

Thomas Faist
Jeanette Schade *Editors*

Disentangling Migration and Climate Change

Methodologies, Political Discourses and
Human Rights

 Springer

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ISBN 978-94-007-6207-7 ISBN 978-94-007-6208-4 (eBook)
DOI 10.1007/978-94-007-6208-4
Springer Dordrecht Heidelberg New York London

Library of Congress Control Number: 2013935483

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Preface

The specter of mass migration as a consequence of climate change has been haunting public and academic debates for several years now. Yet the debates are still lacking solid conceptual foundations which would help frame the relevant issues. This book aims to deliver two key elements, a grounding of the debate in migration theories and concepts of development. The former focuses on migration as a process of cumulative causation and thus connects environmental migration to other forms of geographic mobility. The latter moves from a lop-sided emphasis on vulnerability to development as capabilities.

Toward this end this book presents selected results from the conference ‘Environmental Change and Migration: From Vulnerabilities to Capabilities’ held in December 2010 in Bad Salzflun in Germany. It was the first of a new conference series on ‘Environmental Degradation, Conflict and Forced Migration’, jointly sponsored by the European Science Foundation, Bielefeld University and its Center for Interdisciplinary Research. An interdisciplinary publication arising out of a conference always risks ending up as a compilation of only loosely connected studies. Therefore, we engaged in a continuous process of revising the framework and the contributions. We thank the authors for their continuous engagement in this process.

Apart from the authors and editors, several organisations and persons have contributed to the publication. We thank the European Science Foundation, Bielefeld University, and the Center for Interdisciplinary Research who are the institutional and financial partners of this series of research conferences. Edith Klein carefully edited the manuscript for book publication. Special thanks go to the Collaborative Research Center ‘From Heterogeneities to Inequalities’ at Bielefeld University for making this publication possible through its financial support.

Thomas Faist
Jeanette Schade

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Abbreviations

ABG	Autonomous Bougainville Government
AHDR	Arctic Human Development Report
ARB	Autonomous Region of Bougainville
ASEAN	Association of South East Asian Nations
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action Under the Convention
CARE	Cooperative for Assistance and Relief Everywhere
CCEMA	Climate Change, Environment and Migration Alliance
CESCR	Committee on Economic, Social and Cultural Rights
CIESIN	Center for International Earth Science Information Network
CIRP	Carteret’s Integrated Relocation Programme
COP	Conference of Parties
CP-rights	Civil and Political Rights
DIFD	Department for International Development
EACH-FOR	Environmental Change and Forced Migration Scenarios
ECHR	European Court of Human Rights
ECOWAS	Economic Community of West African States
EM-DAT	Emergency Events Database
ESC-rights	Economic, Social and Cultural Human Rights
EWE	Extreme Weather Events
FAO	Food and Agriculture Organisation
FGD	Focus Group Discussion
FMRSP	Food Management and Research Support Project
FPIC	Free, Prior and Informed Consent
GC	General Comments
GCC	Global Climate Change
GCM	General Circulation Model
GHG	Greenhouse Gas
GPID	Guiding Principles on Internal Displacement
HRC	Human Rights Council
IASC	Inter-Agency Standing Committee
ICCPR	International Covenant on Civil and Political Rights

ICESCR	International Covenant on Economic, Social and Cultural Rights
ICIMOD	International Centre for Integrated Mountain Development
IDMC	Internal Displacement Monitoring Centre
IDP	Internally Displaced Person
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IGO	International Governmental Organisation
INGC	Instituto Nacional de Gestão de Calamidades (National Institute for Disaster Management)
IOM	International Organisation for Migration
IPCC	Intergovernmental Panel on Climate Change
IWTC	International Workshop on Tropical Cyclones
LDC	Least Developed Country
LiSER	Living Space for Environmental Refugees
MICOA	Ministry for the Coordination of Environmental Affairs
MONRE	Ministry of Natural Resources and Environment
NAPA	National Adaptation Programmes of Action
NATO	North Atlantic Treaty Organization
NELM	New Economics of Labour Migration
NGO	Nongovernmental Organisation
OUA	Organisation for African Unity
OCHA	Office for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation and Development
OHCHR	Office of the High Commissioner for Human Rights
OLS	Ordinary Least Squares
P&E	Population and Environment Studies
PIC	Pacific Island Countries
PNG	Papua New Guinea
R2P	Responsibility to Protect
RMMRU	Refugee and Migratory Movements Research Unit
RSG	Representative of the UN Secretary-General
SLA	Sustainable Livelihood Approach
SLR	Simple Linear Regression
SRES	Series of Specific Emission Scenarios
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children's Emergency Fund
UNSC	United Nations Security Council

UNU-EHS	United Nations University Institute for Environment and Human Security
WBGU	Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveraenderungen (German Advisory Council on Global Change)
WEDO	Women's Environment and Development Organisation

Contributors

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Part I
Introduction

Chapter 1

The Climate–Migration Nexus: A Reorientation

Thomas Faist and Jeanette Schade

Abstract The introduction discusses the current ‘climate migrant’ debate. It further elaborates on the topic of ‘climate migration’ from a sociological view point and introduces the chapters of the book.

Keywords Climate migrant debate • Migration theory • Numbers • Sociology • Uncertainty

1.1 Introduction

In February 2012 the Intergovernmental Panel on Climate Change (IPCC) published its comprehensive report on climate extremes based on the most recent scientific knowledge regarding the impacts of global warming (IPCC 2012). While there is no absolute certainty about these changes due to insufficient data for some regions, the report confirms a high degree of likelihood for many phenomena. There is an overall decrease in the number of cold days and nights accompanied by an overall increase in warm days and nights. This can be confirmed particularly for North America, Europe and Australia as well as for much of Asia. More droughts have been experienced in southern Europe and West Africa. There is also a statistically significant trend that heavy precipitation events are increasing in some regions, but decreasing in others, and that tropical storms seem to be shifting poleward in the Northern as well as in the Southern Hemispheres. With respect to

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future developments the report regards it very likely that warm spells over most land areas will increase. This will perpetuate the erosion of mountain areas that are now still at permafrost latitudes. The expected increase in heavy precipitation for some regions is likely to lead to more floods in catchment areas. Such observations and projections raise the question of how people living in the affected areas are going to deal with the climatic repercussions of global warming. That global warming could cause major migratory and refugee movements has therefore been at the forefront of concern since the establishment of the IPCC. Scientific focus has thus been put on the 'climate push' and vulnerability to climatic conditions.

Current research on the subject of environmentally and climate induced migration is still frequently narrowed down to climate change vulnerability and the environmental push factor, and therefore misses some of the complex interlinkages between societal and environmental vulnerability, migration and capability. The social construction of human–environment relationships, the social inequalities backing the unsustainable exploitation of natural and human resources, the efforts of persons affected to overcome such inequalities by geographical mobility, and the role of institutions in sometimes overcoming but often reproducing existing vulnerability and resource poverty have to be seen in conjunction. The need now is to transcend predominantly policy-oriented approaches which are limited by estimating numbers and identifying high risk zones. Such unreflexive approaches that barely consider the social contexts and conditions of migration are still dominant in the debate. The contributions to this volume fill this gap and shed light on the complexity of the nexus between environmental change, vulnerability and migration—and take the discussion to a new realm in capabilities for facing climate change.

This book casts serious doubt on whether existing terms such as 'environmental migrant' and a focus on projecting concomitant migration flows are appropriate tools to capture underlying processes of mobility and social change. Even more fundamentally, we criticize the theoretical and conceptual framework which seems to undergird the inflationary use of terms and numbers. Instead, we argue for a re-orientation of research on migration in the context of climate change and environmental degradation which is cognizant of the rich theorizing on human migration. This orientation implicates a move away from a concern with the invention of ever new terms to describe the phenomena and an abandonment of a futile search for the ultimate causes of migration brought about by climate change. We deem it important to re-orient this mushrooming field of research to consider the strengths of accumulated knowledge in the field of migration and bring it to bear on the complex relationship between anthropogenic climate change and migration. It is fruitful to think of climate change and migration as a two-way relationship, a nexus. In particular, this means a focus on the social frameworks, the processes and consequences of migration in the context of climate change. It is necessary to place migration in the fold of manifold structural social inequalities in and between national states. As to agents, it is necessary to go beyond the notion of vulnerability because it often hides the very active role human beings play in interacting with their 'environment'. Agency needs to be brought in, which means recognizing that migration is most often a proactive and not simply a reactive choice.

In a nutshell, we thus move from considering vulnerabilities to include capabilities. Seen in this way, migration in the frame of climate change is a case of spatial and social mobility, a strategy of persons and groups to deal with a grossly unequal distribution of life chances across the world.

Toward this end, we proceed to disentangle the confusion with the usage of terms and give an overview of the main strands of the ‘climate migrant’ debate, which exposes the bias of the debate on ‘push’-thinking and the problem of the natural resource base. We will then reflect on vulnerability to climate change and environmental migration from sociological viewpoints before we introduce in depth the main insights from migration studies that could and should inform research on environmentally induced migration. With the complexity of migration decisions and processes in mind we discuss the challenge of double uncertainty inherent in investigations into climate-related migration, which explains the controversial nature of the estimations and projections of ‘climate migrants’. Finally, we give an overview of the chapters and their specific contribution in illuminating the debate on environmental migration.

1.2 The Hassle with Terms: What We are Talking About?

There is a proliferation of terms related to the ‘climate migrant’ debate. One of the most frequently referred to in the debate is El-Hinnawi’s definition of ‘environmental refugees’ used in the mid-1980s for the homonymous United Nations Environment Programme (UNEP) report, which included all ‘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 jeopardised their existence and/or seriously affected the quality of their life’ (El-Hinnawi 1985, p. 4). This UNEP report was, however, not yet related to climate change, but to the environment–population–development nexus, and was then used to point to the problem of the breakdown of life support systems due to overexploitation of carrying capacities, for example, for livestock keeping (Kliot 2004, p. 72). The term was then extended to explicitly include people displaced by development projects or who have to flee industrial accidents (Jacobson 1988) and to comprise people fleeing environmental degradation as a cause or consequence of violent conflicts (Loneragan 1995).

The first report of the Intergovernmental Panel on Climate Change (IPCC) also used the term ‘environmental refugee’ in quotation marks and described it as ‘people displaced by degradation of land, flooding or drought’ (IPCC 1990, pp. 5–10). The second IPCC report used the term ‘ecological refugees’ (quotation marks again in the original) to refer to those fleeing natural disasters (IPCC 1996, p. 416). This understanding resembles the one Norman Myers used for his early estimates of ‘environmental refugees’ which he regarded to be ‘people who can no longer gain secure livelihood in their erstwhile homelands because of drought, soil erosion, desertification, and other environmental problems’ from which some ‘flee’ across borders and others become ‘internally displaced’ (Myers 1993, p. 752). Biermann

and Boas tried to be more concise and used instead the term ‘climate refugee’ embracing only people who flee the direct effects of climate change (within or across borders), that is, sea-level rise, extreme weather events, droughts and water scarcity (Biermann and Boas 2007, p. 8).

The use of the term ‘refugee’ in this context became quite disputed, however, because of its legal meaning under the Geneva Refugee Convention. Indeed, the United Nations (UN) refugee organisation did reject the use of the term ‘environmental refugee’ or ‘climate refugee’ and any attempts to broaden the mandate of the Convention (Piguet 2008, p. 2). This might have been one of the reasons why the term ‘environmental migration’ and ‘climate migration’ came into use. The third IPCC report, for example, is somewhere in between. It stated that ‘migration may be the last of a complex set of coping strategies’ to ‘adapt to interannual variability of climate’. Nonetheless, the report still uses the term ‘environmental refugees’ in quotation marks (IPCC 2001, p. 397). The fourth IPCC report, finally, did not use the term ‘refugee’ at all, but only spoke of ‘environmental migration’ emphasising at the same time that ‘there is a lack of agreement on what an environmental migrant is anyway’ (IPCC 2007a, p. 365).

In addition, the terms ‘eco-migrants’, ‘ecological migration’ and terms that suggest a lesser degree of a direct causal relationship such as ‘climate-related migration’ or ‘environmentally induced migration’ have been introduced into the debate. Research entities of international organisations such as the United Nations University or the research unit of the International Organisation for Migration (IOM) indeed undertook great efforts to define and elaborate on appropriate terms (e.g. Renaud et al. 2007; Laczko and Aghazarm 2009). Nonetheless, the fact that the IPCC and many others—including some authors of this volume—have a tendency to put the terms ‘climate migration’ or ‘environmental refugee’ into quotation marks is still a strong signal that the meaning of those terms is often ambiguous and anything but crystal clear. In the end, which combination of words is chosen and why depends to a great extent on the context. The word ‘refugee’ is still often used to highlight the emergency nature of the situation of such people and the responsibility to act and help them (as Biermann and Boas did). The word ‘migrant’ is used partly to avoid the term refugee, but also because it has a broader connotation and encompasses the diverse types of environment related population movements such as circular and seasonal migration, long-term migration due to slow onset changes, or short-term displacement due to sudden events. To stress the non- or semi-voluntary character of those movements the term is often endowed with a prefix such as ‘forced’ or ‘impelled’ migration. The word ‘climate’ might be used to emphasise the interrelationship with global warming and the climate change discourse. The term ‘environmental’ might be used instead to emphasise that it is often empirically not possible to distinguish migration triggered by global warming from that triggered by other sources of natural disasters (e.g. cyclical weather anomalies) and environmental degradation (e.g. overexploitation of natural resources). Moreover, even where such differentiation is possible, as is the case with volcanic disruptions, the emergency response does not look that different from climate related disasters.

In this volume the terms ‘climate migrant/migration’—if they are used—should not be regarded as well-defined concepts, but as terms that express, first, that the current debate on environmentally induced migration is closely attached to the climate change discourse and the expected increases in weather anomalies. Second, the term encompasses environmentally induced migration beyond displacement and flight. Nevertheless, such terms still support the main proposition of the debate which is that of the ‘environmental push’. The most frequently used terms in the volume are, however, ‘environmental migrant/migration’ which is meant to stress the complex relationship between climate and environmental change. The use of the latter terms in this book is usually not meant to embrace people who have been uprooted due to development investments and thus departs from the meaning that Jacobson and Lonergan coined.

1.3 Strands of the ‘Climate Migrant’ Debate

The climate change and climate migrant debate is generally deeply entrenched into the environment and population discourse. This discourse is firmly rooted in neo-Malthusian thinking, which emphasises the mismatch between humankind and its resource base (Saunders 2000). The field of population and environment studies (P&E) is a crucial case in point and tends to reproduce mainly three narratives of the environment-migration nexus (Hartmann 2010): first, the poor and landless in particular migrate to forest frontiers to access new land which leads to deforestation and further degradation (e.g. Geist and Lambdin 2001); second, environmental degradation and population pressure impels migration and produces environmental refugees (e.g. El-Hinnawi 1985); and third, migration leads to (ethnic) conflicts over scarce renewable resources and urban unrest in destination areas (e.g. Homer-Dixon 1999).

The ‘climate migrant’ debate has its origins in the latter two of the P&E narratives of migration and currently consists of five dominant strands. The five threads might be called the ‘ecosystem strand’, the ‘conflict strand’, the ‘refugee strand’, the ‘adaptation strand’ and the ‘relocation strand’. All of them assume a (more or less) direct link between climate change and migration, and share the hypothesis that the crucial nexus is a ‘push’ to move caused by the depletion of natural resources and capricious weather conditions (Schade 2012). According to this view land loss due to sea level rise, desertification and land slides, or water stress and storm surges lead to the deprivation of crucial livelihood assets and ecosystem services, and thus forces people to leave. This may happen suddenly due to hazard events or gradually due to slow onset changes. It might also be the result of exhausted coping capacities due to an increased frequency of extreme weather events that does not allow for substantial recovery.

The ecosystem strand thereby forms the initial base wherefrom the other threads depart. In line with the second P&E migration narrative the key terms are ‘environmental push’ or ‘climate push’. They suggest that ‘climate change’ is a

major trigger for forced and impelled migration.¹ Already the first IPCC report of 1990 argued that migration and spontaneous relocation ‘may be the most threatening short-term effects of climate change on human settlement’ (IPCC 1990, p. 9), thereby emphasising that developing countries in particular would be affected. Such warnings usually go hand in hand with the identification of high risk zones and the projections of the number of displaced persons due to climate change phenomena such as sea-level rise, coastal flooding, changes in the monsoon system and increased severity and frequency of droughts. The most cited figure in this regard is that of 200 million by 2050 (Myers 1996, p. 175). The prevailing message attached to these projections on extraordinary increases in impelled migration is usually that climate change has to be stopped. Some regard this strand of the debate therefore to be a lobbying strategy of environmentalists to increase pressure on decision-makers in order to mitigate climate change (McGregor 1994, p. 127).

Based on these dire predictions and in line with the third P&E migration narrative is the conflict strand. This strand encompasses the scientific community of peace and conflict studies as well as institutions concerned with security issues, who debate the potential for conflicts arising from such climate induced mass migration. The notion that environmental migration increases proclivity for conflicts was briefly raised in the second IPCC report with reference to Homer-Dixon and Suhrke (IPCC 1996, p. 496; Homer-Dixon et al. 1993; Suhrke 1993) and thoroughly adopted by the third report (IPCC 2001, p. 397). In 2007 it was again raised by the German Advisory Council on Global Change (WBGU 2007), and finally also adopted by relevant international organisations such as the UN Security Council, the UN General Assembly and the IOM (UNSC 2007; IOM 2007; UNGA 2009a and 2009b). Migration, in this context, is treated as one of the various security threats society has to deal with in a warming world, alongside issues such as territorial disputes and intra-state as well as internal resource conflicts.

The third thread of discussion, the refugee strand, is more concerned with human security and governance issues. Actors, mainly academics and nongovernmental organisations, have raised their voices to advocate a new regime for so called ‘climate refugees’ and/or to review and adjust existing international laws (e.g. WBGU 2007, p. 129; Bauer 2010). The discussions on how to protect climate and environmental refugees are, however, very diverse, ranging from legal analysis of currently available instruments (Ammer 2009; Ammer et al. 2010; Cournil 2011; Epiney 2011), to new policy proposals (Biermann and Boas 2007; Docherty and Giannini 2009). Of particular concern are the disappearing small island states and the challenges they face regarding provisions of asylum law and other ways to protect refugees’ rights; the situation of internally displaced persons (IDPs, i.e. ‘refugees’ that do not cross borders) and involve conceptual and legal challenges (Zetter 2010); as well as the question of justice and compensation (Penz 2010), amongst others.

The fourth and fifth strands, adaptation and relocation respectively, move away from the alarmist overtones of the debate by offering solutions to the foreseen

¹ For categorisations of climate related “push factors” see inter alia Hugo 2010; Kniveton et al. 2008; Renaud et al. 2011.

disaster of imminent displacement and migration as a ‘second-order effect of unsuccessful adaptation’ (UNGA 2009b, p. 7). The fourth strand is instead concerned with the potential of migration for adaptation to climate change by generating remittances (Adger et al. 2003; Barnett and Webber 2010). This narrative was derived from the development–migration nexus debate and the work of migration research on the significance of remittances as a strategy for income diversification and coping with life risks, such as crop failures (Stark and Levhari 1982; cf. Faist 2008). Circular migration and remittances are promoted as a way forward to enhance people’s capacities for adaptation by means of accumulating skills and resources at the place of origin. The IOM, for example, advocates such circular migration schemes between developing and developed countries as a form of adaptation to environmental degradation and resource pressure (de Moor 2011). Controlled migration is thus seen as a means to avoid uncontrolled migration and flight due to adverse living conditions in a warming world. Here migration evolves into a coping strategy to handle those resource base problems.

Finally, one preventive measure to avoid uncontrolled displacement, which can be labelled the fifth strand of the climate migrant debate, is that of planned relocation of vulnerable communities. Planned relocation is discussed particularly with reference to disappearing islands in the Pacific region (Boege, this volume; Campbell 2010; Ferris et al. 2011), but also with regard to dislocations related to floods (Stal 2009) and bank erosion (Dun 2009), and as a way to enable regeneration of overexploited ecosystems (Zhang 2009). Biermann and Boas (2007) even made preventive relocation the centrepiece of their proposed climate refugee regime that embraces all those prone to severe human suffering due to the direct impacts of global warming. Their solution again forms part of an answer to the resource base problem, and it seeks to solve it by resettling affected people to places with more reliable and viable conditions. Resettlement is regarded as the only possible measure to protect those who live in places where no in situ adaptation is feasible, and to avoid displacement and uncontrolled mass migration as a form of ‘maladaptation’. Ordered relocation even found its way into United Nations Framework Convention on Climate Change (UNFCCC) negotiations and outcomes of the COP-16 in Cancun in 2010 (UNFCCC 2011, para. 14[f]).

In sum, although the climate migrant debate experienced a move from alarmist negative connotations of migration to more solution oriented discussions, all its strands are still centred upon the presumption of the natural resource base problem.

1.4 Some Reflections on Migration and Vulnerability from a Sociological Perspective

The premise of the resource base problem and the environmental push unfortunately overlooks the social conditions causing the problems and the social construction of the prospects for the proposed solutions (cf. Berger and Luckmann 1966). The underlying conceptualisation of migration in the ‘climate migrant’

debate, and the terminologies and numbers it produced, have therefore been widely criticized by social scientists and migration researchers in particular (McGregor 1993; Cannon 1994; Kibreab 1994; Black 2001, Castles 2002). For an interim period this even led to a polarisation of the debate between ‘alarmists’ and the ‘sceptics’ (Gemenne 2011b, pp. 230–239). This characterisation, however, is misleading, because it suggests that ‘sceptics’ do not believe in the severity of climate change—like those who are sceptical about anthropogenic global warming—and thus would neither believe in its potential to uproot people. Instead, the so-called sceptics are concerned with the shortcomings of the existing concepts and approaches, and are reluctant to draw premature conclusions.

In particular the ‘alarmist’ strands of the climate migrant debate characterise migration solely as an expression of vulnerability and disregard the sometimes positive role of mobility in everyday life. In equal measure they disregard the multi-causality of social vulnerability to climate change, which leads us to bring in migration studies. The lopsided focus on the ‘environmental push’ as a ‘root cause’ for uprooting and displacement is partially deceptive, because social structures determine to a large extent whether an extreme weather event turns out to be a human disaster or not (Cannon 1994, p. 17f). We argue instead that the analysis of migration as well as vulnerability to environmental conditions have to be placed within the context of the structures of inequality across the globe. The degree of vulnerability or resilience and coping capacities respectively of certain segments of a population to environmental stressors depends heavily on societal structures (Bohle et al. 1994, p. 37; Adger and Kelly 1999, p. 255). These are also a manifestation of social inequality within a particular society, and must certainly be considered on the local and national levels. The political marginalisation of the indigenous people in Chiapas (Mexico), for instance, is one of the reasons for the absence of lobbies to protect the rain forest from extensive logging by large wood traders. Deforestation resulted in huge mud-slides during exceptionally heavy rains that buried small villages of exactly those indigenous people (Alscher 2008).

Also, on the global scale patterns of inequality between nations and world regions and their historically rooted hierarchies of exploitation have an impact upon climate change vulnerability. In the Mexican case, for instance, logging is perpetuated by global demand for wood. It is thus not only extreme weather events and social inequality within Mexico that make the indigenous population vulnerable, but also global markets and purchasing power which are in turn incorporated into local and national patterns of inequality. Similarly, in Bangladesh the expansion of shrimp production for the world market resulted in the destruction of large mangrove areas which had protected the coastal areas against salt water intrusion (Stern 2007, p. 433). Moreover, shrimp production is less labour intensive and agricultural labourers left jobless, which also forces them to migrate to cities in search for new income. This leads us to a more general observation: Not only does global warming hit the developing world much harder than other parts of the world because of unfavourable geographic-climatic conditions. To an even greater degree, because of their structurally disadvantaged position, developing countries are not able to adapt as well as post-industrial countries. Moreover, the difficulties in adaptation

exacerbate the difficulties developing countries face in competing in markets (cf. Wallerstein 1974), again limiting their adaptive capacities. The character of such post-colonial societies—weak civil societies, great inequalities in income, as well as restricted access to resources, law and justice—feeds into the weak adaptive capacities of their societies (Roberts and Park 2006). We thus potentially observe a ratcheting effect resulting in a downward spiral to cope with climate change.

From a migration studies perspective mobility is, moreover, not an expression primarily of vulnerability but one of human agency. Migration is often a proactive and not simply a reactive choice. In many environmentally harsh areas mobility (rather than flight) often serves as a traditional coping strategy to deal with the scarcity of natural resources. The seasonal movements of pastoralists from wet season grazing areas to dry season grazing areas are such an example. In the form of labour migration—often to urban areas—it serves to spread risks, diversify income and enhance opportunities (Stark and Levhari 1982; Stark 1991). It is a useful strategy, for example, to substitute usury credits and lack of income opportunities for remittances. Moreover, it serves to insure families against crop failure where no formal insurance system exists.

The degree of voluntariness and agency involved in migration decisions might, however, vary to a large degree. Migration decisions must be analysed in the broader context of the livelihood settings and the ways livelihoods are embedded into societal institutions. If the latter—ranging from formal administrative structures and policies to informal social networks and civil society organisations—respond or do not respond to the demands and needs of the members of a society, two reactions are possible (Hirschman 1970): exit or voice. Exit as an option implies that out-migration from nation states or smaller administrative and social units has to be analysed in relationship to the capacities of the people (or the lack thereof) to change things in situ by raising their voice and exercising political influence. Exclusive political and legislative systems, for instance, deprive vulnerable groups of their voice option and thus restrict their search for in situ solutions (Faist 2000, p. 20ff.) in the face of climate change (adaptation) as well as other burdens. In this regard, vulnerability as a result of exclusion and inequality indeed strongly relates to a proclivity to migrate and to use the exit option. Crucial for voice is loyalty to the social unit concerned, for example, a village or a national state. Loyalty plays a major role if people feel very attached to their communities, their land and their ancestors. In some instances, exit and voice may even be complementary. If exit is succeeded by a continuing concern with the region of origin, by sending remittances for example, exit may contribute to voice in that it increases the range of options allowing for in situ adaptation of those who remained. However, to stay might likewise be the result of complete immiseration and lack of necessary assets to move or to improve conditions in situ, i.e. people are deprived of their voice as well as of their exit options. In such cases it is not a decision to stay but the plight of immobility.

To capture the human agency involved in environmentally induced migration as well as its limits, we have chosen to move conceptually from vulnerabilities to capabilities. The aim was to embed environmental migration within the broader

frame of the capabilities approach which was pioneered by Amartya Sen for development studies and since then adapted to various purposes (Sen 1981, 1992, 1999). According to Sen, capabilities are not the things that people may be able to do—their ‘functioning’—but their capacity to choose and to live a life they value. Such functions include access to food or education, or mobility, and other aims which are important to her/his idea of a good life. For that, of course, they need basic resources to make decisions on the functions they want to be fulfilled. Such resources may include natural, physical, mental, cultural, social, economic, financial and political assets, and necessitate their advantageous embeddedness in societal structures and institutions. Yet Sen goes beyond an instrumental concern with resources to enable functions and brings in the intrinsic consideration that the choice of one’s way of life and functioning is fundamentally important. In general, the term capability connects to the broader issue of human development which depends axiomatically on freedom to achieve those chosen goals. Ultimately, Hirschman’s and Sen’s approaches converge in that the ability to make choices is constitutive of agency.

Greater capabilities may be equated with lesser vulnerability, which is certainly true for impoverished and marginalized populations. If assets can be multiplied, livelihoods are more sustainable, and the eventual loss of one asset can be compensated for by the use of others. Accordingly, we understand vulnerability as lacking or being deprived of essential assets necessary to realize functions crucial to coping with environmental change. The specific role of migration has thus to be contextualized with regard to the other assets available to a person or household, including its political assets, its voice. And voice implies capabilities. Migration is thus shaped by the same assets available for in situ alternatives, their ‘double uses’, and the overall combination of tangible and nontangible resources available to an individual or a household. Whether migration is an expression of vulnerability or capability depends to a large extent on the degree of freedom or choice for exit or voice or a combination of the two. That migration can be chosen at all is a manifestation of capability, if the case of immiseration is avoided.

1.5 The Potential Contribution of Migration Studies to Research on Environmental Migration

Difficulties in conceptualizing and researching environmentally induced migration meaningfully arise from the complexity of migration processes. These are in most cases multi-causal and no single ‘driver’ such as environmental degradation can normally be isolated from other drivers, which may or may not be related to the environment. Failing or exploitative credit and labour markets, for example, are acknowledged incentives for migration decisions too (Massey et al. 1993, p. 436ff) and these might go hand in hand with environmental degradation. Migration processes are self-perpetuating and become partly independent of their original drivers, which is called ‘cumulative causation’. They are path-dependent,