and highly unequal processes of resettlement” (Fussell and Elliott 2009: 389). In a seminal study, Morrow-Jones and Morrow-Jones (1991) found that those displaced due to disasters were more likely to be from marginalized and socio-economic vulnerable groups including female-headed households, minority group members, lower income, and less educated strata, than those who moved for other reasons. In the following sections, it is shown how social vulnerability causes certain populations to face forced and permanent migration from climate impacts, and how this vulnerability affects their resilience following migration.

Environmental Migration: A Social Process

On the theoretical “continuum of agency” from voluntary to forced, Hugo (1996) placed environmental migration as a subset of forced migration because changes in the resource base compel people to move, and sudden disasters force immediate distress migration. Others have similarly regarded environmental changes as “push” factors differentiated by the agency of the mover (Bates 2002; Henry et al. 2004; Hunter 2005; O’Lear 1997).

Using a social vulnerability framework moves the discussion beyond simplistic push/pull or

rational choice and human capital migration models to focus on how certain populations are more vulnerable to environmental migration (Fussell and Elliott 2009). Both economic and social characteristics generate social vulnerability. Economic assets (e.g. home ownership, financial assets, insurance) and social status (e.g. political power, marginalization, minority status, education, gender, age) affect vulnerability to forced displacement and permanent environmental migration (Fothergill and Peek 2004; Norris et al. 2002; Phillips et al. 2010).

Social vulnerability influences the likely trajectories of populations through each stage of environmental migration (climate change impacts, agency, and permanency of displacement) and then affects the resilience of populations who have permanently migrated. Figure 1 depicts the

general stages of environmental migration in the U.S. and the likely path of the most vulnerable populations. Socially vulnerable populations are more likely to face environmental migration due to the differential initial risk and because they have fewer resources to help them recover from any losses (see Figure 1: differential impacts). Because they face greater impacts and have fewer resources, vulnerable populations have less choice about whether to move, and are more likely to be forced or compelled to migrate (see Figure 1: continuum of agency). Displacement is more likely to become prolonged and even permanent for vulnerable populations (see: Figure 1 permanency of migration). Finally, once permanently displaced, the most vulnerable face greater obstacles to bouncing back from the climate impacts and the migration (see Figure 1: resilience). Each stage will be discussed in detail below.

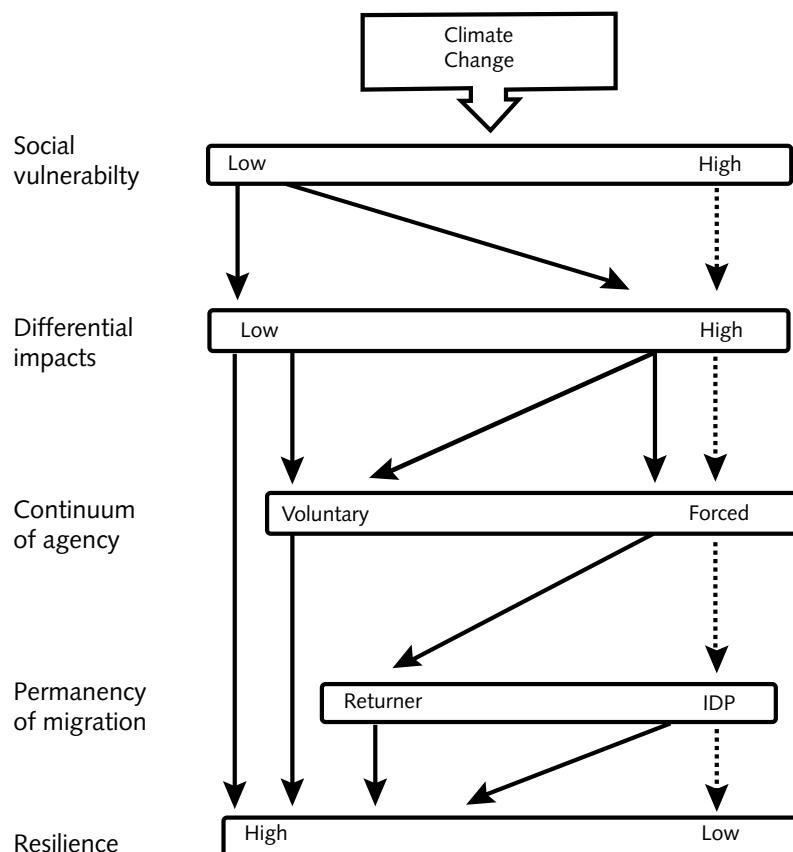


Figure 1: Social vulnerability framework of internal U.S. environmental migration (Source: Author)

Differential impacts and continuum of agency. The initial impact and agency of the mover are intrinsically linked—the greater the initial impact of climate change, the more likely that affected populations will be compelled or forced to migrate. Because socio-economic status affects one's ability to mitigate impacts or to adapt, vulnerable populations are at greater risk from climate change impacts and have less agency or the freedom to choose whether and when to move. Initial risks from climate change impacts include risk of both property and job loss.

Poor and minority populations are often segregated into environmentally risky areas or areas with less disaster mitigation, leaving them at greater risk of initial damage from sudden-onset events (Bullard and Wright 2009; Dyson 2006; Freudenburg et al. 2009). For example, Rivera and Miller (2007) discussed how African Americans are consistently segregated into risky areas, ignored during evacuation, and forced to permanently migrate. Due to years of structural racism, the poorest New Orleans citizens lived in the most flood-prone communities; and without financial resources to help them evacuate, they were stranded for days following Hurricane Katrina before being forcibly relocated to sometimes unfamiliar destinations (Dyson 2006). These individuals were often displaced the farthest from their former homes, making their return difficult (Quigley 2007).

The social dimensions of rural resource-dependent communities – niche economic dependence, underestimation of risk, and belief in technological advancements – limit adaptive capacity and reduce proactive response to risk from gradual-onset events (Molnar 2010). Within these communities, resource-dependent labourers have higher initial risk due to their dependence on ecosystem services, and thus they will have less choice in migration than wealthier, land-owning, and non-resource dependent populations (Field et al. 2007). For example, in the Dust Bowl, landowners could avoid migration because they had assets to last through the drought, or they increased rents from farmers and received federal aid (McLeman and Smit 2006). In contrast, crop failure forced labourers with external social ties to migrate for work and left other labourers destitute (Henry et al. 2004).

Permanency of migration. Social vulnerability affects the length of environmental displacement in three ways. First, initial damage is correlated with return rates, thus differential impacts increase the likelihood of longer-term displacement for vulnerable populations (Finch et al. 2010). Evidence from Hurricanes Andrew and Katrina indicated that the quickest returnees were predominantly white, older, better educated, homeowners, and had sustained less damage to their property (Fussell et al. 2010). Forms of affordable housing, including rental properties and government-subsidized housing, are often severely damaged during disasters, and are not a priority for quick reconstruction. Also, increased rent from lack of supply prevents poorer residents from returning (Crowley 2006). Second, even with equivalent damage, wealthier individuals, especially homeowners with insurance, returned more quickly. Higher socio-economic status provides the financial resources to rebuild and the cultural knowledge to manoeuvre through the complicated U.S. disaster aid process (Finch et al. 2010). Finally, besides damage to homes, lower-income populations are more dependent than others on wage labour, which is lost during disasters. For example, Hurricane Katrina caused half of Mississippi households with annual incomes below \$10,000 to lose employment, compared to 15 per cent of households with incomes above \$20,000 (Abramson et al. 2007). Without housing and employment, vulnerable populations face longer displacements and are more likely to become permanently displaced than other populations.

The likelihood of permanent migration for resource-dependent populations also increases as gradual-onset impacts increase in duration or severity in environmentally-dependent economic sectors. For instance, Raleigh et al. (2008) stated that compared to other disasters, populations threatened with drought indicated the highest probability of permanently migrating. Also, second and third moves of resource-dependent labourers commonly result in transitions to service sector or manufacturing employment, leading to permanent migration (Portes and Rumbaut 1996).

Unfortunately, those most affected by environmental impacts and most likely to be displaced are those who have the least capacity to adapt

or respond to environmental changes (Fothergill and Peek 2004; Hunter 2005). Thus, not only is vulnerability to environmental migration socially structured, so is the resilience of IDPs.

Socially Structured Resilience Following Displacement

Resilience is the long-term ability of individuals or communities to “bounce back” from disaster impacts, and involves social and economic capital, community preparedness, and mitigation and adaptation planning (Manyena 2006; Mayunga 2007). Usually focused on the original location, environmental migration refocuses resilience research across space (Fussell and Elliott 2009).

Environmental migration negatively affects the resilience of all IDPs, whether socially vulnerable or not. IDPs are slower to “bounce back” compared to voluntary movers and those returning to the original community. Since vulnerable groups are more likely to be represented among the small population of permanent environmental migrants in the U.S., the focus is put on socio-economically vulnerable populations. Vulnerability and resilience are also interrelated (vulnerable populations are often least resilient), and previous vulnerabilities become exacerbated by disasters and migration making resilience a slow, difficult process (Weber and Peek 2010). To discuss the resilience of IDPs, in this section four areas for policy attention are highlighted: housing, economic recovery, health, and discrimination.

Housing. Individuals who are forcibly displaced are more likely to lose housing during disaster recovery than those not displaced (Hori and Schafer 2010). Morrow-Jones and Morrow-Jones (1991) noted that the number of homeowners declined sharply and significantly from 43 to 31 per cent after distress migration, and the population in public housing more than doubled. Homeownership is central to Americans’ economic security, and homes represent a disproportionate amount of minority households’ wealth compared to whites (Finch et al. 2010; Li et al. 2010). Renters and low-income individuals (neither renters nor homeowners) also lose housing, but have fewer options for aid from federal disaster housing programs (Hori and Schafer 2010).

IDPs are also more likely than other movers to relocate numerous times. Morrow-Jones and

Morrow-Jones (1991) found that 60 per cent of disaster displaced persons changed residences within three years. In Weber and Peek (2010), those displaced from Hurricane Katrina moved anywhere from two to more than 12 times. In particular, Li et al. (2010) found that African American females experienced the highest number of moves after Katrina. These “serial relocations” require continued adjustment and prolong recovery (Picou and Marshall 2007).

Economic recovery. IDPs also face economic barriers to recovery. After Hurricane Katrina, IDPs had lower odds of employment recovery (African Americans had the lowest odds) and larger declines in income (Hori et al. 2009). Also, households on public assistance face barriers to receiving their pre-disaster benefits. For example, Lein et al. (2010) discussed how displaced families waited months for smaller benefit allotments.

The social networks of the poor are crucial during normal times for financial assistance, childcare, food, and shelter. Poor populations are less likely than non-poor populations to move from their original communities, so when a large disaster displaces entire communities, families and social networks are severely disrupted (Li et al. 2010). Without social network resources in a new community, resilience is limited.

Finally, because of the extreme impact of Katrina, many individuals evacuated without personal documentation such as birth certificates, social security cards, licenses, vehicle registrations, and educational, medical, and other identifying documents. These losses made job hunting, driving legally, and enrolling children in school difficult (Peek 2010). Research shows that regular school attendance is crucial to children’s disaster recovery, but displaced children miss more school and make numerous school changes compared to children who are not displaced (LaRock 2005; Peek and Fothergill 2008; Phillips et al. 2010).

Health. “It is the reluctance to uproot oneself, and the absence of positive original motivations to settle elsewhere, which characterizes all refugee decisions and distinguishes the refugee from the voluntary migrants” (Kunz 1973: 130). Forced migration increases mental and physical trauma – higher levels of stress result from the loss of homes, family, friends, and employment (Morrow-Jones and Morrow-Jones 1991). After

Hurricane Katrina, forced evacuation caused separation of families, relocation to unfamiliar cities, and loss of recovery information – all amplifying the emotional and physical toll of the migration. Compounding these effects, displaced individuals are more likely to lack health insurance (Morrow-Jones and Morrow-Jones 1991). More frequent migrations and poor subjective perception of new communities further reduce IDPs' health outcomes (Yabiku et al. 2009).

Discrimination. Large-scale migrations transport place-specific disasters to other communities. As discussed above, minority communities are often disproportionately represented among the displaced and can face racial and ethnic discrimination in the receiving community, either immediately or within a short time period. For example, many communities receiving evacuees from Hurricane Katrina differed culturally, racially, and economically from the Gulf Coast; and discrimination occurred immediately in housing placements, assistance programs, and from private citizens offering assistance (Crowley 2006; Fussell et al. 2010). In Weber and Peek (2010), many displaced persons reported suffering racial slurs, employment discrimination, and refusal of leasing agents to accept government housing vouchers. Trauma from the disaster and unknown surroundings amplify the effect of discrimination on this population. Also, undocumented immigrants were eligible for disaster assistance, but did not have deportation immunity. Thus, many immigrants did not seek governmental assistance (Wing 2006).

Disaster response is usually temporary, so discrimination against those displaced has been shown to grow with time. Peek (2010) described “Katrina fatigue” in which the compassion of destination communities for evacuees faded within months. With evacuees not leaving and not becoming self-sufficient quickly, anger and discrimination increased. IDPs were no longer seen as victims, but as competitors for jobs, social services, and other amenities while facing accusations of changing the racial and cultural composition of the community. Even short-term migration increases the demand for services, infrastructure, and resources, leading to resentment and hostility (Moore and Smith 1995; O’Lear 1997).

Populations displaced from gradual-onset disasters are compelled to move due to a loss of

ecosystem services or agricultural opportunities. For this reason, their movement and their experiences following migration will probably mirror the experiences of labour migrants. However, little research has addressed the resilience of labour migrants within the U.S., focusing instead largely on international migration. Within this literature, discrimination is a known outcome of labour migration and probably after environmental migration because these populations are funnelled into economically and ethnically segregated communities – slowing the recovery of economically induced migrants (Foulkes and Newbold 2000; Portes and Rumbaut 1996).

While the country as a whole has the resources to mitigate climate impacts and thus reduce potential environmental migration, policy response to environmental damage and disasters is often reactive (Birkland 2006), making this mitigation unlikely – especially considering that the burden of climate change falls unequally on socially vulnerable populations (Paavola and Adger 2002). Thus, with these housing, financial, health, and discrimination issues in mind and an understanding of who are the most vulnerable populations, we now turn to potential policy arenas that could address the most urgent concerns for these populations after they are displaced.

Policy Considerations for Environmental Migration

Climate change has increased attention on internal, permanent migration across the world. Yet in the U.S., internal migration is seen as a rational choice process related to economic and demographic changes (Hall 2009). There are no internal migration policies addressing the vulnerability of IDPs or their resilience. Evaluating other potential policy arenas, I argue that 1) current disaster, social service, and discrimination policy show potential for addressing the resilience of IDPs, but 2) incorporation of international displacement standards is necessary to ensure the broadest protection and assistance.

Disaster Policy

The guiding laws relevant to disaster recovery are the Robert T. Stafford Disaster and Relief Act of 1988 and its amendments and the Post-Katrina Emergency Management Reform Acts of 2006. The Stafford Act’s purpose is to provide “orderly

and continuing federal assistance to state and local government in carrying out their responsibilities to alleviate the suffering and damage caused by disasters" (Godschalk et al. 1999: 11). Under the Stafford Act, the United States Federal Emergency Management Agency (FEMA) supports state and local governments in the event that a disaster overwhelms their capacity. Once the President declares a federal disaster, housing, economic, and health assistance is offered to local governments and affected populations.

The Post-Katrina Reform Acts extended FEMA's authority to provide housing assistance beyond three months and outside the vicinity of the disaster area (Bea 2006). Though still focused on short-term, in-situ recovery, these changes expanded the federal government's assistance in disasters and potentially environmental migration by creating a case management function within FEMA, the National Disaster Housing Strategy, and the National Disaster Recovery Framework (NDRF).

Case management. Populations displaced from federally-declared disasters receive up to 18 months of housing assistance or \$26,200 (adjusted yearly for inflation), whichever limit they reach first. These populations are also offered 26 weeks of disaster unemployment insurance and financial support for healthcare and other expenses under the Other Needs Assistance Program. This assistance is not streamlined, so case management helps populations manoeuvre through the complicated assistance structure. Disaster case management "address[es] long-term recovery needs, such as health care, employment, housing, and other social services... may directly provide assistance, make referrals to organizations that have agreed to meet specific client needs, contract with other organizations, or otherwise arrange for individuals and families to receive needed services and resources." (GAO 2009a: 4)

While some Hurricane Katrina victims are still receiving case management, the Program faced discontinuous funding streams, lacked clear assignments, had high case-worker turnover, and did not reach the most vulnerable populations (GAO 2009a).

National Disaster Housing Strategy. Drafted in 2008, the National Disaster Housing Strategy aimed to streamline collaboration with the

United States Department of Housing and Urban Development (HUD) and address low-income and special needs populations (those with disabilities, children, and the elderly). One of the strategy's key goals is "to move disaster victims into permanent housing as quickly as possible" (FEMA 2008: 58). The strategy calls for a "Housing Taskforce" to define the specific programme policies.

The U.S. Government Accountability Office (GAO) strongly criticized the strategy for not describing the role of HUD or addressing vulnerable populations—its two main purposes (2009b). While affordable housing was mentioned, the proposed solution involved tax credits for developers to rebuild. HUD subsidies for low-income populations were briefly mentioned as transferable to other locations, but extra assistance for low-income homeowners depends upon appropriations passed by Congress following specific disasters (FEMA 2008: 65-68). The strategy also failed to provide streamlined assistance processes, transportation funding, or discussion of the costs, staffing, or training necessary to assist in permanent housing transitions.

National Disaster Recovery Framework. Drafted in 2009, the NDRF was up for public comment at the time of this writing. It is meant to be "a scalable system that coordinates and manages disaster recovery operations to more effectively deliver recovery assistance to severely impaired communities" (FEMA 2010b: 7). The NDRF uses a resiliency approach focused on rebuilding to reduce future disaster vulnerability. The NDRF identifies the socio-economically disadvantaged, minorities, educationally disenfranchised, women and children, individuals with disabilities, and the elderly as vulnerable or under-served groups that deserve special attention. The NDRF advances disaster policy by emphasizing participation and coordination among local, state, and federal government, NGOs, and individuals, especially vulnerable populations. It shows potential to increase resilience during environmental migration by calling for federal and state recovery coordinators and recovery support functions to provide a "one-stop shop" for assistance.

In their review of the NDRF, the Brookings Institution (2010) noted the insufficient discussion of forced relocation (referencing indigenous Alaskan populations) and vulnerable populations

that are unable to evacuate or relocate on their own. They called for incorporation of the United Nations Guiding Principles on Internal Displacement (1998).

Limitations. The case management function, the National Disaster Housing Strategy and the NDRF have little to no discussion of environmental migration. Given increased climate change impacts and the socio-economic dynamics of environment migration, rebuilding in place is not feasible for everyone. Without specific attention to environmental migration, two key omissions exist in disaster policy: small disasters and gradual-onset events.

A central assumption of federal policy is that local governments have the primary responsibility for preparing for, responding to, and recovering from disasters. The President declares a federal disaster and offers federal assistance only when local and state capacity has been overwhelmed. While over 30 disasters each year are federally declared, most small and many gradual-onset disasters are not (FEMA 2010a). As discussed above, displacement occurs as a result of both large and small disasters. Lack of response capacity at the local level leaves populations displaced from non-federally declared disasters and without assistance. Also since 1953, less than three per cent of federally-declared disasters were drought-related, and there is no standard for sea-level rise to prompt a federal declaration without storm or wave impacts (FEMA 2010a). Thus, economically-driven migration from gradual-onset events is not covered by disaster policy. While FEMA is working to improve housing, economic, and health assistance to disaster victims, environmental migration exposes the limitations of current disaster policy.

Social Service Policy

The need for social service programmes that provide housing, food, medical care, transportation, and financial assistance to low-income populations increases during disasters. Populations not originally eligible for government assistance often meet eligibility standards following a disaster (Tobin-Gurley et al. 2010). For further details on non-disaster social service programmes see GAO (2010) and Winston et al. (2006).

Housing. Housing programmes are central to disaster assistance, and the U.S. has given HUD more disaster housing responsibility. This department controls housing vouchers in non-disaster situations, and these vouchers are transferable to different locations. These housing programmes require individuals to find their own housing, which is difficult for those displaced to new communities or without transportation (Paradee 2010). Moreover, the amount of available public housing and affordable rental options vary greatly across the U.S., and HUD and FEMA have limited funding or authority to rebuild damaged public housing units (GAO 2009b).

Economic, transportation, and health. Economic assistance to low-income populations during non-disaster circumstances includes: unemployment insurance, job placement and assistance, food vouchers, breakfast and lunch programmes at schools, early childhood education programmes, and bus transit programmes (GAO 2009a; Winston et al. 2006). Following Hurricane Katrina, some social service programmes, such as Temporary Assistance for Needy Families, Medicaid, the Department of Labor, and the food voucher programme, were awarded additional funding and reduced their eligibility requirements to assist IDPs. Unfortunately, these disaster-specific programmes lasted less than six months, ending before displaced populations had fully resettled (GAO 2009a). With Katrina displacement seen as an exceptional event, HUD is still the only department that officially collaborates with FEMA, and there is no plan for permanent disaster collaboration with other assistance programmes.

Limitations. As many disaster and poverty researchers note, U.S. social service provisions are being steadily rescinded (Lein et al. 2009). However, the need for these programmes is increasing. For example, the poverty rate increased from 11 to over 13 per cent between 2000 and 2008, with poverty rates among African Americans, Hispanics, and Native Americans double that; and since 2000, the number of individuals receiving food vouchers has increased from 17 million to 33 million (GAO 2010).

In normal circumstances, social service programmes have limited eligibility, strict constraints on earnings, require state contributions, allow states to set eligibility standards, and have limited provisions for sudden changes in need that

may leave many eligible populations unaided. Disasters highlight additional limitations including: cross-jurisdictional complexity, short-term focus, financial constraints, and unclear division of local-state-federal responsibilities (Winston et al. 2006). If federal agencies do not appropriate funding or relax eligibility requirements following a disaster, states, and localities cannot provide extra services; thus, IDPs from less catastrophic events will receive limited assistance.

Since disaster assistance is considered a short-term process, when FEMA programmes end, eligible populations should transfer to these social service programmes. However, IDPs restarting or beginning benefits in a new location can wait months for food vouchers and housing assistance (Lein et al. 2010). The GAO found that the most needy populations after Hurricane Katrina (the elderly, those with disabilities, and the unemployed) were the hardest to assist (2009a). As the GAO states, “a disaster can exacerbate the long-standing challenges at-risk populations have in accessing needed assistance from multiple programs” (GAO 2008: 42).

These social service issues highlight the breach between disaster assistance and long-term recovery and poverty alleviation efforts. To assist IDPs, benefits need to be easily transferable, and must have extended time limits and relaxed eligibility requirements. As Winston et al. (2006) argued, all programmes that address housing, economic, educational, and medical needs should include emergency response protocols that specify funding mechanisms, how assistance is triggered, and length of assistance.

Discrimination Policy

Policies enforcing civil and human rights relevant to IDPs' resilience are the Civil Rights Act of 1964 and the Fair Housing Act of 1968. Titles VI and VII of the Civil Rights Act prohibit intentional discrimination in federally-funded programmes and in employment (Feder 2008). The Fair Housing Act “prohibits discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, colour, national origin, religion, sex, familial status, and handicap” (HUD 2010). These policies do not address unintentional discrimination nor do they specifically apply to private acts of discrimination.

These policies also cannot address community actions that prevent the rebuilding of affordable and public housing or other unintentional discrimination after a disaster (GAO 2009b). Also, some accuse the Fair Housing Act of benefiting only middle class blacks, which is why it has been unable to end segregation and housing discrimination (Sidney 2001).

Beyond these policies, there have been recent calls for redevelopment of the U.S. Commission on Civil Rights into the Commission on Civil and Human Rights. Supported by numerous advocacy agencies, the commission would focus on incorporating international standards on human rights into domestic policy and is in response to recent disasters (Marcus 2010). While only a proposal, this commission could increase attention to IDPs.

Limitations. A complaint or lawsuit is required before discrimination violations can be dealt with, which is the biggest limitation of these policies. When trying to obtain immediate housing, employment, and education, displaced individuals have little time, energy, or money to begin a complaint or lawsuit. Following Katrina, fair housing complaints were filed by NGOs after tests revealed discrimination and HUD initiated complaints for the worst offenders. These complaints only addressed a small proportion of the estimated discrimination violations. The institutional racism and racial mistrust witnessed during disasters and migration cannot be addressed through individual discrimination complaints nor through “colour-blind” programmes that ignore the legacy of racism and discrimination (Henkel et al. 2006).

While disaster, social service, and discrimination policy can work together to assist IDPs, there are still gaps, especially for migration from small and gradual-onset disasters. Also, the rescinding of U.S. social service provisions and discrimination enforcement means IDPs will continue to face difficulty in transferring current benefits, receiving new benefits, and receiving fair treatment in their new location. As shown, environmental migration compounds the hardships of these disadvantaged populations: “[After Katrina] some residents who were just ‘getting by’ in New Orleans, and others who were already impoverished were thrown into deeper poverty during prolonged displacement—a problem that could not be adequately addressed by either disaster assist-

ance programs or local social assistance programs alone." (Fussell and Elliott 2009: 386).

These issues are why incorporation of international displacement standards is important for the U.S.

Conclusion: Incorporating International Standards

"Until the U.S. Government recognizes its responsibility to use all resources at its disposal in responding to domestic disasters – including internationally developed standards in humanitarian response – the U.S. will continue to fail in its obligation to provide protection to its citizenry." (Lauten and Lietz 2008: 160)

The United Nations has argued for rights-based approaches to IDPs, but these provisions are not fully integrated into U.S. domestic policy. Since the federal government sets guidelines and goals, federal policy on environmental migration is important to compel state and local attention to the issue. This paper concludes with a discussion of international standards that could support domestic policy, including the Guiding Principles on Internal Displacement (1998), race and civil

rights agreements, and an international resolution on climate change and human rights.

The *Guiding Principles on Internal Displacement* identify the "rights and guarantees relevant to the protection of persons from forced displacement and to their protection and assistance during displacement as well as during return or resettlement and reintegration" (Kalin 2008: 1). Since refugee law is not applicable to IDPs, nations are responsible for "respecting, protecting, and fulfilling [IDPs'] civil and political as well as their economic, social, and cultural rights" (Kalin 2008: 19). The United Nations General Assembly argues that nations should: "Develop and implement domestic legislation and policies dealing with all stages of displacement, including through the identification of a national focal point within the government for issues of internal displacement, and through the allocation of budget resources" (Kalin 2008: 20).

Table 1 shows how U.S. policy could benefit from incorporating these standards, especially those related to discrimination and economic assistance (Kalin et al. 2010):

Guiding Principle	Key points	Applicability to U.S. IDPs
1 and 4	Anti-discrimination	Supports discrimination coverage for IDPs under current laws.
4	Vulnerable populations	Supports special attention to socio-economically vulnerable populations.
9	Displacement of indigenous populations and those "specially" dependent on their land	Supports special assistance to resource-dependent and indigenous populations.
19	Medical assistance	Supports healthcare coverage based on the human right to the highest attainable level of physical and mental health.
20	Identifying documents	Supports quick re-issuance of personal documents speeding social service benefit provision, job placement, and school enrolment.
23	Education	Supports returning children to school immediately and reincorporating them into regular educational programmes.
28	Right to return or resettle and prohibition of forcible return	Supports government efforts to create "the conditions that allow displaced persons to rebuild their lives" in their original community, their current place, or a new area. (Kalin 2008: 128). Prevents forcible return (as witnessed after Katrina).

Table 1: Applicable components of the Guiding Principles on Internal Displacement for United States Policy (Source: Author)

The applicability of these principles depends upon defining migration as “forced”. The principles do not apply to persons moving solely for economic reasons (Kalin 2008). However, by using a social vulnerability perspective, we see that vulnerable populations are forced to migrate and could be better protected through the use of these principles. In support, the United Nations recently clarified that all forms of climate change displacement, including those from gradual-onset changes, are covered by the Guiding Principles (Kolmannskog 2009).

The *Guiding Principles* are not binding agreements, but the U.S. is obligated to the International Convention on the Elimination of Race Discrimination and the International Convention on Civil and Political Rights—both of which could bring attention to IDPs. After Hurricane Katrina, United Nations representatives called the conditions “shocking and gross violations of human rights” (Wing 2006: 42), but others have disagreed, stating that the U.S. did provide necessary protection (Okeke and Nafziger 2006). Thus, defining human rights violations in the U.S. makes application of these agreements difficult.

Protection of IDPs is also supported from a climate change standpoint. The United Nations recently stated that climate change “poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights” (Limon 2009: 443). A human rights frame should be “a forward-looking means of encouraging the evolution of, and providing a qualitative contribution to, robust, effective, and sustainable policy responses at both the national and international level, across mitigation and adaptation” (2009: 458). However, as with other international climate change policies, the U.S. is non-committal. To avoid facing charges of human rights violations due to greenhouse gas emissions, the U.S. argues that the complexity of climate change, the long-term cause and effect mechanisms, and the global scaling of contribution make human rights arguments void. Thus, a climate change frame of environmental migration in the U.S. is not politically viable.

International standards such as the *Guiding Principles* provide great resources for new policy or extension of current disaster, social service, and discrimination policy (Kalin et al. 2010).

Recognizing IDPs as victims of natural disasters rather than victims of climate change is not only more politically acceptable but also bypasses a need to define which climate changes should initiate federal assistance. Recognition of the issue does not require legal status for migrants to encourage streamlined assistance mechanisms and incorporation of the *Guiding Principles* in FEMA’s new case management and recovery coordinator efforts.

Recognition that environmental migration disproportionately affects the most vulnerable populations is crucial to developing policy that addresses the resilience of IDPs; and the participation of these populations in policy and programme development is necessary. This participation is already supported in the NDRF, and increased participation will draw attention to discrimination and eliminate the need for a disaster-specific “Citizens’ Bill of Rights” as implemented following Hurricane Katrina (Sanyika 2009). The complexity of environmental migration in the U.S. should not forestall policy action; on the other hand modelling and understanding complexity could generate more successful policy options (Hayden 2006). Thus, whether new policy is developed or current policies are adapted, the U.S. must acknowledge that environmental migration is not an unfortunate and unlikely event resulting only from extremely catastrophic disasters, but a normal part of life in the U.S. and should thus begin incorporating good practices (Bullock et al. 2009; Lauten and Lietz 2008). Focusing on IDPs will move the disaster resilience discussion from immediate humanitarian assistance and rebuilding in place towards protecting human rights and encouraging environmental justice (Meertens 2010).

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Section One

Improving National Governance and Regional Cooperation in Managing Displacement and Migration: Selected Case Studies

Slow-Onset Disasters

Food Insecurity and Environmental Migration in Drought-Prone Areas of Ethiopia

Aschale Dagnachew Siyoum

Abstract

The study examines the extent and nature of environmentally induced migration undertaken by people in the face of environmental degradation and food insecurity in a drought-prone region of Ethiopia. It also describes the protection mechanism currently provided to people affected by environmental degradation. In-depth household interviews and household surveys are the major sources of data. The study indicates that environmentally-induced migration in the area took place in two forms: either as spontaneous migration or as assisted migration. The study argues that though migration in the area is closely linked with drought and environmental degradation, there is no single factor responsible for rural outmigration in the study area. The study also reveals that there are no effective social protection policies directed towards the protection of environmentally induced displaced persons in Ethiopia. The study, therefore, calls for better understanding of the complex nature of rural outmigration and the formulation of appropriate social protection policies to address vulnerabilities associated with environmental degradation.

Key-words: Environmental degradation, Food insecurity, Environmental migration, Internal displacement, Social protection

Introduction: Environmental Change and Migration

Globally speaking, migration today has risen to an unprecedented level. According to the 2008 IOM report, about 192 million people lived outside their place of origin (IOM 2008). Over time, people have chosen the option of migration as a means of coping with the effect of environmental changes, both those of a sudden and disastrous nature and those caused by slow onset environmental deterioration. However, the root causes of migration are multiple, with a complex web of factors driving migration. The literature on forced displacement and the migration of people emphasizes the impact of natural and environmentally-related disasters as a direct cause of migration. However, a common and generally agreed upon

definition of environmental migrants is missing because of a lack of consensus among researchers and academics (Oucho 2009).

Debates about the interconnections between environmental change and forced population displacements are not new. While it is likely that human settlements have always been faced with environmental change, the extent to which this changes induced migration is still largely unknown. Moreover, the multi causality of factors that prompt migration makes it difficult to establish a precise causal relationship between environmental change and migration (Hietanen 2009). However, it is increasingly recognized that environmental change plays an important role in people's decisions to migrate. Environmental disruptions are generally recognized as an increasing important factor of migration in a sense that people who can no longer gain a secure livelihood in their homelands opt for migration, having no other alternative. In a 1985 UNEP report, El Hinnawi referred to these people as "environmental refugees", which he defined as; "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" (El Hinnawi 1985: 4). However, this concept of environmental refugees became a centre of controversy as the term "refugee" is purely restricted by the United Nations Convention of 1951 and the Organization of African Union (OAU) Convention of 1969 (Adepoju 2009).

In 2007, IOM produced a definition of environmental migrants as: "persons or group of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect 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" (IOM 2007: 1).

Though there are different definitions of the concept of environmentally induced migration, it is not sufficient to consider the migration-environment relationship just in terms of migration as a response to a particular environmental event. Given the increasing trend of environmental degradation, it is suggested that the number of

environmentally induced migrants will increase. According to Myers (1996), the number of environmental migrants totalled at least 25 million people in 1995. He further predicted that this number could well double by 2010 and could reach as high as 200 million by 2050 (Morrissey 2009).

In Africa, multiple push factors incite migration both within the continent and to other regions. Throughout its history, Africa has experienced important migratory movements, both voluntary and forced. Migration in Africa also represents an important livelihood and coping strategy to ecological and economic downturns (African Union 2006). Over the last couple of decades, deteriorating political, socio-economic, and environmental conditions, as well as armed conflicts, poverty and environmental degradation have resulted in a significant increase in mass migration and forced displacement in Africa (African Union 2006). In Africa, migration is also a way of life and an important demographic response to conditions of poverty and environmental stress, and Ethiopia is no exception in this regard. In Ethiopia over the centuries various forms of population movement have been recorded in response to drought and famine, political turmoil, economic crisis and security. The country has experienced severe droughts and famine beginning from the 19th century resulting from a combination of natural climatic variations and human-induced atmospheric changes. Although a number of factors are responsible for rural outmigration in the country, the role played by environmental changes is more pronounced. Generally, in Ethiopia, lack of access to sufficient farmland and severe environmental degradation are the major factors which force people to abandon their homes and migrate (Mberu 2006).

This paper therefore examines the extent and nature of environmentally induced migration as undertaken by people in response to environmental degradation, and its negative impact on food security. The paper will be based on ethnographic fieldwork conducted as part of the author's PhD research in a drought-prone region of Ethiopia. The paper also describes and analyses the protection mechanism currently provided to people affected by environmental degradation. Environmentally induced migration in the study area took place in two forms: either as sponta-

neous migration or as assisted migration. The study argued that, though migration is strongly linked with drought and environmental degradation, there is no single factor responsible for rural outmigration in the study area. Research findings also indicate that provision of social protection for environmentally affected people is very limited and has not addressed their needs in dealing with the negative impact of environmental degradation on their livelihoods. This paper therefore calls for the formulation and implementation of appropriate social protection strategies and an operational response that will lead to essential livelihood improvements and address vulnerabilities associated with environmental degradation. Moreover, strengthening regional instruments such as the African Union Kampala Convention should be emphasized as it provides new mechanisms, if implemented effectively by Member States, to enhance protection and assistance for those affected.

The Ethiopian Context

With more than 73 million people in 2007 (CSA 2007), Ethiopia is the second largest country in sub-Saharan Africa. About 84 per cent of the population live in rural areas and their livelihood depends on subsistence mixed farming. Low socio-economic status, erratic weather conditions, massive land degradation, and lack of basic infrastructure for intensive land use have undermined agricultural growth and reduced the labour absorption potential of the agricultural sector. The country is characterized by extreme poverty, a high population growth rate, severe environmental degradation, as well as frequent drought (Degefa 2005; Ezra 1997; Getachew 1995; Workneh 2008). Especially in the highlands, long and sustained human settlement and the absence of modern technology or a resource management system, have led to an acute depletion of natural resources. This has resulted in the very poor performance of agriculture for several decades, which has led to the inability of the country to adequately feed its population from domestic production. This has been evidenced by the prevailing food insecurity, both chronic and transitory, which has become the way of life for a significant proportion of the population of the country (Degefa 2002; Rahmato 2007). Food insecurity in Ethiopia is a long-term phenomenon

caused by a combination of both natural and man-made factors, such as lack of alternative income sources outside agriculture, unreliable rainfall pattern, land degradation, poor infrastructure, lack of modern agricultural inputs, and limited credit facilities in rural areas (Macrae and Zwi 1994; Wisner et al. 2004).

In such a disabling environment poor people are forced to use various means to survive. This includes agricultural production, temporary employment, home industries, reliance on remittances and help from kin and neighbours. Migration is another mechanism employed by poor households in coping with declining food availability. A significant proportion of rural households live in uncertain and fragile environments that no longer offer opportunities to secure a sustainable life because of their limited agricultural potential and serious environmental degradation. Often such households have no alternative other than to migrate in search of better living conditions. The current study area (Ebinat District in the Amhara National Regional State in northern Ethiopia) is also one of the areas most severely affected by recurrent drought and environmental degradation, particularly since the mid 1980s.

Ebinat is one of the chronically food-insecure districts of the Amhara region, with a total population of about 221,000 and a total area of 2494.27 km². People in the district depend primarily on agriculture, with 96 per cent of the population being involved in mixed farming. The information obtained from the district agricultural office indicates that livelihoods in the area are predominantly dependent on rain-fed agriculture. However, rainfall patterns are erratic and uneven and are characterized by late onset and early withdrawal. Average land size is very small, about 0.5 hectares per household. This is too small to support an average family size of 5.5 people per household. The average production of cereals, the major agricultural output, is very low. Average duration of food sufficiency in a year is 3-6 months. Households are thus highly vulnerable to chronic food insecurity and a high percentage of households participate in the Productive Safety Net Programme which provides food/cash transfers for up to six months a year based on participation in public work schemes. The vulnerability of the district is increased by environmental degradation, frequent drought, poor soil

fertility, fragmentation of land, and a high population pressure. Migration is thus an important livelihood option, as there are limited possibilities of securing a decent life in their home area. Most of these migrants do not cross an international border and are therefore classified as IDPs.

Data Source and Methods

The primary data for the research was collected from household surveys and in-depth household interviews conducted for over a period of 18 months between December 2008 and May 2010. Most of it took place in the form of ethnographic fieldwork as part of the author's PhD research. One of the main objectives of the survey and in-depth household interview was to explore the response of peasant households in the face of environmental degradation and food insecurity. The research also looked into how households integrate programmatic interventions, particularly the Productive Safety Net Programme, into their livelihoods and how these affected their food security status and rate of outmigration. The household survey covered 163 households living in two selected villages of two Peasant Associations (PAs). PAs are the smallest administrative structure in rural Ethiopia. Household heads were interviewed as part of the research and in his or her absence another adult household member was interviewed and asked a wide range of questions regarding the nature of the household's responses to increasing environmental degradation and food insecurity. In addition to the primary data collected in the field, secondary information was collected to look at the nature of displacement and to explore the protection mechanisms currently provided to affected households.

Study Findings

In Ethiopia there are three categories of internal displacements, namely: conflict-induced, development-induced, and environmentally induced displacements (Dessalegn 2004). Conflict-induced displacement is the most prominent of these, as it has resulted in the displacement of a large number of people within a short period of time. It is also the area with the greatest concentration of humanitarian assistance. Development-induced displacements are rare; the most common form of development-induced displacement

in Ethiopia is due to road and dam construction. Whereas environmentally induced displacement is mainly attributed to drought, and in most cases characterized as stress migration or temporary displacement, drought and famine-induced migrations are chronic problems in Ethiopia (Dessalegn 2004). The following section discusses the nature of environmentally-induced migration as related to drought and environmental degradation in Ebinat district: an ecologically degraded, drought-prone area.

Environmentally Induced Migration

Looking at statistics on disasters in Ethiopia, drought and famine account for the majority of the incidents. According to the information obtained from the study area, environmentally induced migration took place in two forms.

1. Spontaneous Migration

One of the major forms of environmentally induced migration in the area occurs in the form of spontaneous migration, which in most cases is temporary. In times of stress, people affected by drought and environmental degradation tend to migrate to places that offer employment opportunities, or to places where they have relatives. Much of this trend can be generalized as a movement from the northern highlands to the lowlands, which offer more diverse livelihoods. As the level of stress increases, people migrate farther to the surplus-growing areas of western and southern Ethiopia. However, in some cases, during times of extreme deprivation, people also tend to migrate to neighbouring countries to seek assistance there (Dessalegn 2004; Hammond 2000).

The household survey result showed that out of the interviewed 163 households, 88 households (53.98%) reported that at least one of their household members had migrated. Of the total 789 persons from 163 households, 26.1 per cent of them (206) were reported as migrants. Household heads were asked about the destination of the migrants. The response showed that about 81 per cent of the migrations (167) were rural to rural migration, 11.2 per cent (23) were rural to urban migration, and for the other 7.8 per cent of the migrants, the household head did not know where the member had migrated. It is

also reported that most of the migration involved tended to be temporary in nature and thus most of those involved returned to their community at the end of the employment season.

As part of the survey, household heads were also asked to provide reasons why members of their households engaged in migration. The survey result showed 58.7 per cent of the migrations were linked with the inability to produce enough food due to land degradation and drought. As the communities suffer regular droughts and have experienced the negative consequences of severe environmental degradation for decades, many people resort to migration because they have no alternative. Recurrent drought, coupled with poor land management practices, has contributed to soil erosion and reduced household income and thus many rural families are forced to migrate in order to cope with diminished incomes. Migration as a response to drought and environmental degradation is also documented by Bilsborrow (1992) who argued that as drought and desertification threaten rural household income sources and food security, many rural agricultural families are forced to engage in migration. Morrissey (2008), in his work looking at environmental stress and short distance urban migration in highland Ethiopia, also found a similar result. Migration in response to drought was also reported by Ezra and Kiros (2001) who examined outmigration rates in the drought-prone regions of Ethiopia for the ten-year period between 1984 and 1994.

Migration due to land shortage is another major reason which accounts for about 17 per cent of the outmigrants. Other reasons mentioned are looking for work (which accounts for about 11.7% of the migration), joining relatives (4.8%), migration due to marriage, to attend school and to join the army (all together accounts about 4.4%). For 3.4 per cent of the migrants, reasons for migration were unknown, at least for the heads of the households.

2. Assisted Migration

The second form of environmentally induced displacement in the study area is assisted migration, which takes place in the form of resettlement programmes. State-sponsored resettlement schemes have grown in importance in Ethiopia in

the past forty years. Ethiopia has had resettlement experience of over four decades. The history of encouraging voluntary resettlement dates back to 1958, when the government established the first known planned resettlement in Sidamo. Shortly after the 1974 revolution, the policy of the Derg Government was to accelerate resettlement. In 1975/76 there were 88 settlement centres accommodating 38,818 household heads. By 1982 there were 112 planned settlements populated by more than 120,000 people, mainly in the south and south-western parts of the country. By 1986 the government had resettled more than 600,000 people. At that time state-sponsored resettlement was largely undertaken to provide additional resources for the hard pressed northern peasantry by relocating them to the southern regions. The government believed that resettlement would provide a "lasting solution" for the "hard-pressed" peasantry, and particularly for the population living in the drought-prone areas (Pankhurst 1992; Rahmato 2003; Yenesew and Gelaw 2008).

Following the ousting of the Derg regime in 1991, the Ethiopian People Revolutionary Democratic Front (EPRDF) took power. With the exception of a few isolated attempts to relocate people, it seemed that planned resettlement was suspended for some years. However, later on, the EPRDF Government demonstrated interest in launching planned resettlement schemes, primarily to tackle the problem of chronic food insecurity in particular parts of the country. It was believed that the voluntary resettlement of vulnerable individuals and households would be instrumental in ensuring food security, while at the same time easing overwhelming pressure on the fragile resource base in the highlands (GFDRE 2001). According to the government's food security policy, the objective of ensuring household food security could be achieved through the implementation of three interlinked components: the Productive Safety Net Programme (PSNP), Other Food Security Programmes (OFSP) and the Voluntary Resettlement Programme (NCFSE 2003).

The government launched the resettlement programme in 2003 as part of its overall food security strategy to resettle a total of 2.2 million food-insecure people over a three-year period (NCFSE 2003). In Amhara National Regional

State, the resettlement programme has been implemented since 2003. The main objective of the resettlement programme is to enable up to 220,000 chronically food-insecure households to attain food security within a five-year period of time through improved access to productive land. Besides providing settlers with land, the programme aims to establish basic infrastructure (such as health services, water supply, primary schools and roads). In Amhara region, five districts were selected as the main destination area for the resettlement programme, namely *Qura*, *Metema*, *Tsegedie*, *West Armechiho* and *Jawi*. From 2003 to 2008 about 73328 household heads and 72860 family members were resettled in the region (Yenesew and Gelaw 2008).

According to the information obtained from the Ebinat district agricultural and rural development office, more than 365 household heads have been resettled to different areas in the region since the start of the resettlement programme in 2003. Out of these 365 household heads, 167 have returned back. Information obtained from the district agricultural office and interviews undertaken with returnee settlers showed that high rates of environmental degradation, frequent droughts, shortage of agricultural land and the associated food insecurity form the major reasons for households to join the resettlement programme. High expectations of resettlement itself, as a result of initiation propaganda, were also mentioned as an important reason to opt for resettlement. The interview results showed that poor households who are unable to earn enough to sustain their livelihood as a result of environmentally-related problems have been forced to resettle to other areas.

Protection of Environmental Migrants

According to the African Union (AU) convention for the protection and assistance of IDPs adopted in 2009, all persons have a right to be protected against arbitrary displacement. The prohibited categories of arbitrary displacement include, among others, forced displacements in cases of natural and/or human made disasters. The AU convention states that protection of internal migrants is mainly the responsibility of national governments. However, the task of providing adequate assistance to displaced persons is costly and frequently exceeds national capaci-

ties in developing countries. The objective of the convention is to establish a legal framework for preventing internal displacement, and protecting and assisting IDPs in Africa (African Union 2009).

The convention states that, in cases when individual states do not have adequate available resources, the international community has a pivotal role to play in supporting the protection of basic rights and ensuring that needs are addressed. However, assisting and protecting internal migrants has been a difficult task for the international community for a variety of reasons. These include inadequate resources, lack of cooperation between different agencies, lack of clarity and consensus over the definition of IDPs, contradictions between short-term relief aid and longer-term developmental assistance, limited access to displaced populations and insufficient political will to engage in internal matters of sovereign states (African Union 2009; UNFPA 2004). Another reason is the fact that internal migrants remain within the jurisdiction of their own nation states and they may be eligible for legislation and state policies pertaining to national social protection (Sabates-Wheeler and Waite 2003).

The term "social protection" refers to policies and approaches that assist people, households, and communities to protect themselves against shocks and natural disasters. Social protection is defined as "the public actions taken in response to levels of vulnerability, risk and deprivation which are deemed socially unacceptable within a given polity or society" (Conway et al. 2000: 1). Social protection is thus often associated with social assistance and relief transfer provided to vulnerable people. It also covers some forms of promotive measures that provide income or consumption transfers to the poor in response to participation in community development activities.

Social protection policy initiatives have recently been introduced in Ethiopia that focus on the protection of environmentally-related migrants. However, so far, they have done little in achieving their intended goals of providing protection to environmentally induced migrants. It is evident that people displaced by environmental degradation and other slow onset disasters do not receive the same level of attention and protection as persons displaced by conflict and other sudden onset disasters. It is understood that persons who are being forced to migrate due to en-

environmental reasons are often discounted, except for some who are registered in the government resettlement programme. Article three of the AU convention for the Protection and Assistance of IDPs exhorts states to incorporate their obligations under this convention into domestic law, by enacting or amending relevant legislation on the protection and assistance of IDPs in conformity with their obligations under international law (African Union 2009). However, in Ethiopia such protection provided to people displaced by environmental degradation is very limited and of little significance in controlling environmentally-related displacements.

The following section of this paper will discuss some of the available social protection mechanisms currently provided to rural households both in their place of origin in order to reduce migration, as well as in their place of destination for those people who have been resettled by the government resettlement programme. These discussions on social protections are limited to migrants place of origins and destinations, because social protections provided by governments demand that people should settle in a particular place in order to be registered for social protection programmes.

Protection of Households from Displacement at the Place of Origin

Article 4 of the AU Convention for the Protection and Assistance of IDPs explains the obligations of states parties relating to protection from internal displacement. This article states that "States Parties shall respect and ensure respect for their obligations under international law, including human rights and humanitarian law, so as to prevent and avoid conditions that might lead to the arbitrary displacement of persons" (African Union 2009: 6). In line with this principle, evidence in Ethiopia suggests that existing government initiatives seek to reduce forced displacement by providing local opportunities in migration source areas. There are interventions specifically aimed at reducing rural outmigration through local development and employment generation activities. The level to which such initiatives have reduced migration is not known. What is known is that outmigration has taken place irrespective of the services and transfers provided in people's home areas. However, such initiatives are encouraging signs

of government commitment to enhance development more broadly in order to reduce vulnerability and the associated forced displacement of people.

As part of the national food security policy, the Government of Ethiopia developed the Food Security Strategy in 2002 which focuses on environmental rehabilitation designed to reverse the current trends of land degradation, thereby reducing the displacement of people due to problems associated with ecological disruptions. The government food security strategy consists of three components: the PSNP, the OFSP, and the Voluntary Resettlement Programme (MoARD 2004). The PSNP provides social protection by providing transfers (food and/or cash) to the food-insecure population in chronically food-insecure districts. This aims to prevent asset depletion at the household level while simultaneously creating assets at the community level (MoARD 2004). Its purpose is to improve the effectiveness and productivity of transfers to food-insecure households, thereby reducing household vulnerability, promoting sustainable community development, and consequently addressing the underlying causes of food insecurity and outmigration. The PSNP started by assisting five million people in 2005 and covered over 8.3 million people in 2009. Participating households are guaranteed cash and/or food transfer in exchange for their labour in environmental rehabilitation activities to bridge their food gaps, and are enrolled in credit schemes and other projects offered through other food security programmes in order to enhance their asset bases (MoARD 2009).

In the study district, about 36 per cent of the rural population, which is about 76,618 people, had participated during the last five years in the PSNP programme, through which people engaged in public work activities designed to rehabilitate degraded lands. In return, participating individuals were provided with cash and/or food transfer on the rate of 10 birr per day, which is equivalent to 0.75 dollar per day (the payment increased from 6 birr in 2006 to 10 birr in 2009) in order to cover their food gaps and reduce the level of outmigration in the area.

Evidence from the field also showed that, in addition to the food security interventions, other longer-term development and climate change adaptation programmes are being implemented. These

programmes aim to protect local communities from displacement associated with natural disasters and environmental degradation. However, the effect of these programmes is not yet clear. The Red Cross Climate Change-Induced Disaster Risk and Vulnerability Reduction (CCIDRVR) Program implemented by the Ethiopian Red Cross Society (ERCS) is worth mentioning. This is a programme supported by the Netherlands Red Cross and the Netherlands Government. MERET (Managing Environmental Resources to Enable Transitions to more sustainable livelihoods) is also another project supported by the World Food Programme. The objective of the Red Cross CCIDRVR programme is to reduce the impact of climate change induced risks on local communities and improve their living condition. This is to be achieved through different developmental interventions using the food for work approach. An important objective of the MERET project is also to increase incomes of the poor through asset creation and environmental rehabilitation. It includes activities, among others, to conserve, develop and rehabilitate degraded agricultural and community lands (ERCS 2008; Kehler 2004).

Though these interventions have focused on environmental rehabilitation to ensure food security and reduce rural outmigration, the study shows that the rate of outmigration in the study area is still high. This suggests that these interventions have done little to reduce the displacement of people out of the area. According to the district food security coordinator, the programmes fell short of their intended goals as a result of various factors, the major ones being:

- Poor quality of public work activities which failed to bring significant change in environmental rehabilitation
- Lack of investment in own farm land (since rehabilitation activities by the PSNP public work are only undertaken on community lands)
- Lack of adequate support for poor households who are unable to produce and earn enough for their households due to natural and/or man-made disasters
- Poor targeting mechanisms used to select beneficiary households
- Aspiration failure and hopelessness of the beneficiary households.

Protection of Displaced Persons at the Place of Des-

ination

This type of protection is mainly provided to assisted migrants in the form of humanitarian assistance upon arrival at the place of destination. In this regard, Article 5 of the AU Convention for the Protection and Assistance of IDPs explains the obligations of states parties relating to protection and assistance of IDPs. This article states that "States Parties shall provide sufficient protection and assistance to IDPs, and where available resources are inadequate to enable them to do so; they shall cooperate in seeking the assistance of international organizations and humanitarian agencies, civil society organizations and other relevant actors" (African Union 2009: 8). However, information obtained from returnee migrants showed that the nature of protection provided to assisted migrants at their place of destination is not sufficient, as is clearly demonstrated by the high rate of returnees from the resettlement sites. For instance, in Amhara National Regional State, from 2003 to 2008 about 146,188 household members were resettled in five different districts of the region. However, only 75,716 household members (51.8%) remained in the resettlement areas by mid-2008 (Yenesew and Gelaw 2008). The information obtained from the district agricultural office also showed that, from the study area, out of the 365 household heads that were resettled since 2003, 45,75 per cent of them (about 167 household heads) had returned to their place of origin.

In line with the resettlement guidelines developed by the government, settlers will be provided with land, agricultural tools, oxen, proper provision of basic infrastructures and food aid until their first harvest. However, interviews conducted with returnee settlers revealed that the government had not lived up to its promises, and this was said to be the key reason why they returned to their home areas. Returnee resettles also mentioned other factors that contributed to their return. These included poor soil fertility, prevalence of malaria, and failure of crop production. Development agents in the study area also mentioned that selection criteria for potential settlers were not appropriate, and that this explained the high return rate.

Conclusion

This study examined the response of peasant households in the face of environmental degradation and food insecurity. The study also looked

into the kind and level of protection mechanisms put in place by the government with the aim of reducing the extent of environmentally-induced migration. The study shows that environmentally induced migration in the study area took place in two forms. The first one was in the form of spontaneous migration, by which vulnerable people affected by environmental degradation and chronic food insecurity migrated to other areas in search of better living conditions. The results indicate that vulnerability to food insecurity, as a result of land and forest resource degradation and unpredictable weather conditions, determined rural outmigration in the study area to a considerable extent. Furthermore, the study revealed that environmentally induced migration in the area also took place in the form of assisted migration as part of the government resettlement programme. Resettlement has been a major policy of the Derg regime since the 1974 revolution. The recent government also introduced resettlement as part of its overall food security policy and this is seen as a major policy instrument to tackle the problem of chronic food insecurity and environmental degradation in Ethiopia. Environmental degradation, recurrent drought, and chronic food insecurity were some of the main reasons expressed by the interviewed household heads for joining the resettlement programme. However, it was found that though migration was closely linked to drought and environmental degradation, there was no single factor responsible for rural outmigration in the study area. Therefore, in order to grasp the full picture of rural outmigration, one should examine it under multiple lenses and attempt to understand its complex vulnerabilities.

The study also found that there are no effective policies directed towards the protection of environmentally induced displaced persons in Ethiopia. However, there are two types of social protection mechanism currently implemented by the government as part of the national food security strategy, and these focus on environmentally induced migrants. The first one is the PSNP, which aims to provide support in the form of income and/or consumption transfers to vulnerable communities in response to their labour in environmental rehabilitation activities. This kind of protection mechanism aims to ensure household food security, thereby reducing the displacement of people from their place of origin, though evidence from the study suggests that the pro-

gramme is not effective in meeting its intended goals. The second type of protection is assistance provided to settlers in their place of destination. Returnee settlers said that protection provided to settlers upon their arrival up to the time of their first harvest fell short of expectations. This was evidenced by the high percentage of returnee settlers. Unmet promises of the government during mobilization were a major reason for settlers being forced to return to their place of origin. This underlines the importance of formulating policies and strategies in accordance with international principles that aim for effective social protection schemes and livelihood improvements. Such policies and strategies are essential to address vulnerabilities associated with environmental degradation and climate change impacts, and for strengthening protection of IDPs. In this regard, assistance provided by other AU Member States or the wider international community should be utilized as outlined under the AU Kampala Convention.

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The Agulu-Nanka Gully Erosion Menace In Nigeria: What Does the Future Hold for the Population at Risk?

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Abstract

The Agulu-Nanka area of Anambra State has gained national recognition as an ecological disaster zone because of the incidence of gully erosion. The aim of this work is to examine the impact of this menace on the population of the area, and to examine the management and coping strategies adopted by individuals, the community, and the government. Data used in this study were derived from a questionnaire survey, key informant interviews, government and published sources. The analyses and presentation of the data and results utilized a combination of complementary qualitative and quantitative techniques. The findings indicate that the menace has over the years been responsible for increasing losses of houses and land of the people, thereby displacing affected inhabitants of the area. Also, it has led to the loss of life of people and livestock, as well as the destruction of farms on which the majority of the population depend for survival. Consequently, the local people have been employing indigenous management strategies, while the Government of Nigeria has tried over the years to control the menace without making much progress. The paper therefore recommends, among other things, that the management strategies of the government should be harmonized with those of the local people with regard to the unique environmental and social features of the area if the menace is to be sustainably tackled. This will minimize and even halt the displacement of the population as well as the perennial loss of lives and properties associated with the hazard.

Key-words: Population displacement, Gully erosion, Climate change, Responses, Vulnerability, Adaptation

Background of the Agulu-Nanka Gully Erosion Menace

Disasters have been defined and categorized in diverse ways by various scholars (see for instance, Bates (2002), Keane (2004), Hugo (2009) and

Naik (2009)). Disasters which occur from natural or man-made processes often involve large-scale alterations of the areas they occur in and the suffering of a sizeable number of persons by way of injuries, loss of life, and loss of property. Human responses to disasters vary according to the nature of the disaster with respect to its effect on the land and the people of the area, as well as the peoples' responses to this ever-present threat to lives and property. Disasters have been part of human history and they still befall mankind today (Bell 2000). This paper discusses the Agulu-Nanka gully erosion area in Anaocha local government area of Anambra State, south-eastern Nigeria. Agulu is situated on the Awka Uplands. The Agulu-Nanka area is an area of dense and very long human habitation on the Awka-Orlu uplands. The topography is generally gentle to undulating, characterized by slopes of between 20-50. Slopes reach between 500 -700 at the scarp point of gully advancement. The original vegetation of the area has been largely cleared. What exists today is secondary climax vegetation made up of mainly anthropic species. The climate of the area is tropical humid with a mean period of eight months of rainfall. The Agulu-Nanka gully erosion area is a wide area that is being eaten away gradually, and continuously eroded by the advancing gullies. The gully erosion zone covers the following communities: Agulu, Nanka, Ekwulobia, Oko, Amaokpala, Ezira and Ogboji and affects about 2.5 million persons. The present study covers Agulu, Nanka, Ekwulobia and Oko. Oko is the home community of Nigeria's former Vice President, Dr Alex Ekwueme.

Methodology

Questionnaires were used to elicit information from 300 randomly selected respondents across the communities within the gully erosion area. Not all parts of the communities studied are affected by the gully erosion, thus responses were obtained from the most knowledgeable persons in the communities and the families identified as having been victims of the disaster. Our study is a development of the already documented facts on the disaster via field observations from July 2009 to March 2010. The respondents were not less than 45 years of age at the date of contact. Using the questionnaire, nineteen structured questions were put to the selected respondents.

The questions related to the different aspects of the gully erosion menace in the study area such as the trends, regularity, causes, impacts, and coping and management strategies utilized by the affected population. In addition, key informant interviews were conducted with some notable stakeholders or leaders in the communities, such as traditional leaders, town union leaders, and some retired civil servants. The research also utilized personal observation methods and made extensive use of published literature from various relevant sources. The analysis of the data was carried out with simple descriptive statistics and the use of logistic regression to estimate the impacts of the gully erosion on the population of the study area. Finally, the authors were able to produce a diagram of the environment-human interactions that typically have characterized the climate and soil erosion impacts of the area.

Formation of the Gully Erosion Menace

According to Nwajide and Hoque (1979) and Egboka and Okpoko (1984), the gully erosion menace started around the year 1850 (about 160 years ago) as narrow channels of erosion which have since metamorphosed into gully erosion. By 1920, the gully area had an estimated area of 120 km²; in 1950, 250 km²; in 1960, 780 km²; 930 km² in 1979 and by the year 1983, the gullies covered an area of about 1100 km² and it is estimated to have been expanding at a rate of 20-50 m per year (Mozie 2010). Egboka and Nwankwor (1985) discovered that the fragile soils, which much earlier in time were protected by dense forest cover, were left to the mercy of the weather when the people deforested the area and thus exposed the soils to heavy downpours and characteristically concentrated runoffs. In the view of the inhabitants, the causes of gully erosion by proportions of respondents from the findings of the fieldwork of this study are as follows: deforestation (48.6%), geology (33.3%), high rainfall (66.7%), infrastructural development, poor drainage (54.2%), and topography (61.1%). In addition, 55.6 per cent of the respondents are of the view that there has been an increase in the number of the gullies in the past ten years, while 22.2 per cent are of the view that there has been a decrease in the incidence of the menace, and another 22.2 per cent note that in the last ten years, the trend of occurrence of the gullies has

shown no significant variation. Subsequently, the impact of gullies as perceived by the inhabitants of the study area is shown in table 1. According to Chief Okoye (Mbuze 1 Nanka), "the gully erosion in Nanka and Ekwulobia started from the flood waters that flow down from Isuofia some seven kilometres, and seventy five metres higher, to the west of Nanka, Oko and Ekwulobia. The people had wanted to tackle the problem, but were told to wait for the Government. In Agulu, the surface flood incidence was also the genesis of the erosion problem and was left unattended, thus the gullies were created. Mbuze means 'gully' in the Igbo language of the people of south-eastern Nigeria. That one of the chiefs of the community is Mbuze, is an acknowledgement by the people that the gully erosion has become their unavoidable nearest environmental disaster. Consequently, they have come to see the menace as part and parcel of the affected communities – a phenomenon that inflicts severe losses on the people."

The years of gully advance are usually years of exceptionally heavy rainfall. The slides occur between June and early October. Changes in climatic patterns resulting in flooding and cases of slides in the area were rare, but are gradually becoming more regular. These changes in the climate pattern of the area, whenever they occur, have devastating effects because they are generally atypical and so unexpected (Okoye 2009). Furthermore, deforestation and development of infrastructure, such as houses and roads, have induced increases in runoffs and created the gullies. This has created the badland topography of today and led to continuous advancement of the gully heads. Unfortunately, the increasingly vicious downpours have been yielding greater runoff due to climate change. The runoff is made more devastating by the continuous conversion of agricultural land to residential land as more rainfall is intercepted and made to flow overland in poorly made channels.

It can be seen from table 1 that most people surveyed believe loss of human life has decreased and the displacement of populations from severely affected areas has increased within the past ten years. The displaced and migrant populations have in essence become environmental refugees in safer locations within and outside their communities.

Impacts of erosion	Increasing	Decreasing	The same
Loss of human life	19.4	59.7	19.4
Loss of farms	72.2	23.6	4.2
Loss of houses	58.3	27.8	27.8
Loss of livestock	33.3	44.4	20.8
Loss of forests	59.7	27.8	12.5
Loss of pasture	47.2	41.7	11.1
Displacement of populations to other areas	56.9	26.4	16.7
Establishment of badlands	59.7	29.2	11.1
Loss of fertility	65.3	18.1	16.7

Table 1: Impacts of gully erosion in the last ten years (2000-2009) in the study area (%) (Source: Author)

Efforts at Controlling the Gully Erosion Menace

Measures of the Government in Nigeria to prevent and manage the gully erosion menace

The first attempts by the government at containing the menace were through the establishment of a soil conservation scheme financed by the Colonial Welfare and Development Fund (Udo 1971). The project was to serve as a model for checking gully growth and as an anti-erosion demonstration for other agencies working in areas suffering similar problems. By 1950, 805 dams, 24 miles (384 km) of contour ridges and 33 miles (53 km) of path with 4336 sumps had been built. The government of the eastern region of Nigeria in 1964 declared its intention to fight the gully expansion but the pogrom and the Nigeria-Biafra civil war halted every plan in the project. After the war in 1970 attempts to meaningfully combat the erosion problem were resumed but in a manner that grossly underestimated the magnitude of the menace. In 1974, the Federal Government awarded a multi-million naira contract to an Italian firm, Technosynthesis S.P.A. to study the erosion phenomenon in Nigeria, produce a soil erosion map of the country, and suggest a battery of measures required to check erosion in each of gully erosion zones (Eze Uzoamaka et. al 1979; Niger-Techno 1978). Unfortunately, the execution of the suggestions was inadequate and too half-hearted, and the gullies kept expanding. Also in November 1983, the President of Nigeria awarded an interim contract for the construction of drainage channels with

a promise to design and award a contract for a comprehensive management of the menace on his return to Lagos, the then capital of Nigeria. However, the military coup in late 1983 led to the abandonment of the project. Consequently, the rating of the overall government efforts stands at below 40 per cent by the inhabitants of the area. Between 1983 and 1999, when Nigeria was under military rule, all governments at the State and Federal levels showed little or no interest in combating the erosion menace. The people were left to suffer their fate with the continued loss of their land and houses. The reversion to democracy once again enabled the people in the area to make serious and vociferous petitions to the Federal and State governments through their local government representatives. The continued cries of the people have recently elicited reactions from the Federal government through the Federal Ministry of the Environment (FMEN). Following the exceptional floods in 2009, the Governor of Anambra State ordered the release of N 30 million to the people of Agulu, Nanka, Oko, and Ekwulobia for the construction of anti-erosion structures and rehabilitation of affected persons (ANSG Bulletin, 2009). In the same year, pressures from the governors and members of the federal legislative houses in the five south-eastern states ravaged by the gully erosion asked the Federal Ministry of the Environment to dispatch a study team to assess the cost of controlling the erosion. The team produced a cost schedule of N 24 million (Ashekoya 2009). It should be noted that the respondents said that they had

never been incorporated into the gully expansion control plans of the government. Unfortunately, and despite these efforts, there is still no act or law in Nigeria targeted specifically at the management of soil erosion. In some of the existing laws and policies, soil erosion is treated as an integral component of environmental problems despite the fact that it has now assumed alarming proportions, especially in the south-eastern parts of Nigeria.

Measures of the population to prevent and manage the menace

For over thirty years, the people have been left to battle the menace practically on their own. They have, in the intervening period from 1983-1998,

been on their own except when the governors of Anambra State (where the menace occur) visited to console them when lives and/or properties are lost. The findings of this study from fieldwork on the situation in the study area agreed with the postulations of Hunter (2005) who said that most rural dwellers are not aware of the disasters about to befall them because they do not expect such disasters. Even when they expect a disaster, they underestimate the consequences. Furthermore, when they understand the consequences of disasters they resign themselves to accepting the losses. The methods employed by the villagers in response to the gully erosion menace are shown in order of importance in table 2.

Measures used by villagers to prevent/manage erosion	Proportion of responses (%)
Planting of cover crops/carpet grasses	80.6
Construction of drainage channels	77.8
Afforestation	70.0
Contour planting of crops	48.6
Use of sumps	41.7
Construction of sand banks	40.3
Control of bush burning	30.6
Multiple cropping	15.3
Zoning/controlling of use of pasture	15.3
Mulching	12.5
Use of crop rotation	6.9

Table 2: Measures to prevent/ manage erosion in the last ten years in the study area (%) (Source: Author)

In addition, 70.8 per cent of the inhabitants stated that the community helps victims to rebuild houses, mainly through the supply of free human labour. Another 48.6 per cent of the respondents said that the inhabitant-victims are helped out through donation of relief materials, while 37.5 per cent of inhabitants said that the community gives money to victims to help them weather the impacts of the menace. In considering victims' responses to disasters, it should be noted that Bell (2000) added that victims may in some cases understand the mechanism of the disaster and obviate it; anticipate and obviate the disaster by preventive land use planning and land use; or resort to pre-and post disaster risk management strategies or move away from disaster-prone zones. In the study area, about 81 per cent

of respondents have people in their households who have migrated because of the erosion in the last ten years, while another 85 per cent of respondents know people who have moved out of their village in the past ten years because of the menace. Findings from the study show that the displaced persons migrate permanently and are not able to return to their lost houses and lands which have been "swallowed" by the gullies. The area where the people live in is separated from the badlands by a scarp which has a mean height of 22 metres. The impact of the gully erosion on the population is appraised using regression analysis. Table 3 shows the results of the regression analysis.

Impacts of erosion	Regression coefficients
Loss of life	-0.297
Loss of houses	0.588**
Loss of farmland	0.424**
Loss of livestock	-1.056
Loss of forest	1.804**
Displacement of populations	0.630**
Damage of road	0.031
Loss of soil fertility	-0.238
Creation of badlands	0.202

** significance at 0.05 confidence level.

Table 3: Regression analysis of the impact of erosion on the population of the area (Source: Author)

From the results of the regression analysis, it can be seen that loss of houses (0.588), displacement of populations (0.630), loss of farmlands (0.424) and loss of forests (1.804) have been significantly influenced by the gully erosion. For instance, the regression results show that any unit increase in the occurrence of the erosion results in a corresponding 1.804 increase in the loss of forest cover if all other variables are constant. These four variables significantly influenced by the menace are central to the existence and livelihoods of the people because once they are affected the erosion victims usually have nothing else to fall back on. The situation is made worse because of the palpable pressure of population on land in an area that has a mean population density of 950 – 1200 persons/km². Land in the area also constitutes a cultural, economic, and socio-religious identity as a status symbol and as a means of providing food. Even though the menace has been increasing in intensity and occurrence, the vulnerability of the population in certain aspects of their existence has been reduced. For instance, the regression results show that there has been reduction in loss of life, loss of livestock, and loss of soil fertility. This reduction in vulnerability may be due to the enlightenment and consequent change of the perception of the menace by the population, and their responses to the menace, as shown in figure 1.

With regard to combating and managing the menace, about 45.8 per cent of the respondents stated that their local measures have contributed to a great extent to mitigating the impacts of the

erosion. Results show that 44.4 per cent of respondents are of the view that their local measures have contributed to a small extent in mitigating the menace, while 9.7 per cent of respondents stated that their local measures have contributed in no significant way to mitigating the menace. The local measures include use of near perpetual vegetation cover over the soils; use of storm-water taps to check devastating runoff which incises the land surface; harvesting and underground storage of water; use of drainage channels and sumps which take surface water into the substrata below the surface. The difference in perceptions of these groups of respondents arises from the halt in gully expansion in some areas, the continued expansion of the gully heads in other areas, and the frustration of people forced to live away from their ancestral birthplaces. Some of the adjustment measures show that earlier victims-migrants, according to our respondents, also bring over displaced relatives to live with them in their places of destination (33.3% of respondents), send money to victims (22.2% of respondents), send building materials for rehabilitation of damaged houses or building of new houses to replace lost ones (20% of respondents), send food to victims (19.4% of respondents), and donate relief materials in times of occurrence of disaster (16.7% of respondents).

Modelling the Agulu-Nanka Situation

Based on the literature, the history of the area and the findings of this study, the authors created a man-environment interaction model that

explains the situation in the study area, as shown in figure 1. The issue of environmental damage is viewed in degrees of damage and scale from (none) no damage, at least at the outset when the damage has not manifested itself; (slight) at the incipient stage of the damage, through to moderate, until it reaches the severe stage where the damage reaches disaster proportions requiring prohibitive costs and efforts for it to be mitigated; costs which

governments are unwilling to provide. This is the tipping point when the irreversibility of the disaster causes the inhabitants of the affected regions to migrate. The Agulu area appears to be adequately explained by its model which was derived from a modification of the Department for International Development (DFID 1999) Sustainable Livelihoods model as shown in figure 1.

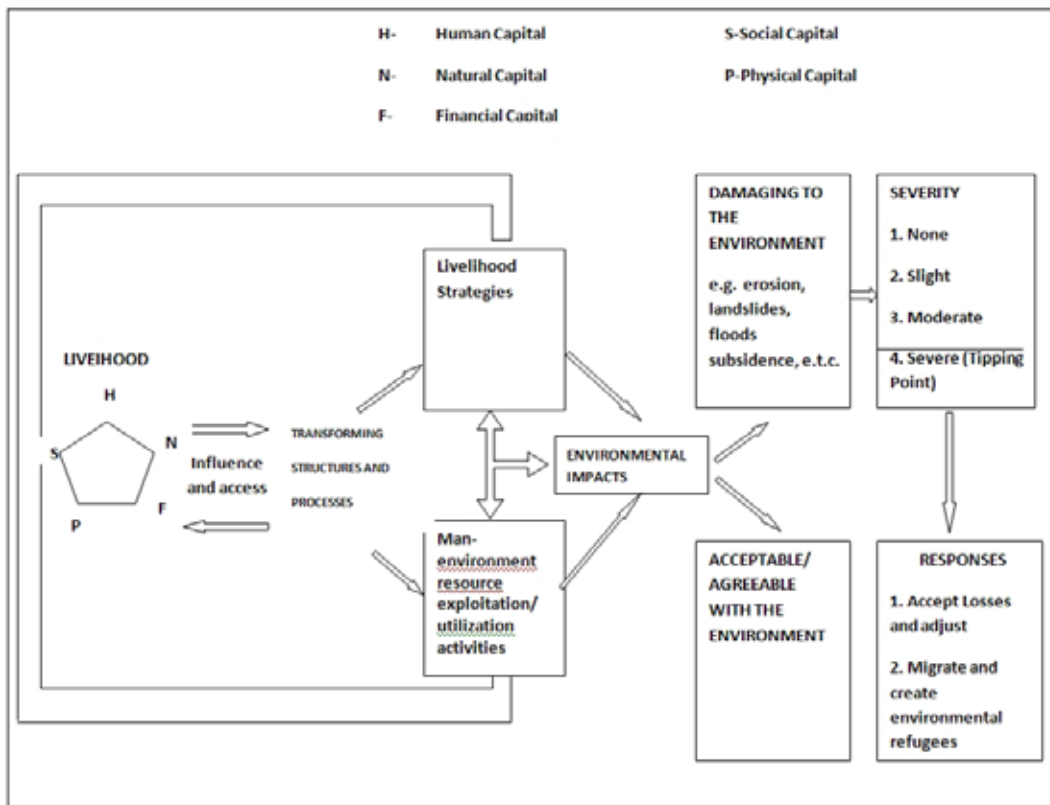


Figure 1: Agulu-Nanka Environmental Sustainability Disaster-Response-Model (Source: Author)

In some cases, victims of the disaster may accept losses, especially if they have nowhere to go or the disaster abates and will be repeated after some years. In the case of the gully erosion in Agulu-Nanka, the inhabitants of the area are forced to migrate to other places as the gullies expand and "swallow" their buildings and farmlands. From the model, it can be seen that: (a) The people living in Agulu and its environs are not wealthy, despite the deception that a certain number of houses belonging to wealthy people exist. They survive mostly through primary economic activities (b) The area was negatively affected by bad and misguided land use practices (c) The ugly consequences of today resulted from about 160 years of deliberate abuse of the bio-system through initial ignorance and poor land management. Between 1930 and 1950 the crea-

tion of environmental refugees had started, as evidenced by Chief John Okoye during the field survey at Isiama Igbo village, Agulu in November 2009. A year ago, Umudu (2008) wrote about the sacking of families by the gully erosion at Oko and Nanka. The disaster has assumed gargantuan proportions due to the very large amount of money estimated for the restoration of the land-soil complex in the area.

Suggestions for enabling the people to cope with the gully erosion menace

The gully expansion in Agulu community still remains a living disaster. The situation remains desperate. Some 1,100 km² of what was once good agricultural and inhabited land has been lost, and more will be lost if the menace is not controlled. Of course, further loss of land will translate to

further population displacement and creation of more environmental refugees. The situation calls for urgent, dedicated, and appropriate measures of response. Two main measures present themselves for consideration; arresting the menace and cushioning the sufferings of the victims.

Arresting the menace of gully expansion

The arrest of gully expansion involves the adoption of restorative actions and processes as was successfully applied in the Tennessee Valley in the United States of America between 1933 and 1940. The project would involve slope height reduction below the natural angle of repose for the soils of the study area. Surface runoff would have to be conducted into the main channel of the Aghomili river, thence to the Ezu river. Fillings will have to be done and the land rehabilitated by re-forestation. It is expected that if there are not any problems, the area can fully recover after about 15 to 40 years. The area should be designated a forest/game reserve. The water issuing from the area will then be exploited as a water supply, processed, and distributed to rural settlements in the Awka (the environs). To help reduce the problem caused by groundwater, the excessive groundwater reserve should be tapped and used by the people (Eze Uzoamaka et al. 1979).

Cushioning the effects on the population

Section 20 of the Nigerian Federal constitution of 1999 provides that the state shall protect and improve the environment, and safeguard the water, air, land, and wildlife of Nigeria. This section has however been declared non-justiciable by the courts of Nigeria, thus preventing persons who are injured by the refusal or negligence of the government to care for the environment to sue for and/ or apply for compensation from the government at any level. The deceit in this provision has been condemned by some authors (Mozie 2010). As futile as this situation is, political platforms could be used to cause the State and Federal Governments to consider implementing some palliative measures to tackle the gully erosion menace. The steps to be taken would involve a coordinated battery of activities starting from a census of displaced persons, and establishing the degree of compensation to be awarded. They should be compensated for their losses with an agreed sum that is enough to replace their previous abode or build a simple three-bedroom

bungalow. The people yet to be affected would also be compensated because the slope height reduction and channel construction must affect them. They would, however, become beneficiaries of their lands, which would become a forest/game reserve, as guides, workers or restaurateurs when business in the reserve takes off. As a last measure, property owners in the study area would be encouraged to take up insurance cover for themselves, family members, and properties. In all these areas, the traditional institutions, such as chiefs and town unions, must be brought into the team.

It is also recommended that participatory inputs of the inhabitants be used by government and the population at risk in implementation of the above measures. Government should as a matter of urgency enact laws and implement programmes specifically directed at solving erosion-related problems. Furthermore, the population should be educated on the sustainable use of their natural resources/capital in order to minimize stress on the environment.

Conclusion

From the discourse above, the following conclusions are made:

(a) Over the years, gully erosion has contributed to loss of life, loss of property, and displacement of population (environmental refugees). As a matter of fact, the erosion sites are gradually being converted into "tourist centres" even as the inhabitants are gradually being pushed out of their abodes and denied their primary source of livelihood. (b) There exists no protection instituted by government for victims of the problem. The affected population are left to cope with and manage the disaster on their own. (c) No laws exist to address soil erosion, which various governments have acknowledged as a disaster affecting almost all parts of the country. (d) There is no connection between the efforts of government and the efforts of the communities in managing the menace, resulting in the impression that nothing has been done at all to manage the problems. (e) The use of participatory approaches in tackling the menace remains the best solution for the protection of both the environment and the population at risk.

Future work by the government in addressing these issues may be facilitated by international agencies. For example, in December 2010, the Anambra State Governor, Mr. Peter Obi, took representatives of UNEP to the gully erosion zone on an inspection tour. Afterwards, UNEP expert said that the UNEP would assist the Anambra State Government in controlling the gully expansion and rehabilitating the badlands (www.thenationonline.net. 15 December 2010).

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Section Two

Improving International law and Regional Cooperation on Migration to Enhance Development and Climate Change Adaptation: Selected Case Studies

Regional Labour Migration as Adaptation to Climate Change: Options in the Pacific

Fanny Thornton

Abstract

Challenges to the Pacific Islands' long-term sustainability as habitable places under climatic changes are manifold, and the portrayal of some of them as 'sinking islands' has stimulated debate about the worst implications of climate change. In particular, climate change is now increasingly recognized as contributing to vulnerabilities that could generate migration and displacement in the region. This paper seeks to contribute to the emerging discourse on migration as adaptation to climate change by analysing opportunities for both temporary and permanent labour migration within the South Pacific region in this context. The paper will briefly outline both the particular climate change induced vulnerabilities faced by many of the region's island nations, and the islands' history of voluntary as well as forced migration, especially in relation to livelihood and resource threats. It will then give an outline of current labour migration arrangements with metropolitan neighbours, New Zealand and Australia, and analyse how these may or may not be relevant in the regional climate change context. Although acknowledging that labour migration as a response to climate change threats is not a panacea, the paper concludes by recommending frameworks that will enhance such migration in the region for the benefit of all stakeholders.

Key-words: Climate change migration, Pacific, New Zealand, Australia, Labour migration

"...rapid sea-level rise that inundates island and coastal settlements is likely to limit adaptation possibilities, with potential options being limited to migration." (Parry et al. 2007: 733)

Introduction

Both permanent and temporary (or circular) migration have become defining features of the modern age (Allegro 2006: 6, 10). They impact significantly on the flow of capital, services and ideas and often benefit not only receiving destinations, frequently unable to supply internally

both the quantity and quality of required labour, especially as populations age, but also sending countries, who can benefit in terms of growth or development (Reddy et al. 2004). Where socio-economic opportunities are scarce or threatened, migration has acted as an important tool to reduce human vulnerability. Climate change is now increasingly recognized as contributing to vulnerabilities that can generate migration (e.g. Warner et al. 2009). In this context, however, the fact that migration presents an important coping strategy that may also assist affected communities to adapt to at least some of the impacts of climate change has been recognized. Barnett and Webber (2009: 22f), for example, have pointed out that migration away from affected areas can act to reduce per capita demand on what may become increasingly scarce resources, that remittances returned by migrants to their home regions can increase adaptive capacity there, and that returning migrants may also act as agents of positive change and sources of valuable information.

This paper, then, seeks to contribute to the emerging discourse on migration as adaptation to climate change by analysing opportunities for both temporary and permanent labour migration within the South Pacific region in this context. The paper will briefly outline both the particular climate change induced vulnerabilities faced by many of the region's island nations, and the islands' history of voluntary as well as forced migration, especially in relation to livelihood and resource threats. It will then give an outline of current labour migration arrangements with metropolitan neighbours, New Zealand and Australia, and analyse how these may or may not be relevant in the regional climate change context. The paper will conclude by recommending improved regional labour migration frameworks to facilitate climate change adaptation, discuss their broader relevance, but also highlight the inherent shortcomings of a labour migration approach.

Climate Change Impacts and the Pacific Islands

In the climate change displacement literature, the small island states of the South Pacific have received much attention. The portrayal of some of them as 'sinking islands' has stimulated debate about the worst implications of climate change, with at least the very low-lying island nations

now regularly cited as facing the prospect of complete elimination and the relocation of their entire population (e.g. Corlett 2008: 7, 42). This is an image that several of the islands themselves have also propagated with some vigour (Chin 2008). Challenges to their long-term sustainability as habitable places facing climatic changes are indeed manifold and many already have long-standing environmental problems making them particularly vulnerable. Such vulnerabilities include: a) high population density, which increases vulnerability to single-event, localized disasters; b) water reserves that, especially on the atolls, are limited to shallow subterranean freshwater lenses which get contaminated with salt water or waste easily and whose replenishment is highly dependent on rainfall patterns, all of which challenge food production and potable water supply; c) high rates of coastal erosion, coastal development and pollution, which also impact fragile reef and mangrove ecosystems, as well as artisanal fisheries (Gillespie 2003-04; Barnett and Adger 2003).

Even drastic mitigation efforts will not prevent small islands in the South Pacific from suffering some impacts from global warming as a result of greenhouse gases already emitted. The main problem is a rise in mean annual temperatures, which may cause a sea level rise due to thermal expansion of the oceans and melting of the icecaps. The IPCC estimates of global average sea-level rise by the end of the 21st century range between 0.18 and 0.59 metres (Solomon et al. 2007: 695). What is certain is that sea levels rose by 1.8 mm per year between 1961 and 2003, this increased to an average of 3.3 mm per year rise (almost doubling) between 1993 and 2003 (Spratt and Sutton 2008: 33). However, scientists (Rahmstorff et al. 2007) are concerned that accelerated melting of the polar ice sheets and other global warming-related factors could cause even more substantial sea level rise, resulting in major changes to coastlines and inundation of low-lying areas, with the greatest effect in low-lying deltas and low-lying islands such as those in the Pacific. Pacific Island coastlines will almost certainly suffer from accelerated erosion, as well as an invasion of settlements and arable land with associated social and economic consequences. Sea level rise will also compound existing threats to freshwater supplies in the islands due to saltwater

intrusion. Coupled with an expected modest decline in annual precipitation in the region (Lal et al. 2002), this could lead to loss of soil fertility and shorter growing seasons, impacting food supply and economic activity around agriculture. Additionally, increasing extreme events in the area, such as tropical cyclones, are predicted to have huge impacts on agriculture, forest cover, biodiversity, and habitats, particularly as adaptation responses on small islands are expected to be limited and impacts of storms may be cumulative. Finally, climate change is projected to lead to a regional increase in diseases borne by insects, food, and water. These would include malaria, dengue fever, diarrhoea, heat stress, skin diseases, acute respiratory infection, asthma and other illnesses (including mental) (Mimura et al. 2007: 689f). An increase in cyclones, flooding, and storm surges could also affect incidences of injury, drowning, and malnutrition, as well as the functioning of health delivery systems.

Although even the lowest islands in the region may not be in imminent danger of complete inundation, human vulnerability to climate change impacts in these places should not be doubted. Migration in this context will have to be an important strategy to cope with environmental change and to act as a buffer against resulting socio-economic vulnerabilities.

Regional Migration Patterns

Patterns of migration have historically been an important feature in the area (e.g. Lieber 1977; Moore and Smith 1995). In many of the larger Melanesian islands (e.g. Papua New Guinea (PNG), Solomon Islands, Vanuatu) this has tended to be internal, from rural to urban centres. Alongside this, there has been some redistribution within rural areas, if possible, given customary land ownership patterns and traditional rivalries. Population pressures and climate change impacts will probably increase the necessity for international migration in future. However, these countries tend to have few existing migration opportunities with metropolitan neighbours, resulting in limited diasporic communities. Resettlement efforts from the coral atolls comprising the Carteret Islands (PNG) have gained some notoriety in the climate change displacement discourse. What is certain is that permanent habitation on these atolls has become increasingly dif-

ficult on account of population growth and salt water intrusion. Internal resettlement efforts to the larger island of Bougainville (PNG) are therefore under way (Stewart 2007). Melanesian Fiji and New Caledonia also evidence strong migration to towns and cities, putting pressure on labour markets and ecosystems there. However, the two also have prominent opportunities for international migration: residence rights exist for the former in France, a result of colonial ties, and there has been significant movement of Fijians to both New Zealand and Australia for some time. Furthermore, Fiji has a record of being a destination for resettlement from other parts of the Pacific (note, for example, the relocation of Banabans to the Fijian island of Rabi after World War II, following the destruction of much of their home island by phosphate mining. Of note also is the purchase of the Fijian island of Kioa by Tuvaluans from Vaitupu in the 1940s, facilitated by the assistance of colonial administrators interested in relieving population pressures).

The islands of Polynesia have long-standing diasporas settled in New Zealand, Australia, and the U.S.. To give a prominent example, 92 per cent of Niueans now live in Australia and New Zealand (Crocombe 2001: 66). Seven of the ten Polynesian jurisdictions are either territories of another country (e.g. American Samoa) or are self-governing but with full access to a former colonial power (e.g. the Cook Islands and Niue with New Zealand). The remaining three (Tonga, Tuvalu and Samoa) are independent countries but maintain historically strong ties, particularly with New Zealand, but also with Australia and the United States. Migration that is relatively easily facilitated by these arrangements has, in recent decades, contributed significantly to development in the sending countries, largely through remittances (Connell and Conway 2000). At times, these ties have also facilitated resettlement following a natural disaster. For example, after Hurricane Heta destroyed much of Niue's infrastructure and many of its communities, New Zealand offered to resettle the entire population remaining on the island, effectively proposing abandonment of the island (Bedford et al. 2006). However, the Niuean Government chose to rebuild with the assistance of aid. Some islanders returned to assist with reconstruction and, by the last census in 2006, residents on the island numbered at least the same as before the storm

(Bedford et al. 2006). This is, in large part, a reflection of the importance of return migration and islander attachment to their homelands, also reflected in islander attitudes in the climate change context, where they have repeatedly stressed that actions must be taken to allow them to remain (European Parliament 2009).

Micronesia, finally, contains many fragile atoll and reef islands (e.g. in Kiribati and Marshall Islands) and countries in this sub-region are marked by high levels of urban populations facing great pressures regarding sea level rise and freshwater supply. Similarly to Polynesia, inhabitants of many of the islands are able to move to Pacific Rim countries (especially the U.S.) due to historic ties, though this is not an option for fragile atoll nations of Kiribati and Nauru. In the past, the fragility of these islands was recognized by colonial administrators, who resettled communities amongst the islands for reasons which included severe drought (Federated States of Micronesia) and population pressures (Kiribati) (Lieber 1977). Resettlement was sometimes forced: Banaba island, for example, (interestingly, the only island not a low-lying coral atoll in Kiribati), was once a source of phosphate. Mining of this by outsiders meant that, eventually, 90 per cent of the island became uninhabitable. After World War II, British authorities resettled the population to the Fijian island of Rabi, which raised, and continues to raise, many important issues of concern for potential climate change related resettlement in the region: problems with land rights, citizenship, destruction of homeland, financial hardship, and loss of culture, identity and language.

Climate change will impact the region's islands differently and add to pre-existing environmental and other risk factors. Many, if not most, of the islands will certainly permit continued habitation for some time, though significant adjustments to food supply, housing, water supply, and infrastructure may have to be made. There is little doubt that climate change will also add to push factors that lead to migration, whether internally or externally. The role of labour migration policies in neighbouring New Zealand and Australia in facilitating necessary migration will be explored in the following sections. In doing so, particular attention will be paid to the co-development dimension contained in the various

schemes explored, which it is argued are relevant in the climate change adaptation context.

Labour Migration Opportunities with New Zealand

The Pacific Island population is the largest immigrant minority population in New Zealand (Stahl and Appleyard 2007: 21). Approximately 232,000 persons of Pacific Island descent were living in New Zealand at the time of the 2001 Census, comprising 6.5 per cent of the total population (Stahl and Appleyard 2007: 21). Though New Zealand, like most developed countries, favours migrants with high levels of skills and qualifications, since the 1970s, successive governments have recognized the importance of short-term labour migration from the islands (amongst other places) in addressing the problem of seasonal labour shortages, especially in the horticulture and viticulture sectors. In 2007, the Recognized Seasonal Employer (RSE) scheme, permitting temporary labour migration from several of the Pacific Islands, became the latest, and most ambitious, of such initiatives. It stands out particularly as a genuine attempt to develop policy which would benefit migrants, their country of origin, as well as the destination country (Ramasamy et al. 2008: 171). The foreign minister at the time, Winston Peters (2006), highlighted the development component as such:

First and foremost, it will help alleviate poverty directly by providing jobs for rural and outer island workers who often lack income-generating work. The earnings they send home will support families, help pay for education and health, and sometimes provide capital for those wanting to start a small business.

Following extensive consultation with island partners, the policy was launched in April 2007 and now allows up to 8,000 seasonal workers to come to New Zealand for a maximum of seven months per eleven-month period, though employers can request the same workers to return for more than one season. All Pacific Island countries are eligible to participate; however, Kiribati, Samoa, Tonga, Tuvalu and Vanuatu were selected for special, expedited trial status ('kick-start' states) in the initial stages (as was Fiji, whose participation was withdrawn following political turmoil). Under the scheme, New

Zealand employers in the horticulture and viticulture industries can apply to become RSEs, then apply for an Agreement to Recruit (AtR) island workers. An island worker with an employment offer linked to an AtR can then apply for a seasonal work visa, the granting of which depends on supplying a passport, successful screening for tuberculosis, a medical evaluation, police clearance, and showing a return air ticket, half of which the sponsoring RSE pays for. Workers then attend pre-departure orientations, which cover issues such as taxation, insurance, remitting, climate variability and appropriate clothing, as well as emergency contact information. Workers are also reminded about the implications of overstaying and that they carry responsibility for the continued success of the scheme. Employers in New Zealand become accredited for participation in the scheme by meeting several criteria: they must be able to pay workers the minimum wage for at least 30 hours per week and provide accommodation, food, transport, and pastoral care (e.g. opportunity for religious observance) as specified. Implementation of the RSE scheme varies between countries, with the terms for each set out in inter-agency understandings (IAUs), usually between the New Zealand Department of Labour and the respective ministry of labour on the island. IAUs, for example, set the minimum age of employment and agree on the recruitment process. Recruitment takes place either through a pre-screened pool supplied by the relevant island ministry (often with the assistance of local officers, as well as church and community leaders), or New Zealand employers can recruit on the islands directly but must inform the relevant island ministry.

In the first full season (2007/08) of the RSE scheme, 126 participating employers saw 2883 overseas workers arrive, of whom 83 per cent came from the five Pacific 'kick-start' states, the bulk from Tonga, Samoa and Vanuatu (Department of Labour 2009: 4). A 2009 New Zealand Department of Labour study states that most workers felt they benefitted by returning home with savings, as well as by gaining valuable work and language skills (Department of Labour 2009: 5). The success of the RSE policy was also evidenced by the number of skilled workers who returned for a subsequent season, with the study showing about 55 per cent of RSE workers from the Pacific who worked during the 2007/08 sea-

son returning for the 2008/09 season, most to one of their previous employers (Department of Labour 2009: 5). Immigration risks were successfully managed, with less than one per cent of overstayers among the RSE workers who were in New Zealand between April 2007 and January 2009 (Department of Labour 2009: 5).

Nevertheless, the report also highlights that although the RSE scheme was designed as a win-win-win programme, the first season saw the biggest benefits for New Zealand-based employers (Department of Labour 2009: 9). Although Pacific workers and states benefitted via remittance incomes, the extent to which these have been used for development outcomes, an important pillar of the scheme, remains unclear (Ramasamy et al. 2008). Maclellan (2008: 2) further highlights the need to connect such schemes to broader development assistance by maximizing the outcomes of increased remittance flows into Pacific villages and rural communities, which he does not see being done in a coordinated fashion. He also points out that almost 20 per cent of workers in the first year of the programme came from Asia, undermining the stated purpose of development for Pacific neighbours (Maclellan 2008: 4). If migration was to aid the development of adaptive capacity to climate change in regional island nations, then the development component of the RSE scheme will probably have to be employed with greater care.

In addition to temporary and circular labour migration channels, the New Zealand Government also encourages limited permanent labour-linked migration from the islands (note, for example, the Samoa Quota Scheme). Most recently, in 2002, it created the Pacific Access Category (PAC), which permits small quotas of citizens from Tuvalu (75), Kiribati (75) and Tonga (250) to permanently migrate to New Zealand (Fiji's participation was suspended in 2006 for the above-cited reason). It is sometimes mistakenly cited (e.g. by Friends of the Earth 2006: 6) as a bilateral agreement concerning formal migration for so-called 'climate refugees'. Although pertaining to migration from island nations threatened significantly by sea level rise and other climate change impacts, and although the New Zealand Government acknowledged that it will 'provide some certainty for these countries' (Gosche 2001), the scheme does not formally present a climate

change displacement approach. Applicants must meet character, health, and age stipulations, have basic English language skills, as well as a job offer. These requirements are so stringent that less than 30 per cent of places allocated to Tuvalu (with an annual quota of just 75) were filled in the early stages (Anonymous 2004; note that some adjustments were made to address this in 2005 (Stahl and Appleyard 2007: 30f)).

New Zealand, then, has significant and long-standing channels permitting labour-related migration from many of the Pacific Islands. It has also stressed 'that current climate change efforts in the Pacific should continue to focus on adaptation, and should be underpinned by the desire of Pacific peoples to continue to live in their own country' (New Zealand Government; in McAdam 2010: 19). The continued facilitation of labour migration could very well become an increasingly important tool to facilitate this.

Labour Migration Opportunities with Australia

Australia's position concerning climate change displacement in the Pacific was once cynically expressed by Australian Bureau of Agricultural and Resource Economics Executive Director, Dr Fisher, who stated that an evacuation of small island states might be more efficient than forcing industrialized countries to cut greenhouse gas emissions (in Edwards 1999: 318). In a 2006 pre-election discussion paper, *Our Drowning Neighbours*, the Australian Labour Party, though guilty of dramatizing the issue, indicated an intention to engage more meaningfully with the Pacific on climate change in general should it be elected. This was to include addressing the question of displacement, proposing assistance with intra-country evacuations when citizens have to be moved from low-lying areas to higher ground (Sercombe and Albanese 2006: 9) and the establishment of an international coalition to accept climate change refugees when a country becomes uninhabitable (Sercombe and Albanese 2006: 10). However, since forming a government in 2007, it has not acted on these suggestions (McAdam 2010: 20) and further policy has not been developed.

In the meantime, Australia has less substantial labour migration arrangements with the Pacific Islands compared to New Zealand, though

many islanders consider Australia their ultimate destination after migrating to New Zealand (eventually reaching Australia from New Zealand is facilitated, for example, by the Trans-Tasman Travel Arrangement of 1973). However, because Australia's labour migration policy is so firmly focused on skilled migration and has traditionally not favoured specific countries, the low skill levels of many Pacific Islanders have prohibited the possibility of direct migration to Australia in most cases (Stahl and Appleyard 2007: 39). It is therefore unsurprising that, in 2001, Pacific Islanders comprised only 0.6 per cent of Australia's population, compared to New Zealand's 6.5 per cent (Stahl and Appleyard 2007: 39).

Australia has, in the past, debated whether Pacific Islanders could be granted temporary visas to engage in seasonal work, especially in the rural agricultural sectors (see Mares 2007). Many such efforts faltered, with governments repeatedly taking a protectionist stance that would not permit the arrival of unskilled foreign workers (Mares 2007). However, in 2008, the Labour Government announced a three-year trial period for the Pacific Seasonal Workers Scheme (PSWS), partially in response to significant practices of illegal employment in the rural agriculture sector (Ball 2010). Like the New Zealand scheme, the PSWS has an acknowledged development component and is expected to contribute to economic development in home countries through Pacific seasonal workers' employment experience, remittances, and training (DEEWR 2008: 2).

Until 2012, 2,500 temporary work visas for employment in the Australian horticultural sector for up to seven months in each twelve-month period will be granted to citizens of Kiribati, Tonga, Vanuatu and Papua New Guinea (DEEWR 2010). The scheme is largely modelled on New Zealand's RSE scheme and shares many of its features. Although it is too early to comment on the success or failure of the scheme, some early indicators point to problems. In the first year, just over half the visas made available were eventually taken up and recruitment under the scheme for 2010 has been plagued by problems, with businesses finding the scheme too expensive in comparison to traditional temporary, unskilled labour avenues of labour supply (for example, backpackers) (Radio Australia 2010). Although, as with the New Zealand schemes, there is the potential for the

PSWS scheme to eventually address developmental as well as adaptation needs of sending countries, the utility of the scheme in that regard (and, in fact, its very survival) is somewhat more doubtful.

However, in 2007, the Australian Agency for International Development (AusAID), the government's overseas aid agency, began funding the Kiribati-Australia Nursing Initiative (KANI), which offers 30 I-Kiribati per year the opportunity to train and later work as nurses in Australia or elsewhere (AusAID 2010). This corresponds to the long-term goals of the Kiribati President, who has expressed a desire for skilled migration of his people, especially to Australia and New Zealand, as a response to climate change risks (McAdam and Loughry 2009), favoured particularly as it would permit the gradual build-up of communities and diasporas abroad, which could ease the trauma of eventual full resettlement.

Conclusion and Recommendations

The extent to which climatic shifts will influence population movement within and from the Pacific Islands will partially depend on the success or failure of global efforts to curb greenhouse gas emissions. Equally, migration patterns will be impacted both by the ability of affected societies to adjust and to use a range of adaptive strategies, as well as the willingness of receiving countries to accept migrants. The emphasis in this paper has been on external migration that assists in reducing vulnerability and which provides an opportunity to enhance adaptive capacity for Pacific Islanders. It is acknowledged that labour migration as a response to climate change will not always be an adequate approach, especially as climate change impacts become more severe in future. Nevertheless, it is promising in that it may be palatable to nation states keen to regulate flows of migration, and in the process it may also turn affected people into agents of positive change in their area of origin.

All the schemes highlighted emphasize a development component to Pacific Island migration to metropolitan neighbours. Engineering such schemes to also assist with climate change adaptation needs in Pacific Island countries is to take existing schemes only slightly further, at least conceptually, though some alteration and en-

hancement of existing programmes would have to take place in practice. Measures to consider include:

Ensuring maximum uptake:

- Proactively identify skills and attributes of sending country workers that are in demand in destination labour markets;
- Provide opportunities for training and up-skilling of migrants to match destination labour market demands.

Decreasing vulnerability:

- Facilitate labour migration from places most vulnerable to climate change;
- Facilitate the flow of remittances and return migration; establish channels that ensure these assist with climate change adaptation goals;
- Facilitate recognition that labour migration may have a positive influence on adaptive capacity to climate change in sending countries by helping to enhance human, social, and financial capital.

Improved mechanism:

- Develop appropriate transport links and immigration procedures that facilitate migrants' travel to destination labour markets;
- Establish regional cooperation mechanisms;
- Establish appropriate governance and regulatory systems in both sending and receiving countries. This should involve migrants, governments, unions, employers, aid agencies, NGOs, and all other stakeholders.

If such measures are implemented, migration may influence positively for some time the quality of life for many individuals, families, and communities, even given some adverse climate change impacts. In other words, it may permit more people to stay for longer, whilst facilitating the gradual expansion of communities and networks abroad, aiding necessary eventual permanent relocation and adaptation to a new culture.

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Temporary Labour Migration for Victims of Natural Disasters: The Colombia-Spain Model

Nicole de Moor

Abstract

Environmental degradation is increasingly causing large-scale migration. This paper looks into international labour migration as a strategy to adapt to a changing environment. Facilitating legal migration for persons affected by environmental degradation can prevent them from being forcibly displaced, can reduce their vulnerability to future environmental disruptions, and can contribute to the development of vulnerable communities. This paper analyses how environmental migration could be facilitated. It does so through a case study of the Colombian Temporary and Circular Labour Migration (TCLM) project. Through this innovative migration model, based on an agreement between Colombia and Spain, Colombians facing recurring natural disasters are offered a livelihood alternative through temporary work abroad, while affected zones can recuperate. This programme, supported by the IOM, illustrates how a European Member State can enable vulnerable people to migrate overseas by providing labour migration opportunities for selected beneficiaries. By supporting migrants in maximizing the impact of remittances on the recovery of their place of origin, the TCLM programme increases their resilience to natural disasters, and offers them an alternative to permanent and/or urban migration. The paper discusses the normative framework supporting the TCLM programme, and identifies some conditions for the replication of the programme in other states. The potential of the project for both development and adaptation to environmental changes is being considered.

Key-words: Environmental migration, International migration, Temporary migration, Adaptation, Development

“Mobility may... contribute to the adaptation of people affected by environmental change. Conversely, immobility may increase people’s vulnerability to environmental pressures.” Annual Report UN Population Fund (UNFPA) (Engelman 2009)

Introduction

The phenomenon of global warming, together with the loss of biodiversity, is increasingly causing large-scale migration. Both slow-onset environmental degradation and sudden natural disasters threaten to force millions of people to leave their environment. This paper looks into international labour migration as a strategy to adapt to a changing environment, and to increase the resilience of disaster-affected populations. Facilitating international migration for persons affected by environmental degradation can prevent them from being forcibly displaced to already overpopulated and environmentally-fragile places within their own region. Temporary international migration could furthermore act as an alternative to permanent and rural-urban migration, and may mitigate pressure on vulnerable places and urban centres. Through earning a livelihood abroad, migrants can also reduce the vulnerability of their communities of origin, so as to cope better with future environmental disruptions.

Through a case study of TCLM, this paper analyses how international migration could be facilitated for disaster-affected communities. Through this innovative migration model, supported by IOM, Colombians facing recurring natural disasters are offered a livelihood alternative through temporary work abroad, while affected regions can recuperate. The programme illustrates how a European Member State can enable environmentally vulnerable people to migrate overseas by providing labour migration schemes for people coming from the most affected regions. By supporting migrants in maximizing the impact of remittances on the recovery of their place of origin, the TCLM programme increases their resilience to environmental disruption.

By analysing the TCLM programme, the paper aims to contribute to the discussion on the nexus between environmental migration, development, and adaptation to environmental disruptions. In Chapter I, the project therefore will be framed within the existing academic debate on migration for development and adaptation to environmental disruptions. After introducing the main features of the TCLM programme in Chapter II, the legal framework supporting the programme will be discussed in more detail in Section D. Finally, the benefits of the programme for both development and adaptation are examined

and the conditions for its consolidation and replication in other states identified.

I. Environmental Migration for Development and Adaptation

A. Migration for Development

The interconnection between migration and development is rising on global, regional, and national agendas. Recent decades have shown a renewed optimism about the effectiveness of migration for development (De Haas 2010). While not all international migration (e.g. that which is forced) is positive, there is an increasing recognition among scholars and policymakers that some forms of international migration can help migrants, their families, and their communities to improve their living conditions and welfare. According to the United Nations Human Development Report, international migration can contribute greatly to human welfare and development (UNDP 2009). Money transferred by foreign workers to their native countries provides families left behind with livelihood opportunities, and contributes to the economic growth of home communities. Remittances even exceed international development aid (Deprez 2010a; Engelman 2009)¹. In the country of destination, migrants furthermore fill gaps in the labour market. Migration can thus be a tool for development, both in regions of origin and of destination.

In 2007, the Global Forum on Migration and Development (GFMD) was initiated by the United Nations Member States, in order to enhance the international dialogue on the growing importance of the migration and development nexus (Martin and Abella 2009). Through this government-led process, the Member States want to promote legal migration at the global and national level as an opportunity for development, rather than as a threat (GFMD 2007). During the second GFMD, held in Manila in 2008, the governments argued for circular migration as a way to strengthen the connection migrants have with their country of origin (Martin and Abella 2009).

B. Migration as Adaptation Strategy

Aside from a development strategy, migration can also be regarded as an adaptation strategy for communities affected by environmental disasters. The GFMD Chair-in-office 2010, Mexico,

has already called upon United Nations Member States to start a dialogue on the connection between environmental degradation, migration, and development (GFMD 2010). The phenomenon of global warming, which now poses new challenges to migration and development, asks for a comprehensive adaptation strategy to help and protect vulnerable populations. It is therefore advisable to develop a coherent approach linking policies on migration, development, and adaptation to a changing environment.

Under certain conditions, environmental migration can be seen as an adaptation strategy, rather than as a failure to adapt to a changing environment. Facilitating legal migration for persons affected by environmental degradation is both a way to prevent forced displacement and the suffering it generates, and a way to relieve pressure on vulnerable regions. If migration due to climate change is managed effectively, humanitarian crises could be minimized, and conflicts avoided. Furthermore, most environmentally affected persons migrate to nearby places which are also under environmental, social, and/or political threats. By targeting existing migration programmes at populations affected by environmental disruption, the most vulnerable persons could be enabled to leave their destroyed environment, either temporarily or permanently (Boncour 2009). Migration might even help to slow down the process of environmental degradation, and allow those left behind to adapt their livelihood provision. Finally, remittances can help home communities to mitigate and/or adapt to environmental degradation (Acketoft 2008; Barnett and Webber 2009).

Proactive environmental migration could be part of a comprehensive European strategy towards climate change effects, natural disasters and other forms of environmental disruption. Where people do not have sufficient resources to flee from an uninhabitable environment, the European Union (EU) could enable them to migrate by providing legal migration schemes for people coming from the most affected regions. Good practices of planned environmental migration can lead to recommendations for appropriate policy responses, or could even serve as an example for the elaboration of environmental migration programmes in the EU.

C. Temporary and Circular Migration for Development and Adaptation

As discussed earlier, the debate on environmental migration as an adaptation strategy can be situated within the broader debate on the nexus between migration and development. There are many links between the environment, development, and migration. Both sudden and gradual environmental changes act as a push-factor for migration. Migration is in many cases also triggered by a lack of development, weakening the resilience of communities to environmental events, which even adds to the migration pressure of vulnerable communities.

In the present study, the focus will be on temporary and circular migration². By maintaining contact between the migrant and his home country, circular migration turns the migrant into a protagonist of development. For the country of destination, circular migration has the advantage of reducing the social and political costs of immigration, as circular migrants return to their country of origin. Similarly, the latter does not have to deal with permanent outmigration, hollowing out its economy (Zapata-Barrero et al. 2010; Deprez 2010b). In this sense, circular migration offers a more durable solution for countries severely affected by environmental degradation. Finally, circular migration can provide countries of origin with financial and social remittances needed to mitigate and adapt to climate change effects, and reduce the vulnerability of their population (Ackeoft 2008).

II. Temporary and Circular Labour Migration Programme

A. Origin of the TCLM Project

During recent decades, Spain often encountered a reduced seasonal labour force. Since the 1990s, the *Unión de Pagesos* (UP), the main agricultural trade union in the Spanish region of Catalonia, has been organizing and supporting the recruitment of foreign seasonal workers in order to respond to its members' needs. In 2001, the UP initiated a TCLM project, facilitating seasonal migration from Colombia to Spain, in order to solve a shortage in the labour force for harvesting fruit in Catalonia (Magri 2009; IOM 2010). The initial UP project offered logistical assistance in the recruitment process (selection of the work-

ers, travel arrangements, visa procedure, etc.), and supported the workers during their stay in Spain, informing them about available facilities and services, the host region, the healthcare system, and the local culture. What makes UP stand out from other trade unions is its focus on co-development. UP recognizes the potential benefits of migration for development and adaptation to climate change. Together with the *Fundació Pagesos Solidaris* (FAS)³, its foundation, the UP therefore provides training courses for migrants, with the aim of creating opportunities and productive processes in the country of origin (Engelman 2009; Magri 2009).

Recurring environmental disruptions, together with a long-lasting conflict, have displaced many Colombians. When in 2006 the Galeras volcano in south-west Colombia erupted, the TCLM programme, which targets different vulnerable communities, was used to provide a migration opportunity for thousands of affected people. This programme allowed them to temporarily migrate to Spain, where they could earn an income in the seasonal harvest. Afterwards, the programme was also expanded to rural populations whose crops and land are particularly vulnerable to floods, droughts, and other environmental disruptions. During their working period in Spain, the temporary migrants acquired the knowledge and skills to diversify their income upon their return to Colombia. This way, they could reduce their vulnerability to environmental disruptions without being forced to permanently relocate. Furthermore, their absence allowed the recovery of their fragile land (Engelman 2009; Irin Humanitarian News and Analysis 2010).

In 2007, IOM joined the TCLM project, with the aim of strengthening it and making it replicable. IOM also wanted to help certain targeted communities to benefit from the programme (Magri 2009). Thanks to funding of the European Commission's AENEAS programme⁴, IOM expanded the initial project, increasing the number of beneficiaries and the number of Spanish employers taking part. The organization also provided technical assistance to national institutions developing a migration policy and legislation (IOM 2010). While the UP had initiated the project as an opportunity for economic welfare and development, IOM added the perspective of 'migra-

tion management', as required by the AENEAS programme (Magri 2009).

B. Goal

The TCLM programme offers Colombian workers the possibility to work in Catalonia doing seasonal labour for one of the employers associated with the UP. The goal of this programme is twofold: firstly, it aims at effectively managing seasonal labour migration. The programme is an answer to Catalonia's demand for low skilled labour, and is meant to legally regulate labour migration flows. Secondly, and of greater importance for the purpose of this study, the programme also aims at supporting "the generation of wealth in both countries" (Magri 2009: 28). In other words, it wants to enhance the impact of migration on the development of local communities in Colombia (IOM 2010). Since the experience of seasonal migration can provide skills and resources, migrants could be made "innovators and entrepreneurs in their country of origin" (Magri 2009: 13). This way, the seasonal worker can improve not only his social status and personal income, but the economic welfare of his home community as well. The idea is to provide the migrants with temporary residence and work permits in order to allow them to earn a living and acquire knowledge and skills, making them more resilient when returning to Colombia. As for the beneficiaries coming from environmentally affected regions, the programme offers a temporary income alternative while the affected regions recuperate. According to Koko Warner (UNU-EHS), the TCLM programme is "an important source of post-disaster rehabilitation" (Irin Humanitarian News and Analysis 2010).

To achieve these ambitious goals, the participating workers need to be well prepared and guided during the whole migration process. Through various training activities the TCLM programme prepares migrants to generate economic and social development in their region of origin. Participating workers are supported in the planning, coordination, formulation, and management of community projects, and in the structuring and follow-up of business plans. They are also encouraged to achieve self-sustainability through marketing, services or import/export activities. Moreover, remittances are channelled towards productive initiatives or the purchase of goods improving the socio-economic status of

the community of origin. IOM's local partners are responsible for some of the preparation work in the country of origin, such as the selection of the migrant workers, and the identification of job-generating initiatives. In order to reduce the families' separation distress and assist them to earn a livelihood, the migrants' families receive support while their relatives are working abroad (Magri 2009).

C. Beneficiaries

Two of the innovative aspects of the TCLM programme are the targeted communities in the country of origin, and the way of selecting beneficiaries. The communities participating in the programme are extremely heterogeneous: from ex-guerrilla fighters over vulnerable and displaced communities and indigenous groups to single mothers and people from zones at high risk of natural disaster. In 2007, 1519 migrants participated in the programme, while 1400 participated in 2008 (Magri 2009).

The selection criteria vary slightly from community to community depending on the local partners involved, and the features of the communities. IOM has identified some specific target populations, and IOM's local partners take care of the pre-selection of the migrants. In order to strengthen the development impact of the programme, an important selection criterion is the migrant's community involvement. The loyalty and strong links of the workers with their communities of origin is a discouragement to leave the TCLM programme (Magri 2009).

Of particular interest for this research are the communities selected with the aim of 'relocating' people from zones at high risk of natural disaster (mainly volcanic areas), offering them the opportunity to earn a livelihood through the TCLM programme.

As for people affected by environmental disruptions, the TCLM programme was originally conceived to offer a livelihood alternative to families affected by the eruption of the Galeras volcano. As discussed above, the programme later was expanded to include other environmentally vulnerable communities.

D. Legal Framework

An innovative migration model such as the TCLM project, can only work when it is sustained by a

solid legal framework, allowing for temporary and circular migration. Bilateral agreements between countries of origin and destination can support migration projects, as well as agreements signed by the EU with third countries. Obviously, strong national migration legislation is a *conditio sine qua non* for any migration programme. After briefly discussing a bilateral agreement between Spain and Colombia which forms the backdrop to Spain's establishment of the TCLM project, this section covers in particular the Spanish procedures and conditions for the migration of third-country nationals for the purpose of seasonal work.

1. Bilateral Agreements such as those between Spain and Colombia

In order to manage international migration, European Member States conclude agreements with third countries. Besides facilitating the management of migration flows, simplifying the selection of foreign workers, and establishing rights and obligations of migrants, those agreements often include measures to fight irregular migration and to facilitate the return of irregular migrants. Recent trends in agreements with third countries reflect a move away from the traditional migration policymaking in the EU, increasingly associating migration policy with other policy areas, such as development aid and external relations.

In order to regulate migration flows, Spain has signed bilateral migration agreements with a number of third countries. In 2001, the first 'recruitment agreement' was signed with Colombia (Agreement Spain-Colombia 2001). Later, agreements followed with, among others, Romania, Bulgaria, Morocco, Poland, Senegal, Ecuador, and Peru (IOM 2009; Vergé Oms 2010). Most of the agreements focus on labour migration: they regulate the recruitment process, the issuance of residence and work permits, the rights and obligations of foreign workers, and the transfer of entitlements acquired in each country (IOM 2009). Specific to the agreement with Colombia is that this agreement refers to co-development and the development impact of migrants' remittances. This provision was suggested by the UP, and has not been repeated in any other bilateral agreement between Spain and third countries (Vergé Oms 2010). The agreement obliges the parties to take measures to encourage the reintegration of Colombian migrants, with the migration experi-

ence as a factor of economic, social, and technological development (IOM 2009). Supported by this agreement, the UP later established the TCLM programme.

2. National Migration Law

The national legal basis of the TCLM programme is covered by the *Ley Orgánica* (Organic Law) on rights and freedoms of foreigners in Spain and their social integration (Zapata-Barrero et al. 2010). The procedure for the recruitment of foreign workers is covered by the *Reglamento de Extranjería* (Immigration Rules). This legislation is of course subject in turn to European and international legislation, and to the bilateral agreements signed between Spain and third countries. With the exception of some "hard to fill" vacancies, Spanish legislation only allows the hiring of non-resident third-country nationals in accordance with a quota system for foreign workers (IOM 2009). The Spanish Government determines a yearly quota of migrant workers who can enter the country, considering the economic situation and the interests of various stakeholders (Organic Law, Article 39; Immigration Rules, Articles 77-80). The quota, which can be modified throughout the year, is established for three categories of migrant workers: permanent workers, temporary workers, and job seekers.

As for seasonal workers, the Royal Decree (2393/2004) enumerates the sectors where migrants can be employed. Seasonal labour migration is allowed for a maximum period of nine months within 12 consecutive months (Royal Decree, Article 55). The quota for seasonal workers is mainly reserved for those countries that have signed a bilateral agreement with Spain, including Colombia (Organic Law, Article 42; Immigration Rules, Article 55; Magri 2009; IOM 2009). The bilateral agreement with Colombia has installed a fast track system for seasonal migrants, with the support and supervision of IOM Colombia and UP. On the basis of the bilateral agreement, Spain introduced a temporary visa, the T Visa, valid for up to nine months.

An important feature of the Spanish legislation is the concept of recruitment in the country of origin. Workers have to pass selection in their country of origin, with priority given to states which have signed a bilateral migration agreement with Spain (IOM 2009). After verifi-

cation that no workers already residing in Spain are willing to accept a particular job, employers can request to employ a foreign worker. In the consular offices, foreigners can then subscribe to lists showing available vacancies, prepared by the Public Service of State Employment (Royal Decree, Article 50). Once approved, the employment contract is signed by the worker in the Spanish consulate abroad. Afterwards the worker is issued a temporary work visa with which he/she can enter the Spanish territory (Magri 2009).

Several requirements have to be met in order to issue a residence and work permit. Firstly, a labour market test verifies that the vacancy cannot be filled by a Spanish worker, before allowing the recruitment of a migrant worker. For seasonal migration however, no formal labour market test is required (IOM 2009). Furthermore, the employer must provide adequate accommodation, make travel arrangements, and register the migrant worker with the Spanish social security system (Immigration Rules, Article 56). The worker must also agree to return to his country of origin at the end of his employment in Spain, and has to go to the Spanish consulate within one month of his return. Non-compliance could limit his opportunities to work in Spain in the future (Magri 2009). Moreover, after two years of seasonal labour in Spain, and subsequent returns to the country of origin, the migrants benefit from an exception to the labour market test (Organic Law, Article 40,k; IOM 2009). Compliance with the obligation to return can thus lead to being assigned priority for permanent employment in Spain.

The Spanish migration legislation allows for some flexibility, with the possibility to request an extension of the temporary residence permit, of up to a maximum of nine months. Furthermore, seasonal migrants can work for several employers during this time limit of nine months within a period of 12 consecutive months (Magri 2009). The T visa allows migrant workers to move from one employer to another. As the agricultural sector requires some flexibility, this is very useful. Some harvests require quick shifts of workers, and have a temporary character.

In many European countries, the link between migration and development has not been recognized, whereas Spain has introduced the concept of co-development into its migration policy. The Plan Estratégico de Ciudadanía e Integración

(Strategic Plan for Citizenship and Integration) 2007-2010 from the Ministry of Work and Social Affairs, "aims at identifying and promoting development opportunities for the countries of origin while incorporating co-development strategies in the process of integrating migrants" (Magri 2009: 72-73). The plan emphasizes the importance of cooperation among local governments in the countries of origin and destination, and promotes the channelling of remittances towards productive initiatives.

E. Potential for Development and Resilience Building

This chapter discusses the potential of the TCLM programme for the migrants, the country of destination, and the community of origin. In other words, is there a win-win-win outcome for the parties involved?

There is a wide agreement that the TCLM programme impacts positively on the country of destination. The programme fills gaps in the Spanish labour market in a flexible way, without the country having to accept migrants on a permanent basis (Magri 2009; Zapata-Barrero et al. 2010). Secondly, the circular migration experience clearly benefits the participating migrants, as they are offered the possibility to earn a livelihood abroad, which allows them to send remittances to their families. The impact of the programme is even greater if they are able to acquire new skills and learn from their experience abroad (Magri 2009). These 'social remittances' can help the beneficiaries to diversify their income upon their return home (Engelman 2009). It can even help the migrants to increase their resilience to environmental disruptions, and it gives them an alternative to permanent, urban, and/or forced migration.

A more challenging question however is, whether the TCLM programme benefits the migrants' region of origin. During the absence of the migrant workers, environmentally fragile land can recover, allowing marketable crops to start growing again (Engelman 2009). According to Magri, the TCLM project also has the potential to generate development in Colombia, mainly through income-generating activities creating employment opportunities. Due to their strong commitment and loyalty to their home communities, the participants attach great importance

to the development impact of the programme. Through interviews with participants, it has been shown that many of them have plans to start a business. Since the TCLM programme in itself is insufficient to solve Colombia's unemployment problem, income-generating activities are regarded as a tool to generate jobs for the home community (Magri 2009). However, as too little time has passed since the project was introduced, it is not clear yet whether the programme has indeed increased the possibility of implementing productive initiatives. For the moment, only the potential and likelihood of this specific outcome can be assessed.

The co-development goal of the TCLM project is supported by the local governments in Colombia. Together with social workers and the FAS, they assist the workers and their families in the channelling of remittances towards productive initiatives in the region of origin, and help them to develop job-generating projects. However, research has also shown that returned migrants often lack sufficient capital and expertise to start their own business. Although their goal was to reduce the unemployment and increase the resilience of their home communities, most of their first Spanish wage payment was used to pay off debts, improve their own living conditions, and pay for education. Aside from a lack of capital, returning migrants willing to start a business often suffer from a lack of expertise. Even though the migrants have learned from their experiences in Spain and from the training they have received, they still lack the knowledge to deal with bureaucratic and technical issues when starting up a business. Therefore, it can be recommended to provide more professional and technical support in developing and implementing business plans in order to accomplish the programme's development goal (Magri 2009).

F. Replicability of the TCLM Programme

The aim of this final section is to examine whether the TCLM programme could be implemented in other European Member States. As the European Commission proposes the programme as a "good practice" (Magri 2009: 82), it is interesting to investigate the possibility of copying this model, taking national specificities into consideration. In addition, since the TCLM programme has been designed to tackle some of the concerns that have been raised about temporary and circu-

lar migration programmes, certain features of the project should be taken into account for a successful territorial replication of the TCLM model.

Firstly, the political, economic, and institutional context of the host region is decisive for the successful implementation of any labour migration programme. The political will to support temporary labour migration with a focus on co-development is imperative for the replication of the TCLM project. A gap between labour supply and demand in the destination country is another indispensable factor for a labour migration programme. Seasonal labour migration is also stimulated by an economic sector with a calendar linked to the circularity of the temporary migrant. The TCLM project was implemented in the Spanish agricultural sector, where there is a large demand for seasonal migrant workers for the harvesting and processing of fruit. In 2006, foreign workers even counted for 74.1 per cent of the labour forces in this sector (Zapata-Barrero et al. 2010). In addition, a strong employer's organization, with a coordinating and mobilizing management role, facilitates such a project. Finally, the way in which countries deal with irregular migration and with sanctioning employers hiring irregular migrants, plays a vital role (Magri 2009).

Furthermore, respect for migrants' fundamental rights is a necessary condition for the development of a humane and efficient labour migration policy. The lack of legal protection for temporary migrant workers has often been criticized in literature (Castles 2006; Zapata-Barrero et al. 2010). In order to protect the migrants' rights and reduce their vulnerability, the workers participating in the TCLM programme are informed of their rights prior to their departure. They receive information on the destination and the working conditions, and they are assisted by the FAS foundation before departure and during their working period in Spain (Magri 2009). Furthermore, only those employers fulfilling certain requirements are selected for the programme. At the international level, the most comprehensive instrument protecting labour migrants is the United Nations Convention on the Rights of All Migrant Workers and Members of their Families, which specifies a comprehensive set of rights for both regular and irregular migrant workers (General Assembly Resolution 45/158 of 18 December 1990; Boeles et al. 2009). The convention

unites the most important legal provisions from previous International Labour Organization (ILO) instruments (IOM et al. 2007). However, although the convention is open for signature by all states in accordance with its article 86 (1), it has only been ratified by 42 countries, none of which are important destinations for migrant workers (Martin and Abella 2009).

A solid national legal framework, allowing third country nationals for temporary labour migration, is another indispensable factor in the replication of the TCLM programme. The conditions and procedures for (seasonal) labour migration vary between EU Member States (IOM 2009). In order to select the European Member States where such a model could be replicated, a comparative analysis of their legal and institutional framework is needed. Firstly, replication of the TCLM programme is only possible for those European Member States that allow seasonal labour migration for low-skilled workers. Furthermore, the issuance of residence and work permits for third country nationals in some Member States is limited to nationals of certain third countries. In Italy for example, the seasonal quota is mainly reserved for citizens of listed countries, or countries which have signed a cooperation agreement with Italy. The intention is to combat irregular migration and repatriate irregular migrants (Magri 2009). Countries like Spain and Italy, with a large demand for seasonal labour, tend to facilitate seasonal migration through bilateral agreements on migration management with third countries (IOM 2009). Moreover, according to some national legislation, labour migration can only take place within certain quotas established by the government. Furthermore, some countries only allow migrant workers to be employed in certain sectors or certain jobs, while others apply a broader approach regarding the employment of third country nationals. For those countries where labour migration is limited to nationals of certain third countries, the introduction of a TCLM programme might have to be preceded by a cooperation agreement with countries of origin.

Another important aspect is the encouragement of the circularity of the migrant in national policy and legislation. In order to reduce the risk of circumvention of the programme, and to guarantee the return of the temporary worker, the visa that workers in the TCLM programme are

granted is valid for a period of maximum nine months, and does not allow a change of residence status. At the end of the season, the migrant has to return to Colombia. As discussed above, after compliance with this rule for two years of seasonal work in Spain, the “national employment situation” will not be considered in the application for a permanent work permit (Organic Law, Article 40, k; IOM 2009). In order to prevent the programme from acting as an incentive for workers to remain in Spain, participating migrants are also informed about the consequences and risks of an illegal stay in Spain. Moreover, circularity of the migrants is encouraged by the strong expectations of their families and their commitment to their communities of origin. Therefore, the project focused on beneficiaries demonstrating community involvement and leadership (Magri 2009). Migrants are also encouraged to return by the incentive of being re-invited to Spain during the next working season. In order to guarantee the circularity of the participants, it is also important to guarantee that returned migrants can sustain themselves and their families in the country of origin; otherwise, there would be no incentive to return home (Magri 2009).

For countries implementing temporary and circular migration programmes, it is advisable to introduce incentives for the migrants to return to their country of origin. The Italian migration law for example, aims at guaranteeing the return of temporary workers by giving workers who comply with the rules priority for re-entrance during the following season (Magri 2009). Of course, much depends on the contents of bilateral agreements between home and host countries. However, it is impossible to completely avoid the risk of settlement in Spain. Approximately five to six per cent of the workers did not return to Colombia (Magri 2009). Though this is a rather small percentage, it might act as a discouragement for the replication of the programme by other Member States, as the migrants are free to move and travel in the Schengen area.

A programme like the TCLM model furthermore requires some flexibility in national migration law. Employers in the agricultural sector, where Colombian beneficiaries were employed, are exposed to sudden changes in production, and need to be able to respond to changes in the demand for workers. Spanish legislation al-

allows for a temporary permit extension, according to changes in the seasonal work planning. This means that employers can choose to employ a person longer than the period that was initially authorized. In some countries (e.g. Italy), such an extension is not possible. Another aspect of legal flexibility is the possibility for a seasonal migrant to work for more than one employer within the allowed time period. In some countries, such an authorization can even be given after the worker has entered the country (Magri 2009). It would be better to have a legal framework allowing for such flexibility before introducing a seasonal labour migration programme on the basis of the TCLM model.

Another key to success is the efficiency of the migration procedure. In many countries, the complexity of the procedures for legal employment of temporary workers is one of the main obstacles to labour migration. Inefficient procedures even act as a stimulus for employing irregular migrants already residing in the country (Magri 2009). Both the swiftness and reliability of the institutions, in the country of origin as well as in the country of destination, contribute to the effectiveness of the recruitment process (Vergé Oms 2010).

Furthermore, the social and psychological impact of the temporary migration on the migrants and their families staying behind has raised some concerns with scholars. In the TCLM programme, this impact is mitigated through workshops aiming at identifying possible situations of family distress or conflict. Social workers not only prepare the worker for the migration experience, but also his family members left behind. Finally, integration in the place of destination is facilitated both through preparatory activities in Colombia, informing the worker about the local community and its cultural context, and through a wide variety of activities in Spain, organized by the Receiving Area of FAS (Magri 2009).

Last but not least, it is vital for the TCLM programme to be supported by a national policy linking migration with development. In many European Member States, such a strategy does not exist at present.

The aim of this section was to highlight some of the conditions necessary for the implementation of a project based on the TCLM model. This

paper does not constitute an exhaustive analysis of all issues involved. Further research of the national legal frameworks is needed in order to establish whether the above mentioned conditions are present in the specific Member States. It is clear however that flexible legislation, combined with a migration policy linked to co-development, is a condition *sine qua non* for the TCLM programme.

Conclusion and Future Challenges

The TCLM programme is an innovative and inspirational migration model, as it turns environmental migrants into agents for development. It illustrates that the phenomenon of environmental migration can be beneficial for the migrants themselves, and their countries of origin and destination. The aim of this paper was to show how a well-organized programme of environmental migration can help communities to adapt to a changing environment, by providing temporary relief and livelihood alternatives, generating co-development, and building resilience. The programme acts as an opportunity to address some of the underlying motives of forced environmental displacement, such as the lack of resilience to disasters and underdevelopment of environmentally fragile communities. For certain affected populations, planned environmental migration (whether preventive or post-disaster) might be a more durable solution than mere emergency relief.

The TCLM project has been relatively successful. Without this programme, most of the beneficiaries would not have had the opportunity to work temporarily in Spain. It has offered them a facility to increase their income and gain knowledge and skills. Some of the criticisms of temporary and circular labour migration have been adequately addressed. As the programme is, in itself, not a solution for all affected persons, the challenge is to maximize its co-development outcome, and to turn it into a tool creating opportunities for development and adaptation. As more time is needed to observe whether or not the returned migrants will be able to materialize sustainable income and job generating activities, the outcomes of the programme will only become visible after a few years.

Nonetheless, the European Commission has already presented the TCLM programme as a 'good practice' for the management of migration. This paper has identified different variables involved in realizing the programme's consolidation and replication. Further research into national migration legislation and policy is necessary to examine the possibilities for implementing the model in other European Member States. However, some limitations have to be taken into account when promoting the TCLM programme as a model for environmental migration. Firstly, circular migration is only relevant for regions of origin that have not become permanently uninhabitable. A TCLM programme furthermore represents a context-based migration framework that should be adapted to the specific local context, both in the country of origin and of destination. Finally, the number of direct beneficiaries, i.e. participating migrant workers, seems to be limited. Therefore, the focus must be on the development impact of the migration experience for the communities of origin.

In the author's opinion, one of the most important merits of the TCLM programme is that it brings together migration policy and environmental and development policy. Governments could integrate environmental migration into their development policy by enhancing migrants' contribution to the sustainable socio-economic development of their countries of origin through recognizable local and community projects. Moreover, migration could be mainstreamed into national and international adaptation plans, as it can relieve pressure on destructed or degraded regions, and provide alternatives to the affected population. Finally, environmental motives could be included in a coherent migration policy. By creating programmes of legal short-term migration, and prioritizing victims of environmental disruptions, we can both manage migration when migration pressure rises, and offer relief to affected persons.

The association of migration with adaptation and development of disaster-affected communities represents a coherent, comprehensive, and durable approach towards environmental degradation. If the EU would adopt such a coherent migration policy, it might set a precedent for linking migration, development, and adaptation in the rest of the world. One of the challenges

is to manage this type of migration in ways that protect the rights of migrants. For the author's research, this case study is the beginning of a new theoretical process in which it is tried to put forward the nexus between the mentioned policy areas, and define the necessary legal framework to support this nexus. This could in turn help to define new directions and innovations in the field of environmental migration.

¹ As for Colombia, an estimated 3.3 million nationals have moved to other countries, and their remittances to Colombia counted for \$4.6 billion in 2007 alone.

² Circular migration as a pattern of human mobility is a migration model giving migrants the option to move back and forth between home and host countries, often with mutually beneficial policy goals.

³ Foundation for Peasant Solidarity.

⁴ The 2004-2006 AENEAS programme is now succeeded by the 'Thematic programme for cooperation with third countries in the areas of migration and asylum' (http://ec.europa.eu/europeaid/how/finance/dci/migration_en.htm).

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Climate Change and Organizational Change in UNHCR

Nina Hall ¹

Abstract

UNHCR was created in 1950 to deal with mass displacement caused by World War II. Refugees were defined as those fleeing persecution based on race, religion, nationality, membership of a particular social group or political opinion (1951 Convention Relating to the Status of Refugees). UNHCR was neither designed nor conceived as a protection agency for those displaced by climate change. Yet climate change has since risen up the international agenda, and the agency faces a strategic challenge: does it engage with or ignore this new issue area? This paper examines the changes in organizational *rhetoric, policy, structure, operations* and *mandate* in response to the issue of climate change induced displacement. It finds that despite reluctance from many Member States, UNHCR has engaged with climate change and significantly changed its rhetoric and policies. However, it has only made minor changes to its operations and structure and has not sought a formal change of mandate. These findings have significant implications for international relations theory as they illustrate how intergovernmental organizations act independently and at times against member states' preferences – contrary to the assumptions of neo-liberal institutionalism (Keohane 1989). Policymakers and academics seeking to address the gaps in international protection frameworks will also be interested in these findings. Although UNHCR does not explicitly endorse a new convention or a broadening of the 1951 convention, the current High Commissioner is looking to expand the agency's mandate into natural disaster displacement. 2011 may provide the ideal forum for this, with two major ministerial meetings planned.

Key-words: UNHCR, Climate change, Displacement, International organizations, Organizational change

Introduction

UNHCR was created to address a specific problem: refugee protection. The emergence of new international issues which fall outside its mandate poses a challenge to UNHCR. The agency must make a

strategic decision about whether to engage with or ignore these new problems. Climate change is one such difficult challenge. In the past decade climate change has risen to the top of the international agenda. However, UNHCR has a narrow mandate; it is not an agency of forced displacement, and could not currently offer protection to those displaced internationally by climate change. Moreover, UNHCR's executive committee, comprised of Member States, has not mandated the agency to assist those displaced by climate change. In fact, many Member States have expressed concern that such a move would overstretch the agency and detract from its core work of refugee protection. This poses an interesting puzzle: why, given the reluctance of many Member States, has the agency chosen to pursue the issue of climate change induced displacement? In addition, how is it changing to address the issue?

This paper focuses on the processes of organizational change within UNHCR in response to the issue of climate change. It traces how UNHCR has adapted to address climate change by examining five types of organizational changes: *rhetoric, policy, structure, practice, and mandate*. This typology is new and addresses a gap in the international relations literature as there are few typologies that distinguish between different types of organizational change. International relations scholars often reduce organizational change to one dimension and thus conflate mandate or policy changes with operational or implemented changes that have occurred (Gutner 2005; Luken 2009; Nielson and Tierney 2003). As a result, international relations have been unable to investigate if different types of organizational change are factors of different causal processes. This typology addresses this gap and proposes that a change in rhetoric occurs when the leader of an organization engages with a new issue and advocates a new organizational position on this issue. Changes in policy can be identified by the publication of new policy papers and reports that outline a new approach to an issue. Meanwhile, changes in structure represent the creation of new roles, units, or departments or a significant modification of old roles or departments. A change in programming is associated with the development and implementation of new operational programmes. Lastly, a change in mandate is a broader category, encompassing the other four, in which the organization changes

the core mission of its work and seeks a formal endorsement from the executive board to do so. While there is a certain degree of change in rhetoric, which we would expect to happen as new issues arise, what is of interest is when and why this change translates to significant policy, structural, programming, and IO-led mandate change.

To identify these changes this paper draws on fieldwork at the UNFCCC Negotiations in Copenhagen in December 2009 and in Geneva in March 2010. Over 20 semi-structured interviews with United Nations officials, NGOs, and Member States were conducted. The chapter begins by examining the positions of NGOs, governments, and academics in the politicized debate on climate change and displacement. The substantive section briefly outlines UNHCR's history and then traces the changes in each of the five aforementioned categories.

Climate Change and Displacement

Climate change has become recognized as one of the most significant international challenges this century. The IPCC has predicted that it will lead to an increase in extreme weather events, such as floods, storms, and cyclones, as well as slow-onset environmental change – drought, desertification, and sea level rise (IPCC 1990). These changes are likely to have major humanitarian impacts. The Stern Report, for instance, forecasts that "greater resource scarcity, desertification, risks of drought and floods, and rising sea levels could drive millions of people to migrate" (Stern 2006). NGOs such as CARE, Christian Aid, and World Vision have also argued that climate change will trigger mass displacement and up to one billion so-called "climate refugees" (Christian Aid 2007). This message has been reinforced by a broad transnational civil society movement calling for "climate justice" which has identified "climate refugees" as the tangible victims of government inaction to mitigate carbon emissions. Images of low-lying Pacific Islands submerged by water, such as Tuvalu and the Carteret Islands, have dominated the press coverage and are highlighted as canaries of the climate change coal mine (Telegraph 2009). Governments have reframed this problem in national security terms, the U.S. Quadrennial Defense Review, for example, in 2010 identified climate change as a future cause of conflict and mass migration (US Depart-

ment of Defense 2010). From a security perspective, climate change is seen as a threat multiplier that could trigger humanitarian crises and regional instability and thus lead to more humanitarian interventions (Gleditsch et al. 2007).

Climate change is a massive global challenge that could have major impacts on societies across the globe, particularly in developing countries. However, the assumption that there is a direct and linear causal relationship between climate change and migration is problematic. Such a causal link has been the subject of much debate between "maximalists" (predominantly environmental social scientists) and "minimalists" (mainly migration theorists) (Morrissey 2009). Maximalists have emphasized the fact that climate change is likely to lead to hundreds of millions of displaced peoples – Meyers' estimates of 250 million "environmental refugees" are often cited (Meyers 1993 and 1997). Minimalists, such as Richard Black (2001), have challenged these claims and stated that environmental change is not a determining factor of migration or displacement (except in very extreme cases). They claim that migration is a multi-causal, complex phenomenon and thus one cannot separate out climate change – or environmental change – as a distinct driver of migration (Brown 2008; Gemenne 2009; Morrissey 2009; Zetter 2009). Migrants move because of a range of social, political and economic factors (Black 2001). These theorists also take issue with the negative view of migration portrayed by many governments and NGOs who frame climate change as a security threat (Elliott 2010). They highlight that migration is not necessarily a problematic response to environmental change, and for centuries has been an important adaptation and survival strategy (Barnett and Webber 2010).

Refugee law scholars have also problematized the term "climate change refugee" (McAdam 2010b). A refugee, according to the international refugee convention (1951) does not specifically include someone displaced by a natural disaster or by climate change related impacts. A refugee is defined as someone who: owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable, or owing to such fear, is unwilling to avail himself of

the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, unwilling to return to it (UNHCR 2007a: Article 1A (2) [author's emphasis]).

Any attempt to create a new category of "climate change refugees" would be inherently problematic as it is difficult to causally link climate change to a specific natural disaster. Furthermore, even if one could prove that a particular drought was caused by climate change it would be difficult to prove that these slow-onset climatic changes resulted in displacement (McAdam 2010b). For these reasons, this chapter rejects the notion of "climate change refugee" and stresses that the notion of "environmental migrant" is problematic. Yet, despite the inherent problems with these terms they are part of the policy, advocacy, and even academic discourse and must be engaged with on these grounds.

In short, there is a politicized debate on the humanitarian impacts of climate change. On the one hand, many NGOs, civil society movements, and governments have argued that climate change will lead to mass displacement and result in "climate change refugees". On the other hand, migration and legal experts have problematized the direct causation implied in these arguments. They have argued that migration is an important coping strategy and should not only be seen in negative terms. While there is a growing body of literature contributing to our understanding of how environmental changes may contribute to migration there has been no analysis of how UNHCR, the UN agency responsible for refugees (and increasingly other displaced peoples), is responding.

Organizational Change and UNHCR

UNHCR was established in 1950 with a limited mandate to offer protection to European refugees displaced by the war (UNHCR 2007a; Loescher 2001; Goodwin-Gill and McAdam 2007)². The agency was created to respond to the specific problems of post-war Europe – thousands of people displaced by war who sought refuge in another state (Loescher 2001; Loescher et al. 2008). The agency was neither designed nor conceived as a protection agency for people displaced by natu-

ral disasters. Moreover, UNHCR had limited autonomy to determine its own agenda. Its statute (1950) stated that the High Commissioner was to act "under the authority of the General Assembly" and should report annually to the General Assembly through the Economic and Social Council (ECOSOC) and follow policy directives issued by either of these two bodies (Loescher et al. 2008: 75). The agency has an executive committee, made up of Member States who delegate it responsibility and authority on refugee issues, and to whom it has to report on an annual basis (Goodwin-Gill and McAdam 2007; Loescher et al. 2008). Through this annual reporting and frequent informal discussions Member States have monitored UNHCR's work to ensure that neither "mandate creep" nor budget creep occur. Member States' fundamental concern is that UNHCR does not expand beyond its mandate and thus require additional funds (Loescher 2002)³. As Loescher describes, the agency "often walks a tightrope maintaining a perilous balance between the protection of refugees and the sovereign prerogatives and interests of states" (Loescher 2002: 2).

Although UNHCR began with a limited mandate it has dramatically expanded in the past 60 years, both geographically and in scope (Crisp 2008; Loescher 2001; Loescher et al. 2008; Martin 2004). In the 1960s, UNHCR expanded beyond the European continent into Africa; in the 1970s into South East Asia, and now its operations span the globe from Latin America to the Middle East (Loescher et al. 2008). In addition to refugees, UNHCR also offers protection and/or assistance to: returnees, asylum-seekers, IDPs, and stateless people (Crisp 2001; Loescher 2002; Loescher et al. 2008). Moreover, the current High Commissioner is seeking to position the agency as the UN agency for "forced migration" rather than focusing solely on refugees and stateless people.⁴ Although UNHCR's de facto assistance role has expanded, its de jure, or formal legal role, has not expanded to the same extent. The tension between this narrow formal mandate and UNHCR's tendency towards expansionism is an important context for this chapter.

UNHCR and Climate Change

Climate change came onto the world agenda in the late 1980s and 1990s; however, it was only framed as a humanitarian issue in the 2000s.⁵ For most of the 1990s, climate change was conceptualized as a problem of mitigation - reducing carbon emissions to avoid climate change - not adaptation - or preparing and addressing the impacts of climate change (Hulme 2009; Moore 2010). Securing a global agreement on mitigation of greenhouse gases was, understandably, not an issue that was perceived as relevant to the work of UNHCR or other humanitarian actors. In the early to mid-2000s the framing of climate change shifted as NGOs and Member States realized that climate change was already having and would continue to have a major impact on people, particularly in developing countries. It was no longer enough to reduce emissions; states had to decide how they would foster 'adaptation' to these environmental changes (Moore 2010). Discussions on adaptation were also framed by the North-South divide. Developing states argued that developed countries must offer financial assistance to the most vulnerable to adapt to the impacts of climate changes (Hulme 2009; Malone 2009).

In this context, humanitarian agencies realized they could apply their expertise in disaster relief and reduction to addressing the impacts of climate change in developing countries. In the early 2000s some agencies began to work on the humanitarian impacts of climate change. IFRC, for example, established a climate change centre in 2002 to 'better understand and address the risks of climate change, in particular in the context of disaster risk reduction, disaster management, and health and care programs, with a focus on the most vulnerable people'.⁶ UNHCR, however, did not engage in any climate change-related work in the early to mid 2000s. Senior staff did not see climate change as an important priority and were reluctant to engage with the issue, which was perceived as outside their mandate. In fact, a number of UNHCR staff members stated in interviews that 'UNHCR was a late starter' as there was a high degree of internal resistance to working on the issue.⁷

As a result the research and policy leadership on the issue was initially taken by other humanitarian agencies - such as the Norwegian Refugee Council, IFRC and IOM.⁸ In June 2008, for

example, Madeleen Helmer, the Director of the Red Cross's Climate Change Center, put climate change on the agenda of the Inter-Agency Standing Committee (IASC) for the first time.⁹ In a speech to the committee she urged the humanitarian community to engage with the UNFCCC and the issue of climate change. As a result of her speech, the Inter-Agency Standing Committee decided to establish a climate change task-force and worked on collective submissions to the UNFCCC. UNHCR was initially sceptical of this new stream of work.¹⁰

Rhetoric Change

The new High Commissioner, António Guterres, who started in 2005, began to change this. Guterres, a former Prime Minister of Portugal, saw climate change as an important issue to engage with. According to one staff member he had a "strong belief that climate change was a new phenomenon that must be dealt with".¹¹ In 2007 at the annual meeting of the Executive Committee, UNHCR's governing body, Guterres began his annual speech to donors by highlighting that the drivers of displacement were changing. He claimed that: "Almost every model of the long-term effects of climate change predicts a continued expansion of desertification, to the point of destroying livelihood prospects in many parts of the globe. For each centimetre that the sea level rises, there will be one million more displaced. The international community seems no more adept at dealing with those new causes than it is at preventing conflict and persecution. It is therefore important to examine the reasons, the scale, and the trends of present-day forced displacement." (UNHCR 2007b)

This was a significant step for Guterres to take: it was the first time the agency sought to link climate change directly to its refugee mandate to donors.

The Official Summary Record of the 2007 Executive Meeting notes a mixture of responses from states to the High Commissioner's statements. One state was actively supportive (Norway), some states were vaguely supportive, and one was completely opposed (Austria) (UNHCR 2007). Interestingly, when the issue was raised next at the September 2009 Executive Committee, the Bangladeshi representative stated that he had "reservations about any enlargement of the

office's responsibility to cover climate change-induced displacement scenarios. UNHCR should remain focused on its mandated areas where it had comparative advantages" (UNHCR 2009c). While Bangladesh does now appear to support revision of UNHCR's mandate¹² an interview with another Member State delegate confirmed that many states were opposed to UNHCR expanding into new areas such as climate change-induced displacement.¹³ Furthermore, most of the UNHCR staff interviewed claimed that states were completely opposed to UNHCR expansion into this area. As Jeff Crisp, the head of UNHCR's Policy Development and Evaluation Service, states, in his personal view many key UNHCR donors have "expressed persistent wariness with regard to the organization's expansion, often expressing the opinion that the organization should return to its 'core mandate' which they consider to be that of providing refugees with protection in developing regions" (Crisp 2009: 76). While some Member States have supported UNHCR's engagement with climate change, the institutional memory and official record suggest that the majority of the executive committee did not actively encourage the agency to engage with this new issue.

Nevertheless, over the course of 2008 and 2009 the High Commissioner continued to emphasize in many high-level speeches, interviews, and articles that climate change would trigger mass displacement (Dickson 2010; Guterres 2008). On 17 June 2008 in an interview with the Guardian he claimed that: "Climate change is today one of the main drivers of forced migration, both directly through impact on environment – not allowing people to live any more in the areas where they were traditionally living – and as a trigger of extreme poverty and conflict" (Borger 2008). In December 2009 he made his first appearance at the UNFCCC negotiations where he spoke at a number of high-level side-events and press conferences about the humanitarian impacts of climate change. He claimed that "Climate change is expected to unseat conflict as the main driver of mass migration in coming years" and has blurred the boundaries between migration and displacement (Bennhold and Brothers 2009). He also implied the need for a new convention stating that "the international community must develop new mechanisms for the protection of climate refugees".¹³ These were "bold

statements" and constituted a radical shift in UNHCR's position.¹⁴

The High Commissioner, by suggesting that there was a need for new protection frameworks, was in part positioning his agency as a key player in providing this protection. These statements were also potentially dangerous for UNHCR's core work in refugee protection as he implied that the legal refugee definition was no longer relevant and should be significantly reworked. Some UNHCR staff conveyed to me that the High Commissioner made a strategic decision, as an astute politician, to take a proactive stance on climate change, natural disasters, and displacement.¹⁵ He saw that the issue was moving up the international agenda and UNHCR needed to engage with it in order to retain relevance and credibility. As previously documented, some states in the donor and recipient communities raised questions about this shift (UNHCR 2007). They did not see climate change as relevant to UNHCR's work and were concerned with potential mandate creep (and thus budget creep) if it were to get involved in this new issue area. Despite this, the High Commissioner continued to make 'bold' statements on UNHCR's potential role in providing protection to victims of natural disasters and climate change.

Policy Change

While the High Commissioner was emphasizing the humanitarian impacts of climate change, there was comparatively little policy work undertaken on the subject within UNHCR. The first policy paper was produced in September 2008 by the Policy Development and Evaluation Service of UNHCR – a year after Guterres first raised it with the Executive Committee. This paper was needed to catch up with, and back up, the High Commissioner's previous statements. The paper was directed as much at an internal audience as an external one, and aimed at offering a preliminary policy stance.

The UNHCR policy paper (2008a) described the complex links between climate change and displacement, and made three central points. Firstly, the agency was strongly opposed to the use of the term "environmental or climate change refugee". The paper argued it was a misleading and "potentially dangerous" term and that "refu-

gee" should only be applied to those covered by the refugee convention (UNHCR 2008a). Secondly, it recognized that climate change could lead to displacement but this would predominantly be internal displacement. UNHCR had responsibility for protection of such internally displaced peoples under the cluster approach – the UN's consensual division of labour in humanitarian emergencies. As it stated "Some movements prompted by climate change could indeed fall within the traditional refugee law framework bringing them within the ambit of international or regional refugee instruments... as well as within UNHCR's framework" (UNHCR 2008a: 6)¹⁶. Finally, the paper identified gaps in the international protection framework where those displaced internationally by climate change would not fall under their mandate. It stated that 'UNHCR does recognize that there are indeed certain groups of migrants, currently falling outside of the scope of international protection, who are in need of humanitarian and/or other forms of assistance' (UNHCR 2008a: 9). The paper displayed a cautious approach and offered few insights into how UNHCR would integrate climate change adaptation measures more systematically into its work or how it would respond to those who fell outside its mandate.

In 2009 in the lead-up to Copenhagen the policy paper was updated yet barely changed at all. The most significant changes in the updated policy paper were two new sentences that called for significant operational and structural shifts to integrate climate change into the agency's work. The 2009 policy paper stated that:

"All UNHCR staff involved at the country level with refugee and IDP settlements, both rural and urban, will need to be equipped with strategies to combat and cope with the effects of climate change, impacting not just on persons of concern to UNHCR but also broader host communities" (UNHCR 2009a: 11).

The policy paper also claimed that UNHCR would, going forward, have an "overarching policy to tackle the effects of climate change" which would be reflected in "operations management; protection strategies; and advocacy" (2009a: 11). While these were bold statements there is little evidence that they have been supported by any larger climate change policy development. There was, for example, no "climate strategy", although

one is mentioned in the 2009 paper.¹⁷ Most importantly, a significant fact about the paper was that, apart from the two sentences highlighted above, almost nothing changed. The structure and content followed almost verbatim the 2008 policy paper. In fact, a number of UNHCR staff expressed their confusion about why UNHCR had attempted to update this paper and yet made no substantive changes.¹⁸ In mid-2009 there was also a legal paper drafted on statelessness and climate change but this never appeared publicly.¹⁹ Alongside these internal policy developments UNHCR was engaging more constructively with the humanitarian community's Inter-Agency Task Force on Climate Change. They developed a number of joint submissions to the UNFCCC on climate change induced displacement with IOM and other humanitarian actors.²⁰ Yet there was little further internal policy development on climate change between 2008 and 2009 in UNHCR. This lack of policy development appears particularly odd given it was the year of Copenhagen – the biggest climate change negotiations ever (Schroeder 2009).

Structural Change

Why was there so little policy change in UNHCR? Part of the explanation is that there was little "structural change" within the agency. In 2008 the UN Secretary General Ban Ki-Moon had called for UN agencies to establish climate change focal points to prepare for Copenhagen and to give higher organizational priority to the issue (Ki-Moon 2008). The High Commissioner set up an internal UNHCR task force on climate change backed by his "desire for the Office to engage fully and effectively in the international discussion on these issues" (UNHCR 2008b). Its brief included: liaising with the executive office to ensure that a consistent UNHCR position on climate change was articulated; tracking developments related to climate change as they concerned the mandate of UNHCR, and providing inputs to the IASC task force on climate change (UNHCR 2008b). The task force included a number of people across the agency – from the department of operations support to protection – to work on aspects of climate change within their other routine responsibilities.

However, the task force neither triggered nor constituted organizational change within UNHCR – in fact there is evidence to suggest there was almost no change at all. Only a few new positions were created to work on climate change and all were temporary and/or part-time. Moreover, some UNHCR staff reported that even though they were supposedly responsible for working on climate change, they had neither the time nor the space to work on it. One staff member, for instance, claimed that he "was not encouraged to make substantive changes or to take the issue seriously" as he never had the means or authority to turn it into a serious policy issue.²¹ Some senior managers did not prioritize climate change and were reluctant to delegate staff to work on it. Moreover, the agency did not establish a formal focal point for climate change: although one nominally existed they were given no formal brief note on this work.²² Instead the lead role for climate change was passed around the agency like a 'hot potato'. The focal point role was originally in the Policy Development and Evaluation Service in 2008; in 2009 it was handed to the Division of Operations and now (2010) UNHCR is in the process of transferring it to the Division of International Protection. These examples illustrate that the agency is struggling to decide how to address the issue, where it should be located within the agency, and who should be working on it. This suggests there is no consensus that climate change is an important issue to which UNHCR should dedicate staff resources.

Operational Change

From an operational perspective, UNHCR has made no significant changes to integrate climate change into its humanitarian work.²³ At the Geneva level there has been no impetus to support field offices in mainstreaming climate change into their work or developing adaptation programmes. According to one UNHCR staff member, there are "so far no concrete plans to operationalize climate change-related changes in our programmes or works in the field".²⁴ Within UNHCR Geneva there is only one person who has worked specifically on climate change from an operational perspective. This staff member visited Kenya to explore if and how UNHCR could access adaptation funds. He found that the Kenyan field level offices had difficulty responding to questions on

how climate change was impacting their operations and did not have the capacity to work on developing climate change adaptation projects. In April 2010 this staff member left on a posting and said it was "not clear" if his position would be filled.²⁵ From this preliminary research it appears that changes in rhetoric and minor changes in policy have not filtered down to the operational level of UNHCR, nor have they been driven from the field level.

Mandate Change

It comes as no surprise given the lack of structural and operational change that at this stage UNHCR has not formally changed its mandate to integrate people displaced by climate change. Although UNHCR representatives continue to highlight protection gaps in their mandate they are clear that the agency is not seeking to take on new 'clients' such as those displaced internationally by climate change. In fact, there has been a strategic decision within the agency not to bring up the issue for deliberation at Executive Committee meetings.²⁶ Senior staff members are reluctant to raise the issue with states, who they believe will be unsupportive of mandate creep into climate change-induced displacement.

However, more recent developments suggest that the High Commissioner is seeking to expand UNHCR's mandate into the protection of those displaced by natural disasters. There has been a significant shift in language – which was visible even before Copenhagen – with the High Commissioner emphasizing the role that UNHCR can play in natural disasters. For example, the agency has increasingly taken a de-facto role in providing assistance to those displaced by natural disasters: it was involved in the recovery efforts after the Asian tsunami (2004) and more recently following the earthquake in Haiti (2010).²⁷ At a recent principals' meeting of the IASC (the annual meeting of the directors of the core humanitarian agencies) the High Commissioner made a bid to lead the protection cluster for natural disasters in addition to the protection cluster for conflict and the IASC assigned the agency this responsibility for a 12 month trial period in late 2010.²⁸ This marks a significant expansion for the agency. The High Commissioner has also clearly stated to staff in internal discussions since his re-election in 2010 that he sees the agency as one of "forced

migration".²⁹ Thus, although the language of climate change is not often used, the High Commissioner is making a clear bid to expand UNHCR's mandate into the area of so-called environmental displacement.

The 60th anniversary of the refugee convention and the 50th anniversary of the statelessness convention in 2011 may provide the ideal opening for further expansion of UNHCR's role. While the plans at this stage (in mid-2010) are in an early, formative phase (in their "diapers" as one staff member described them³⁰) there is discussion within UNHCR about how these commemorations, and the two ministerial state party meetings that they will culminate in, could be used to fill protection gaps for forced displacement. In these discussions it is possible that the High Commissioner will seek states' support for the creation of new protection frameworks for those currently falling outside the refugee and statelessness convention – in particular for those displaced by natural disasters and/or climate change. We will have to wait to see how these plans unfold.

However, if the debate about climate change and displacement is reframed solely in terms of natural disasters and displacement, UNHCR may end up excluding some people. While there is some overlap between the two categories, neither completely covers those who currently fall outside UNHCR's protection framework. On the one hand "climate change induced displacement" could cover those fleeing extreme weather events as well as slow-onset environmental change (sea level rise, desertification, and drought) but not earthquakes (which have been a major cause of displacement in recent years). While natural disasters include all disasters – from earthquakes to floods – it is not certain whether slow-onset changes would be included in this category. Moreover, displacement from slow-onset climate change will blur the distinctions between voluntary and forced migration. It is not clear what UNHCR's protection role would be in these 'grey' areas where migration is neither clearly forced nor voluntary. Furthermore, both of these terms ("climate change induced displacement" and "natural disaster displacement") fail to include all "survival migrants": people who flee failed states or abject poverty (Betts and Kaytaz 2009). Moreover, migration scholars have argued that it is those who are left behind who are often the worst off

(Gemenne 2009; Morrissey 2009). In short, while the climate change debate is an important debate for UNHCR, to engage with the notion of a "climate change refugee" is problematic. UNHCR will need to think much more holistically about creating a new refugee category in order not to exclude people or further add to the problem.

Conclusion

UNHCR was created with a narrow mandate to protect political refugees in Europe fleeing conflict and persecution. It was never envisaged that it would or could provide assistance or protection to people fleeing climate change or natural disasters. Despite this narrow mandate the agency has evolved and expanded over the past sixty years. It began in the 1990s, for example, to offer de-facto humanitarian services to people internally displaced by natural disasters. However, it was slow and reluctant to engage with policy, academic, and advocacy debates over climate change and displacement. The agency adopted a significant shift in rhetoric in 2007 under a new High Commissioner who sought to position the UNHCR as a 'forced migration' rather than just a 'refugee' agency. He made a series of bold statements identifying the need for protection for those displaced by climate change. UNHCR's policy position has evolved somewhat over the last five years. It has shifted from ignoring the issue (early 2000s) and resistance to any discussion of climate change and displacement, to engaging with the issue (2008 – 2009). However, this shift has not translated into any significant structural, operational, or mandate change. UNHCR's attempts to integrate climate change have been shallow rather than deep.

What are the broader implications of this research? From a policy perspective, this chapter offers important insights into how UNHCR is positioning itself within the debate on climate change, migration, and displacement. This is crucial as many academics and civil society actors have called for the creation of a new convention for 'climate change refugees', but there has been no analysis of what institutional potential or support exists within UNHCR for such a major change. This research has highlighted that such a convention is unlikely at this point, given UNHCR's lack of structural change in response to the issue of climate change – and its disagreement

that the Convention is the appropriate method by which additional protection can be advanced. However, this chapter has also highlighted the potential for UNHCR expansionism into natural disaster protection, which may provide new institutional frameworks for those displaced by climate change. Further research needs to be carried out to investigate if there are differences between UNHCR's de jure protection (what they officially say they are offering) and de facto protection (what they actually end up doing on the ground in times of crisis).

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² Circular migration as a pattern of human mobility is a migration model giving migrants the option to move back and forth between home and host countries, often with mutually beneficial policy goals.

³ Their mandate was set out in General Assembly Resolution 428 (V) of 14 December 1950.

⁴ Interview with delegate from a donor state to UNHCR, Tuesday 23rd March, Geneva 2010.

⁵ Interview with UNHCR senior staff member e, 14 May 2010. Susan Martin (2004) has also advocated such a shift.

⁶ The most significant formal expansion of UNHCR's mandate was the 1967 Protocol. This enabled UNHCR to offer protection and assistance to refugees without the time limitation stipulated in the 1951 Refugee Convention. According to the convention UNHCR could only offer protection to those displaced as a consequence of events occurring before 1 January 1951.

⁷ Telephone interview with IFRC staff member, 16 April 2010.

⁸ The Climate Change Centre, International Federation of the Red Cross, <http://www.climatecentre.org/site/about-us> viewed 10 May 2010.

⁹ Telephone Interview with UNHCR senior staff member e, 14 May 2010.

¹⁰ Interviews with UNHCR, IOM, OCHA, IFRC and IASC members March – May 2010.

¹¹ The committee is a grouping of humanitarian organizations, including the United Nations High Commission for Refugees (UNHCR), the World Food Programme (WFP) and the International Organization for Migration (IOM). Interviews with UNHCR, IOM, Office for the Coordination of Humanitarian Affairs (OCHA). IFRC and IASC members March – May 2010.

¹² Interviews with UNHCR, IOM, OCHA, IFRC and IASC members March – May 2010.

¹³ Interview with UNHCR staff member a, Geneva, 17 March 2010.

¹⁴ In December 2009 the Bangladeshi Finance Minister Abul Maal Abdul Muhith argued that 'UNHCR needed to be revised' in an interview with the Guardian newspaper (Grant et al 2009).

¹⁵ Interview with delegate to UNHCR, Geneva, 23 March 2010.

¹⁶ This is translated from the French: 'la distinction actuelle entre réfugiés et déplacés est dépassée par les effets du changement climatique. La communauté internationale doit inventer de nouveaux mécanismes de protection pour les réfugiés climatiques' (Allix 2009).

¹⁷ UNHCR senior staff member e, Thursday May 14 2010, Telephone Conversation.

¹⁸ Interviews with UNHCR staff member a 17 March and senior staff member c 30 March 2010.

¹⁹ Although UNHCR is only legally mandated to engage with IDPs caused by armed conflict.

²⁰ UNHCR senior staff member e, Thursday 29 April 2010, Telephone Conversation.

²⁰ Interview with UNHCR staff members March – May 2010.

²¹ UNHCR has published other documents outlining if and how the stateless convention could cover populations affected by climate change. Statelessness is within UNHCR's mandate. See UNHCR 2009.

²² IOM, UNHCR and the United Nations University (UNU), (2009). *Climate change, migration, and displacement: impacts, vulnerability, and adaptation options*, Submission to the 5th session of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention (AWG-LCA 5). Bonn, March 29 – April 8 2009

²³ Telephone interview with UNHCR senior staff member e, 14 May 2010.

²⁴ Telephone interview with UNHCR senior staff member e, 14 May 2010.

²⁵ This paper can only make preliminary judgments on the operational level as this will be the subject of future field-work in Kenya. This section of the paper is based on telephone and conversations with UNHCR staff in Kenya (16 June, staff member f) and Geneva (26 March, staff member b) as well as with others working on refugee and displacement issues in Kenya. Since the 1990s UNHCR has had environmental officers in many countries whose primary role is to manage and minimise the impacts of refugees on the environment. There are signs of minor changes within the environmental officer portfolio: such as the development of new programmes which focus on energy efficient, clean burning stoves and the use of solar energy in camps. See for example the Concept Note for UNHCR's environmental awareness programme in Kenya (2010).

²⁶ Personal communication with UNHCR staff member d, 13 April 2010. Once exception is UNHCR Papua New Guinea which is planning to help the government and local NGOs register and relocate people from the Carteret Islands and other neighbouring low-lying atolls to Bougainville. Telephone Interview with Associate Director of the Australian Jesuit Refugee Service, February 14th 2011 and see also Ben Farrell, Pacific islanders face the reality of climate change . . . and of relocation, UNHCR News Stories, 14 December 2009, accessed at <http://www.unhcr.org/4b264c836.html> on 20 December 2009.

²⁷ Interview with UNHCR staff member d, 13 April 2010.

²⁸ Telephone interview with UNHCR senior staff member e, 14 May 2010.

²⁹ See UNHCR. 2010. *Earth, wind and fire, A review of UNHCR's role in recent natural disasters*, UNHCR: Geneva

³⁰ Telephone interview with UNHCR senior staff member e, 14 May 2010.

³¹ Telephone interview with UNHCR staff member d, 13 April 2010.

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- Telephone interview with UNHCR staff member d. 13 April 2010.
- Telephone interview with UNHCR staff member e. 14 May 2010.
- Telephone interview with UNHCR Kenya staff member f. 14 May 2010.
- Telephone Interview with Associate Director of the Australian Jesuit Refugee Service, February 14th 2011
- The author was also present at the United Nations Framework Convention on Climate Change (UNFCCC) Negotiations at Copenhagen from 11 - 18 December 2009 and attended a number of side-events and held informal interviews with NGO and IO representatives.

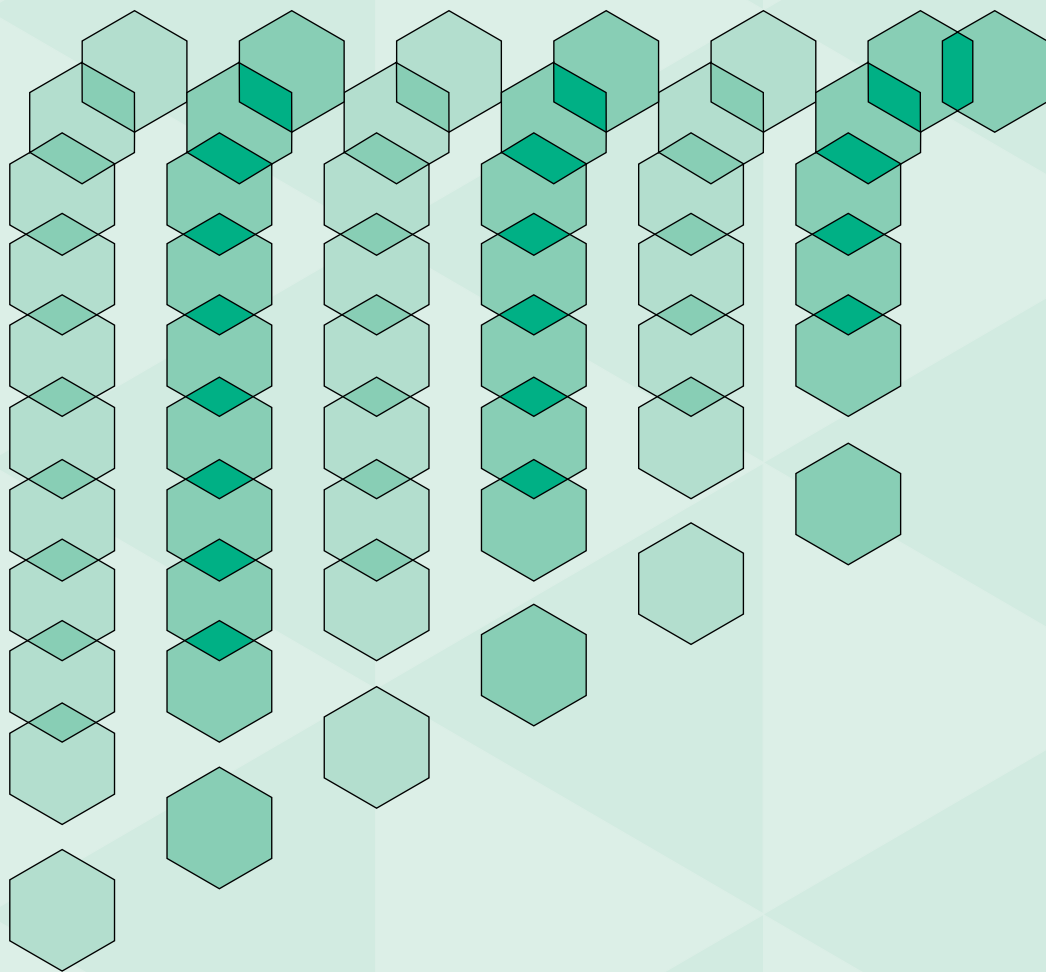
* Note: I have identified UNHCR interview participants with a letter that corresponds with the chronological order in which I first interviewed them to distinguish between interviewees in the footnotes.

Acronyms

ADC	Austrian Development Cooperation
ANSG	Anambra State Government, Nigeria
ARENA	Alianza Republicana Nacionalista
AtR	Agreement to Recruit
AU	African Union
AusAID	Australian Agency for International Development
CCEMA	Climate Change, Environment and Migration Alliance
CCIDRVR	Red Cross Climate Change-Induced Disaster Risk and Vulnerability Reduction
CDMG	European Committee on Migration
CEIBA	Construyendo Espacios Integrales para el Bienestar Ambiental
CIESIN	Centre for International Earth Science Information Network
COHA	Council on Hemispheric Affairs
COMURES	Corporación de Municipalidades de la República de El Salvador
COSUDE	Agencia Suiza para el Desarrollo y la Cooperación
CRG	Calcutta Research Group
CRISOL	Psicólogos para Intervención en Crisis, Solidaridad
CSA	Central Statistics Authority
CSU	Colorado State University
DAAD	German Academic Exchange Service
DEEWR	Department of Education, Employment and Workplace Relations (Australia)
DFID	Department for International Development, United Kingdom
EC	European Community
ECHO	European Commission's Humanitarian Aid Office
EPRDF	Ethiopian People Revolutionary Democratic Front
ERCS	Ethiopian Red Cross Society
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FAS	Fundació Pagesos Solidaris (Spain)
FEMA	United States Federal Emergency Management Agency
FLASCO	Facultad Latinoamérica de Ciencias Sociales
FMEN	Federal Ministry of Environment, Nigeria
FMLN	Farabundo Marti Liberacion Nacional

GAO	United States Government Accountability Office
GDP	Gross Domestic Product
GFDRE	Government of the Federal Democratic Republic of Ethiopia
GFMD	Global Forum on Migration and Development
GIS	Geographic Information System
GNOCDC	Greater New Orleans Community Data Center
HUD	United States Department of Housing and Urban Development
IASC	Inter-Agency Standing Committee
IAU	Inter-Agency Understanding
IDMC	Internal Displacement Monitoring Centre
IDP	Internally Displaced Person
IFRC	International Federation of the Red Cross
IIASA	International Institute for Applied Systems Analysis
ILO	International Labour Organization
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
ITHACA-WFP	Information Technology for Humanitarian Assistance, Cooperation and Action – World Food Programme
KANI	Kiribati-Australia Nursing Initiative
LDC	Least Developed Countries
MDG	Millennium Development Goal
MDVA	Migration and Displacement Vulnerability Assessments
MINEC	Ministro de Economía El Salvador
MoARD	Ministry of Agriculture and Rural Development
MRF	Munich Re Foundation
NAPA	National Adaption Programme of Action
NCFSE	New Coalition for Food Security in Ethiopia
NDMC	National Disaster Management Council
NDRF	National Disaster Recovery Framework
NGO	Non-Governmental Organization
NNN-IRIN	NAM News Network – Integrated Regional Information Networks
NRC	Norwegian Refugee Council
OAU	Organization of African Unity
OFSP	Other Food Security Programmes
OSCE	Organization for Security and Co-operation in Europe

PA	Peasant Association
PAC	Pacific Access Category (New Zealand)
PDDH	Procuraduría para la Defensa de los Derechos Humanos (El Salvador)
PNG	Papua New Guinea
PROFOMID	Fondos de Presupuesto de Mitigación de Desastres
PSNP	Productive Savety Net Programme
PSWS	Pacific Seasonal Workers Scheme (Australia)
RSE	Recognized Seasonal Employer Scheme/Program (New Zealand)
SIDS	Small Island Developing States
SLF	Swiss Federal Institute for Snow and Avalanche Research
SNET	Servicios Nacionales de Estudio Territorial
TCLM	Temporary and Circular Labour Migration
TPS	Temporary Protected Status
TRS	Temporary Relocation Scheme
U.S.	United States of America
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDAC	United Nations Disaster Assessment and Coordination
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nation Population Fund
UNHCR	United Nations High Commissioner for Refugees
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNU-EHS	United Nations University Institute for Environment and Human Security
UP	Unión de Pagesos (Spain)
VGf	Vulnerable Group Feeding
WFP	World Food Programme



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