MOBILITY IN CONTEXT:

EXPLORING THE IMPACT OF ENVIRONMENTAL STRESS ON MOBILITY DECISIONS IN NORTHERN ETHIOPIA

Thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy

by

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ABSTRACT

This thesis examines the relationship between environmental stress and human mobility with a view to understanding the impacts of climate change on human migration. Using a conjuncture of political ecology and migration theory, it firstly explores the literature on 'environmental refugees' identifying a distinction between general *agreement* on the existence of a relationship between environmental stress and migration, and *debate* over the appropriateness of the 'environmental refugee' as a suitable means for representing that relationship. Secondly this conjuncture is used to examine accounts from farmers and migrants in northern Ethiopia, with a focus on understanding how environmental and non-environmental factors interact to shape mobility decisions in a context of environmental stresses, thought analogous to those predicted to accompany future climate change.

The principal finding of the study is that although environmental stress matters in mobility decisions, it does so due to the context of non-environmental factors in which it occurs, not in spite of them. With this in mind the work provides a framework of *additive*, *vulnerability*, *enabling* and *barrier effects* as a means for elaborating our understanding of how environmental and non-environmental factors interact to determine mobility strategies in a context of environmental stress.

Focussing on the role of non-environmental factors, the work reveals that while biophysical features operate at a macro-scale to *shape* mobility decisions, these decisions are *determined* by non-environmental features operating at a micro-scale. The research then traces differences in the existence of these micro-scale, non-environmental, factors across two field sites, finding that their origins lie in both historical and contemporary forces of regional and global political economy. As such, the work concludes that understanding the relationship between climate change and human migration will require a contextualisation of that relationship within this broader framework.

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List of Acronyms and Terms Used in This Thesis

CUD - *Coalition for Unity and Democracy*

EUDF - *United Ethiopian Democratic Front*

EPRDF: *Ethiopian People's Revolutionary Democratic Front*

EPLF: *Eritrean People's Liberation Front*

GHG: *green house gas*

NRS: *National Regional State*

OLF: *Oromo Liberation Front*

PA/Kebele: *Peasant Association (Kebele in Tigray)*

SRES: *Special Report on Emissions Scenarios*

SWAIS: *South West Antarctic Ice Sheet*

TGE: *Transitional Government of Ethiopia*

TPLF: *Tigray People's Liberation Front*

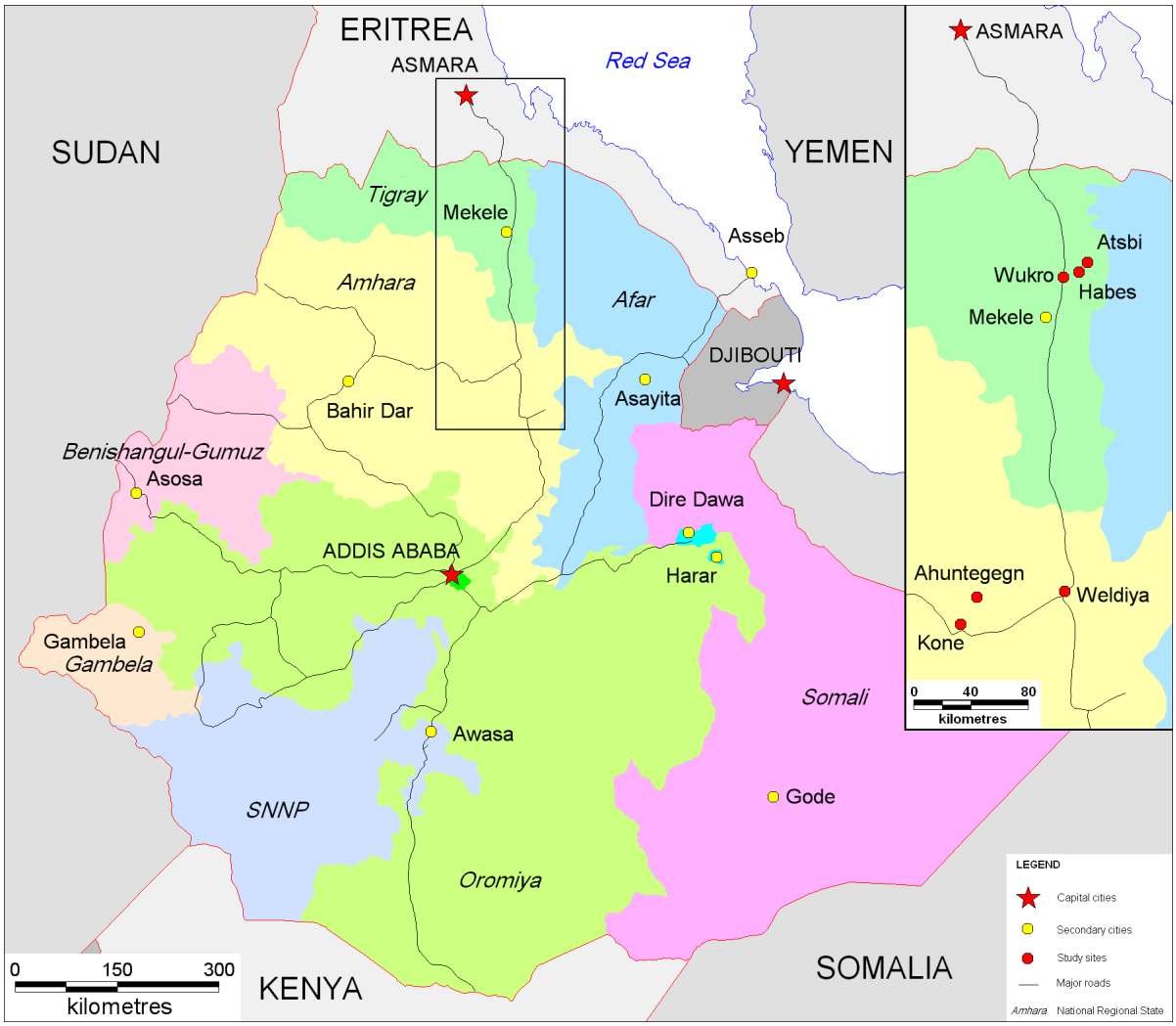
UN: *United Nations*

UNEP: *United Nations Environment Programme*

UNFCCC: *United Nations Framework Convention on Climate Change*

UNHCR: *United Nations High Commissioner for Refugees*

Wereda: The level of political administration above the PA/Kebele



Map 1. Showing the different National Regional States of Ethiopia, by shading, with the study sites inset (Repeated on page 133).

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1 Universitetet for miljø- og biovitenskap (UMB)

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With all these acknowledgements in mind, it should be noted that responsibility for all the errors and omissions in this work, lies entirely with me.

James Morrissey

1

INTRODUCTION

Interest in the relationship between the biophysical environment and human society is long standing, having gone through a number of paradigms and evolutions. A dominant conceptualisation of this relationship has linked environmental crises to humanitarian crises, via the degradation of ecosystems to a point that the society's capability to sustain itself is fundamentally undermined. Such a narrative is underpinned by Malthusian accounts of the impacts of population growth and was central to environmental concerns of the 1970s, where environmentalists invoked the notion of an impending environmental crisis, and its links to social crisis, as a means for achieving political support for policies aimed at maintaining the integrity of the biophysical ecosystem.

The epitome of this narrative has been accounts of the the ecosystems becoming so degraded that people will be forced to flee their contemporary homes and seek refuge away from the ravages of a degraded physical environment. This idea is captured in the notion of an 'environmental refugee', where concern has revolved around both the insecurity of people forced to flee their places of residence and the impacts such people might have in the areas to which they move.

While this narrative has persisted throughout the latter part of the 20th Century, it has been reinvigorated in the 21st Century in the light of growing evidence linking large-scale climate change to human activity. As evidence of this link has strengthened, and the scale of impacts associated with climate change have become clear, the notion of an impending social crisis as a result of climate change has been invoked as a means to generate an impetus for global agreement on limiting green house gas (GHG) emissions. In the context of anthropogenic climate change, where impacts are expected to be worst among those societies least responsible for the emission of damaging GHG, the idea of migration from

the areas worst affected by climate change to those least affected has made the notion of an 'environmental' or 'climate refugee' a powerful advocacy tool, linking emissions to impacts, through the arrival of migrants.

Such a narrative, however powerful as an advocacy and awareness-raising tool, has proved controversial. In the context of growing global anti-asylum and anti-migration sentiment, advocates of migrant and refugee rights have become concerned over the portrayal of migration, migrants and refugees as a problem, which is assumed in depictions of the 'environmental refugee'. As such they have rejected the term, pointing to a number of its conceptual failings and the lack of empirical evidence available to support the narrative linking environmental crisis to both social crisis and out-migration.

While the notion of an 'environmental refugee' remains problematic, even amongst those who reject the term as set out in the name of environmental protection, concern persists about the potential scale of climate change, given the vulnerability of certain societies, to impact on people's mobility decisions. Concern is especially high given the lack of agreement on global emissions and the current global animosity towards both migrants and asylum seekers, which suggests that groups made mobile as a result of climate change might find their livelihoods severely compromised in both sending and receiving regions.

As such there has been a growing desire to understand the role environmental stress plays in mobility decisions and the impact climate change might have on future patterns of human migration. Existing empirical work suggests that environmental stress does play an important role in mobility decisions, however it also suggests that non-environmental factors (such as socio-economic and political conditions) mediate the relationship between environmental stress and mobility. Currently however, no comprehensive framework exists for understanding these interactions.

With the above in mind, this thesis explores the dynamics of the relationship between

environmental and non-environmental factors in decisions about human mobility, undertaken in a context of environmental stress. It builds on an M.Phil thesis, conducted in International Development, at Oxford University and completed in 2008. The focus of the M.Phil was on exploring how well the experience of rural-urban migrants, citing environmental stress, was captured by the notion of an 'environmental refugee' and what this meant for the conceptualisation of the relationship between environmental stress and human migration. The most notable conclusion of the work was that there did not appear to be any simple narrative by which environmental stress could be linked to mobility.

This D.Phil builds off the M.Phil thesis, using it both as an introduction to the debates on the relationship between environmental stress and human mobility, and as a scoping study for the field site which, in both cases, was northern Ethiopia. Notably the D.Phil moves beyond the M.Phil both in terms of its attention to detail and through its focus, which falls less on the relevance of the term 'environmental refugee' and more on the dynamics of the relationship between environmental and non-environmental factors in shaping mobility decisions. As such the D.Phil seeks to understand the reasons underlying the findings of the M.Phil, asking: why is there no coherent narrative linking environmental stress to mobility? If it is due to the role played by non-environmental factors mediating that relationship, then what does that relationship look like? As such, while the M.Phil was focussed principally on migrant experiences, the D.Phil has been focussed more on rural livelihoods, their experience of environmental stress and their options vis-à-vis mobility.

Structure of the Thesis

This work has been broken down into ten chapters, the first five are focussed on introducing the existing literature, justifying the study focus and methodology, and introducing the field

sites. The central intention of these chapters is to argue for the use of an analogous study, by which the impacts of future climate change on migration are explored by examining the relationship between existing stresses (thought analogous to those predicted to accompany climate change) shape contemporary mobility strategies.

The subsequent four chapters describe the empirical findings from the thesis. Of these four, the first describes the role played by environmental stress in mobility decisions. The second describes the importance of non-environmental factors in mediating that relationship and thereby providing something of comprehensive conceptual framework for understanding the relationship between environmental and non-environmental factors in mobility decisions. The third explores what the interaction of environmental and non-environmental factors means for who migrates, and the fourth describes the differences between the field sites and what this means for how we understand the relationship between environmental and non-environmental factors in mobility decisions. The final, tenth, chapter of the work summarises the study's findings, discusses their conceptual importance and concludes the study. With this overall picture in mind, it is useful, prior to reading the thesis, to have an idea of the detail contained in each chapter, so as to make sense of its overall argument.

Chapter 2 introduces the theoretical frameworks which guide the line of enquiry taken in exploring the central thesis question. Two major bodies of theory informed this work: political ecology and migration theory. The former of these two was chosen as a means for guiding exploration of environment-society interactions, while migration theory is used as a means to inform which particular relationships might be of interest. The central aim of Chapter 2 is to introduce the reader to both bodies of theory, motivate for their use in this study and highlight the consonance between them. To this end both bodies of theory are described in terms of their evolution, generally from atomised neoclassical models, to

structural and post-structural critiques. In this regard the chapter sets up a focus for the study on structural features of political economy and post-structural issues exploring the notion of the 'environmental refugee'.

Having introduced the theory which will guide the study, **Chapter 3** undertakes a review of the literature on 'environmental refugees'. The aim of the chapter is to explain evolving concern on, and debate about, the relationship between environmental change and human migration. In addition, the chapter seeks to undertake something of a post-structural exploration of how the 'environmental refugee' has been cast as an environmental problem, explain what this means for policy and its relevance to explaining the debate on 'environmental refugees'. In this regard a central focus of the chapter falls on distinguishing between debate over the 'environmental refugee' as an appropriate representation of the relationship between environmental change and migration, and general consensus about our limited understanding of how to conceive of that relationship.

Chapter 4 describes both the methodological approach and methods used in the study. To this end it provides an account of the methodological problems inherent in studying the social impacts of climate change and advocates for a study which explores the impacts of environmental stresses that are analogous to those thought likely to accompany climate change. The chapter goes on to detail relevant analogous works looking at the relationship between dryland-type environmental stresses and migration, mainly in the Sahel, but also in the dust-bowl of the United States. Based on such work the chapter advocates for an analogous study focussed on exploring the relationship between environmental stress and non-environmental factors in mobility decisions. Following this the chapter goes on to detail the study site, justifying its use as an analogous study, before describing the methods used in the study as well as the work's resultant limitations and ethical considerations.

Having justified the study design in terms of the existing literature, useful theory and

appropriate conceptualisation, **Chapter 5** describes the history of modern Ethiopia, from around 1880 to the present. The aim of the chapter is to both provide a context from which the reader can interpret the events which will be described in the subsequent empirical chapters, and to make the case for the role of non-environmental, structural features of political economy that will be discussed in Chapters 8, 9 and 10. To this end the chapter both describes the contexts in which regime change took place in Ethiopia and the impacts such changes had on local livelihoods. The second half of the chapter then focusses on describing the contemporary political sociology of the country as a means to provide a context from within which power in the study sites might be made intelligible.

With the study now suitably introduced, **Chapter 6** describes the empirical findings of the work, making a case for a relationship between environmental stress and human mobility. To this end the chapter focusses on introducing the human ecology of livelihoods in rural, highland, Ethiopia; describing how environmental stresses compromise livelihoods and then accounting for the narratives of migrants which described such stresses (or their impacts) in accounts of their decision to move. The chapter goes on to highlight how such an approach, although capable of highlighting a relationship between environmental stress and mobility, is unable to explain any of the characteristics of mobility strategies including their geographical and temporal extents and the conditions of duress under which they are taken.

Following such discussion, **Chapter 7** highlights a number of migrant narratives that described non-environmental factors which either generated livelihood stresses similar to those generated by environmental stress, or which acted in synergy with environmental stress to exacerbate livelihood insecurity. To make sense of these, the chapter describes how livelihoods in the field sites have changed in response to the changing socio-political context of the last 50 years. From such an account the chapter categorises three interactions between environmental and non-environmental factors which serve to shape mobility decisions.

These include: (i) *additive effects,* (ii) *vulnerability effects*, and (iii) *enabling effects.* To highlight the operation of these different effects the work points to the examples of land tenure and schooling, describing how they impact on mobility decisions in a context of environmental stress. Finally the chapter explores the role of non-environmental factors which undermine the imperative to move generated by environmental stress. As such the chapter adds a fourth effect to its list: (iv) *barrier effects.* With these effects in mind the chapter explores the characteristics of migration described in the previous chapter. In so doing, it argues that greater sense of mobility strategies can be made if one incorporates the role of non-environmental factors in mediating the relationship between environmental stress and human mobility.

Having outlined a means for making sense of the role of non-environmental factors in the relationship between environmental stress and human mobility, **Chapter 8** explores a notable question: If environmental and non-environmental factors interact to generate powerful migratory imperatives, then why do some people remain in the rural areas? Or, in other words, what are the factors determining *who moves*? In answering this question the chapter focusses on the role of *barrier effects* to explain how major social features – such as age and land tenure – shape mobility decisions so that it is the young and landless for whom mobility proves a viable livelihood strategy. Following this however, the chapter goes on to present examples of migrants and non-migrants which appear to defy the general trends of 'young, landless migrants'. In so doing the chapter makes the case that mobility is only enacted as a livelihood strategy when it makes sense in terms of the entire suite of livelihood strategies. A result of this argument is the conclusion that it is micro-scale features which determine access and power at the local, intra-household/individual level, and thus which determine mobility strategies in a context of environmental stress.

Having explored decision-making at ever smaller scales in the previous three

chapters, **Chapter 9** moves back up to a more regional-scale analysis, exploring the differences in mobility strategies between the two field sites. In so doing that chapter seeks to argue not only for the role of non-environmental factors in mobility decisions taken in a context of environmental stress, but for the fact that the occurrence of such factors is neither random, nor inevitable. Instead such factors are the result of particular historical events located in the structures of global political economy. These effects are considered notable as they have important mediating impacts at the local level, regarding where people move, how long they remain and under what conditions of duress mobility is enacted by different individuals.

With the empirical work having been elaborated, **Chapter 10** reflects on the findings of the thesis, contextualising them within debates on the relationship between environmental stress and human mobility. In so doing the chapter offers important conceptual contributions regarding *migration*, *time* and *livelihoods*. The chapter goes on to describe the contributions the study has made to understanding the relationship between environmental stress and mobility, before describing areas for future research and reflecting on the implications of the work for policy-makers and advocates who are working on climate change and concerned about human migration.

Notes

Anonymity of respondents

Due to concerns about respondent well-being, all interview respondents were promised anonymity in this study. As such, respondents are usually referred to in general terms, describing only their occupation, gender and field site location, with all names having been

replaced with pseudonyms. Exceptions to this include respondents in administrative positions of authority who consented to having their names published in this work. Where consent was not given, interviews are referred to as 'anonymous interviews'. Anonymous interviews are referenced at the end of the thesis, with details on the time and organisational affiliation of the respondent. Only those interviews explicitly referenced by this work are contained at the end of the thesis, interviews used to generate contextual understanding are not referenced. Such an approach is thought suitable for both maintaining the well-being of study respondents and allowing for this study to be replicated, should another researcher wish to undertake such a task.

Spelling and place names

Due to issues of transliteration involved in representing Amharic and Tigrinya words (written using the Ge'ez alphabet) in the Latin alphabet, various spellings exist for Ethiopian names and Ethiopia-specific institutions. As such I have sought to use the best phonetic spelling of names and institutions. My intention here is twofold. Firstly I wish that readers, unfamiliar with Ethiopia, are able to identify locations referenced in this work and secondly, I wish to be as inoffensive as possible to native Amharic and Tigrinya speakers. I appreciate that I will have inevitably failed, to some extent, in both of these endeavours, and apologise at the outset for any inconvenience or offence caused.

Dates

Given the widespread use of the Ethiopian, Ge'ez calendar as a means for representing time in Ethiopia, it is worth mentioning that all dates cited in this study refer to the Gregorian (or

Western) Calendar conventions. Such an approach has been adopted due to the widespread use of the Gregorian Calendar and the likely readership of the thesis.

2

POLITICAL ECOLOGY AND MIGRATION THEORY

This first substantive chapter of the thesis presents an account of the theoretical frameworks which will be used in the study. While it may seem slightly unusual to open with an account of the theoretical framework (rather than a review of the relevant literature) such an approach has been taken as it provides a common ground from which readers, with different disciplinary backgrounds, can explore the literature that will be described in the following chapter. Importantly such an approach will also afford readers access to the critical theoretical approaches, to both environment-society relationships and migration studies, which guided the study's line of enquiry, thereby accounting for a host of conceptual and theoretical assumptions made in this work.

This chapter argues for the relevance of political ecology in the study of migration. To do so it introduces the field of political ecology, providing an account of its evolution, before introducing a variety of approaches to understanding migration. From there the chapter proceeds to describe the benefits each body of theory will bring to this work, and how they might be fused to provide a revealing account of the relationship between environmental stress and human mobility in northern Ethiopia. This, it is hoped, will both make clear to authors, not familiar with political ecology, what it is meant by the term and provide authors, interested in the potential for political ecology to be deployed in new ways, with a means for exploring the fields connections with contemporary migration theory. It will also serve to introduce the competing theories which are aimed at explaining the central concern of this thesis: how farmers in northern Ethiopia make decisions about their own mobility.

Political Ecology: Caveats and Clarifications

While the role of political ecology in this thesis will be both to structure the approach to the central research question and inform the methods used in answering it, it should be pointed out that political ecology contains a broad range of concepts and approaches that cannot be neatly classified nor clearly defined. In addition, the fact that political ecology comprises an eclectic mix of methods and approaches, means that this study, like most in political ecology, will only involve a portion of the theory and methods which have been expounded upon by political ecologists. As such the description provided below can only act as a guide to the mode of enquiry that will be used in this study.

Keeping the above in mind, the fractionalised and multi-faceted nature of political ecology means that introducing it as a 'field' can be misleading as it might suggest an overly agreed upon, and uniform, approach to theorising environment-society relationships. To readers not familiar with the field this presents a problem as to how to understand what is meant by political ecology and how it will be used in this study. As a result I have chosen to describe the evolution of the field and its dominant ideas as a means to provide insights into how political-ecology, in general, views environment-society interactions. This, it is hoped, will provide the reader with a rationale for why certain approaches have been taken in this study, and what might underpin particular assumptions and critiques. With these intentions in mind it should be noted that what I provide here is in no way a comprehensive account of the evolution of political ecology. For a more comprehensive accounts[2] see Robbins (2004) and Neumann (2005), on which this introduction draws heavily.

2 For other useful reviews see: Bryant and Bailey (1996), Peet and Watts (1996), Blaikie (1999), Stott and Sullivan (2000), Page (2003) and Paulson et al., (2003)

What is Political Ecology? A brief history

Neumann (2005), in his comprehensive history of the 'roots and branches' of political ecology, describes the contemporary focus on political ecology as "the current manifestation of a long standing interest in the ideological, material and symbolic relationship of human society with the natural environment" (Neumann 2005: 15). As a starting point for this introduction the reader need only note that by the end of the 18th century the focus of this long-standing enquiry fell most heavily on the question: what role has the physical environment played in shaping human society? (Neumann 2005). Most importantly, as context for this discussion, is that the dominant answer at the time was that the environment was determinant of societies. Such a view was widely circulated in both scholastic circles and among the public (Neumann 2005, Robbins 2004).

Environment-society: Early critical thinking

In describing the determinist view of environment-society relations as 'dominant' at the end of the 18th century, it should be said that there were early critical voices on the matter. Robbins (2004), in what is has become one of the most comprehensive text books on political ecology, notes that although political ecology only crystallised into a field in the 1980s, it is a field with long antecedent academic traditions. Here Robbins (2004) cites authors, such as Alexander Von Humbolt, Elisee Reclus, Alfred Russel Wallace and Mary Fairfax Somerville, who, writing in the 18th and 19th century, were some of the first scholars to provide critical work on the determinist position. It is not worthwhile, in this text, to explore the details of these authors respective contributions but it is worth noting that their critical perspective was frequently a product of their working with groups in what we would

today call the Global South and that their critical orientation appears to be a product of their more general opposition to the exploitative practices of the colonial state[3] (Robbins 2004).

The result of these works was a challenge to the received wisdoms of environmental determinism which posited that differences in people were both real and natural, being the result of exposure to particular physical environments. Many of these early scholars also began to question the colonial project for its impacts on the natural environment, which it was noted, impoverished the peoples with whom these academics were in contact. This change in focus, from exploring the impact of the environment on society to the impact of society's actions on the environment, was to represent an important shift in environment-society thinking. For it set an important precedent in generating the field of cultural ecology which, in turn, would have a major impact on the formation of political ecology as a meaningful field of enquiry (Robbins 2004).

Hazards and cultural ecology: Intellectual developments in parallel

Before discussing the evolution of cultural ecology as an important predecessor to political ecology, it is useful to first explore the important role played by work on hazards and disasters in the formation of both cultural ecology and, subsequently, political ecology. Hazards literature, today, stems from an initial concern, very explicitly, with the impact of the natural environment on human society. In this regard hazards literature produced two conceptual contributions which have been fundamental in the formation of political ecology as we know it today. The first of these came as far back as 1910 when Addams famously linked death rates across Chicago's different municipal wards with patterns of garbage collection in the city (Addams 1990). Important in this work was that it called into question

3 These two themes: close work with the people being described by theory and a sense of injustice at the practices such theory legitimises were to be two long-standing themes of political ecology.

the notion of a simple, dichotomous relationship between society and the environment, in which the former was passive and simply shaped by the latter. For such work suggested that instead, society, rather than being a passive product of the physical environment, was important in shaping the manner in which the physical environment was able to impact on people.

Having made contributions to the study of human-environment dynamics by showing the degree to which social structures shaped exposure to the physical environment, hazards studies also highlighted other conceptual problems latent in the environmentally deterministic model. Most important was the conceptualisation of the environment as a hazard, which got at the crux of the problem of treating nature and society as simply separable entities. In particular, work on flooding in the 1940s highlighted the degree to which the environment (in the form of a flood) is a particular "human-environment artefact" being no more a result of planning codes as it is an act of nature (Robbins 2004: 27). As such hazards literature challenged the traditional approach to flooding by advocating for better planning and changes in human behaviour, as opposed to focussing on structural and engineering solutions which were dominant at the time (Robbins 2004).

The hazards literature thus made two important and related contributions to the formation of political ecology. It showed that social structures act in important ways to shape what were previously thought of as environmental problems. As such it also showed that the simple conceptual separation of nature and society is fundamentally flawed, and thus insufficient for understanding nature-society interactions.

While acknowledging the important contributions made by the hazards literature, all major accounts describing the evolution of contemporary political ecology cannot help but point to the important role played by cultural ecology in shaping the field (Neumann 2005, Robbins 2004, Paulson, Gezon & Watts 2003, Blaikie 1999, Forsyth 2003). In this regard

Neumann (2005) points out that cultural ecology grew out of the 1950s where it constituted a formalised response to the persistent paradigm of environmental determinism.

Still focussed on less-industrial societies and inspired by hazards literature, which had shown the artificiality of simple distinctions between nature and society, cultural ecology sought to understand environment-society relationships by viewing humans as part of the larger ecological system. Within this view it was thought that humans, like the rest of the ecological system, were controlled by the universal laws governing energy and nutrient flows, and by the logic dictating the material struggle for survival (Robbins 2004).

The effect of this conceptual shift was to expand the application of ecological metaphors to include social systems. Absolutely key in this regard was the use of the ecological notion of 'adaptation' which cast the relationship between society and the natural environment as one characterised by fluxes between the two (Neumann 2005). In this conception, changes in the physical environment would generate societal adaptations to which the physical environment would then again adapt, and thereby change. Such change would initiate another iteration of adaptation and change, which would in turn do likewise and so on and so forth. Crucial in this conception was the notion of equilibrium which highlighted the balance that was sought between cultural practices and physical environmental conditions (Neumann 2005). Equilibrium (also a notion from ecology) or, more popularly 'balance', then came to be thought of as the idealised state in which nature and society should exist. Work in cultural ecology thus came to focus on describing how cultural practices dictated interactions with the physical environment in order to maintain equilibria (Neumann 2005).

Despite the conceptual leaps generated by work on hazards and the insights generated by cultural ecology, both fields were limited, to some extent, by their inability to grapple with the full complexity of environment-society problems. In the case of hazards research,

the work found itself hamstrung by its lack of a comprehensive means for engaging, fully, with an analysis of the political economy that was shaping risk (Robbins 2004). In this regard, although hazards studies had effectively shown that risk is as much the the product of social systems as it is the product of the physical environment, as a field it remained unable to explain why risk continued to be produced in the ways that it was. As example, hazards work struggled to explain why policy responses to droughts and flooding continued to be oriented towards large structural solutions (such as dams and irrigation schemes) despite the inefficiencies of such an approach being well articulated by researchers. Hazards research was thus unable to make sense of the political economy of large scale agriculture which lead to certain solutions being favoured over others, despite the inefficiencies involved (Robbins 2004).

Similarly cultural ecology experienced problems with its inability to effectively articulate the larger political and economic systems in which the focus of its research was embedded. In this regard Neumann (2005) describes how cultural ecology found itself struggling to identify field sites which contained suitably autarkic communities in which effective cultural ecology work could be conducted. The problem was that researchers were unable to identify suitably self-contained communities in which the relationship between cultural practices and the physical environment could be examined. Everywhere they looked they found communities whose cultural practices had been mediated by the the penetration of global capitalism, and systems of exchange which had lead to a comodification of elements of the physical environment. Even among the remote groups of bushmen in the Kalahari, they were met with evidence that the notion of autarkic, or easily bounded, communities was largely imagined and that the states of balance and equilibrium which they sought to document (had they ever existed) had already been disrupted (Neumann 2005, Robbins 2004).

In addition to not being able to conceptualise the broader political economy of local nature-society interactions, cultural ecology was also subject to other academic criticisms. The most pertinent of these revolved around its reductionist and question-begging approach which results from privileging 'adaptation', and thus 'equilibrium', as the explanatory forces behind all human action and system function. For once equilibrium is accepted as the law governing nature-society interactions then all human action could be understood as adapting to achieve such an equilibrium. By such an approach all academic enquiry is reduced to answering the question: in what way is this observed human behaviour adaptive? (Robbins 2004), whereby all possible answers only beg the initial question. As such cultural ecology, at its worst, was criticised for creating little more than 'just so stories' (Alland 1975: 69) in which its explanations of human behaviour could be neither verified nor justified.

A final critique of cultural ecology was that its application served to effectively naturalise, and thereby depoliticise, the differences between social groups. This point is clearly made by Robbins (2004), citing Bennett (1969), where it is pointed out that from the standpoint of cultural ecology, groups scavenging a subsistence off the margins of larger economic and social systems become the result of their adaptation to a socio-environmental niche, as opposed to the result of land seizure, political marginalisation, discrimination and decades of exploitation (Bennett 1969). This rejection of cultural ecology's apolitical approach turned out to be fundamental in its rejection as the dominant paradigm for explaining human-environment interactions, resulting in its supersedence by political ecology.

Although it is possible to trace the academic traditions of contemporary political ecology to the fields of hazards research and cultural ecology there is one more important school of thought that needs to be articulated before describing contemporary political ecology. For political ecology was not just the outgrowth of cultural ecology and hazards

literature, it was also, like the fields which preceded it, something of a response to Neo-Malthusian, apolitical accounts of the relationship between environment and society.

Malthusiansm and the neo-Malthusian response to cultural ecology

Although the focus for theorists of environment-society interactions have predominantly been on the impacts of the environment on society; as was mentioned at the start of this chapter, work from as far back as the 18th century has also expended some its energy exploring the reverse relationship: the impact of society's actions on the physical environment. In this regard Thomas Malthus' (1798) *Essay on the Principal of Population*, clearly articulated a simple narrative which has been both incredibly dominant and remarkably persistent (Malthus 1798).

By Malthus' account growing populations will eventually exceed the capacity of the environmental system's ability to support them. Such conditions will result in both humanitarian and environmental crisis. Humanitarian crises would be the result of starvation and disease-based mortality, while environmental crises, as a result of over-extraction, would cause the collapse of the environmental asset base and thus the inability of the environmental system to regenerate itself, instigating a persistent humananitarian crisis (Robbins 2004).

Malthus' narrative has been invoked since his famous essay was first written, however neo-Malthusianism emerged particularly strongly in the late 1960s and 1970s, and its discursive dominance[4] remains persistent today. It is not the intention of this work to describe and criticise all the claims of neo-Malthusianism, but it is worth briefly detailing what lead to the rise of neo-Malthusianism as it has formed an important component of the literature on the relationship between environmental change and human migration.

The growing influence of neo-Malthusiaism was affected by a number of factors

4 By 'dominance' I mean its sway in popular perception and ability to influence policy.

which buttressed logical connections between population growth, environmental decline and socio-environmental crisis. Fundamental in these conceptions was cultural ecology's notion of 'disequilibrium' thought to have been caused by capitalist penetration into what were perceived as being previously autarkic, 'balanced' communities. This notion of communities-out-of-balance was linked with a narrative of natural checks on population growth having been eliminated (through the diminishment of war and the arrival of modern medicine) thus resulting in dramatic increases in population size.

Such a narrative was then linked with social crisis following the publication of a number of texts which arose in a dialectical relationship with a number of high profile environmental crises. Important texts in this regard included Hardins' (1968), *The tragedy of the commons*, which provided a compelling rational choice model detailing the mechanism by which unchecked population growth would result in the inevitable degradation of commonly held environmental resources (Hardin 1968). Additionally, texts such as Ehrlich's (1968) *Population bomb,* Myers' *Sinking ark* and The Club of Rome's (1972) *Limits to growth* (Meadows, D. and Meadows, D. 1972)*,* generated a popular perception of the planet being crushed by the weight of its own population (Neumann 2005). Finally the growth of the environmental movement in the wake of the OPEC oil crisis – an event which highlighted the potential impacts a scarcity of environmental resources might have on society (Porter & Sheppard 1998) – invigorated a rise in popular neo-Malthusianist views of environment-society relationships.

While prominent literature dialectically reinforced the popular understanding of major events involving natural resources, other factors were also important in generating the discursive power of neo-Malthusian accounts. Of principal importance here was the manner in which the neo-Malthusian narrative fitted comfortably within the modernist and teleological accounts of economic and social development (provided by theorists such as

Rostow) which were dominant at the time. In this regard neo-Malthusian descriptions of intertwined developmental and environmental problems, prescribed solutions which were explicitly technical. For when poverty and food insecurity is the product of rampant population growth (and therefore under-supply) the solution is the application of modern farming technologies to increase yields. Similarly, where population growth is causing environmental degradation, the solution is the application of modern environmental management techniques, which will produce better environmental policies, stopping degradation and thereby averting the developmental problems which stem from it.

By a neo-Malthusian account then, as long as scientific advances could produce enough food, and environments could be effectively conserved then society could transition, in a Rostowian sense, to a high-modernist phase in which fertility rates would drop and the associated 'developmental problems' would cease.

Finally, an important factor for consideration in understanding the pervasiveness of neo-Malthusian accounts, is that they did not conflict with the racist accounts of backwardness and incivility – carried over from environmentally determinist and colonial logics – which described less-industrialised societies and undervalued forms of technological innovation developed outside of the industrial fold. As such, neo-Malthusian accounts could easily coexist within other dominant and powerful narratives.

Political ecology: Responding to the impasse in cultural ecology and hazards studies

Roughly 20 years separate the height of cultural ecology[5] and the publication of what is often considered political ecology's foundational text: Blakie (1985) *The political economy of soil erosion in developing countries.* The events that lead to this morphing of cultural ecology into political ecology are numerous and while they no doubt involve an academic outgrowth

5 Often considered to be Rappaport (1968) *Pigs for the Ancestors* (Robbins 2004)

of the literature on hazards and cultural ecology, they are also a specific reaction to what one might call 'apolitical', generally neo-Malthusian, accounts of environmental change and the articulations of environmental problems and (more importantly) solutions they generated (Bryant 1992).

As an outgrowth of hazards research and cultural ecology, political ecology sought to actively make sense of the manner in which broader structures of political economy impacted on how people interact with their physical environment. This focus on political economy stemmed from both the impasse in cultural ecology (that clearly bounded autarkic groups did not exist) and as a result of the challenges posed by hazards research (why were certain solutions preferred over others, despite their inefficiencies). In addition, political ecology sought political economy analysis as a means to counter cultural ecology's prioritisation of adaptation as the organising principal in terms of which all human behaviour can be explained (Neumann 2005).

To do so political ecology focussed on a Marxist political economy, which it was thought, would best solve the conceptual puzzle of nature-society relations by focussing on the relations of production (treating the environment as a capital stock), as this is where the material underpinnings of society would be produced and thus where society would be reproduced (Watts 1983a, Watts 1983b). The result of this focus is that political ecology, even today, has been strongly influenced by a broadly defined, generally Marxist, political economy (Robbins 2004).

This focus on the relations of production also resulted in a tradition in political ecology of placing a major focus on livelihoods and locating the starting point for research at the level of the producer or land manager – a notable tradition which reaches as far back as the early critical scholars of the 18th century (mentioned above).

While political ecology thus stemmed from a reaction to neo-Malthusianism and

grew out of hazards and cultural ecology research, it was also situated within a meta-narrative of general historical materialism, specifically dependency theory (Robbins 2004). In this regard political ecology crystallised into a form of critical geography which arose as a result of the general ascendency of structuralist thought in the social sciences. It thus rejected apolitical, neoclassical, accounts of social change – characterised by descriptions of 'natural' or 'inherent' human behaviour and/or the state of the environment – instead locating explanations in the material conditions of political economy. Notable in political ecology then is the degree to which it blossomed out of a rejection not only conceptual limitations in other fields but also out of dissatisfaction with the policy prescriptions generated by what political ecologists today would term 'apolitical ecologies' (Robbins 2004, Blaikie 1999, Bryant 1992).

Political ecology is thus characterised by an assumption that human-environment interactions are themselves structured by a larger social engine which revolves around the control of nature (Robbins 2004). As such political ecology has come, almost always, to be theoretically engaged with a broadly defined political economy. To this end political ecology has come to focus on the specific historical contextualisation of what are perceived to be environmental problems, rather than locating the cause for such problems in reductionist and/or essentialist accounts of society.

Political ecology crystallises and grows

Although the events described above suggest something of a quantum leap, going from the separate, but related, disciplines of cultural ecology and hazards research to political ecology as a well articulated field, such an account is the by-product of a review of this nature. A more accurate account is one which views political ecology slowly crystalising into a field of

critical thought about the environment. As such many early authors in the field might not have thought of themselves as political ecologists, even if, today, we would consider their work classic political ecology (Robbins 2004). In this regard, Blaikie's (1985) text, *The political economy of soil erosion in developing countries*, although not referred to by the author as 'political ecology' is thought to be the first comprehensive account incorporating broadly defined, political economy, into ecological analyses while Page (2003) references Wolf (1972) as the earliest work of a political ecology sort.

Blaikie has subsequently described his foundational text as a mix of political economy and ecology. A method for this approach, aimed at investigating the degree to which political economy structured the choices of land managers, and therefore mediated the production of environment-society relationships, was first formally put forward in Blaikie and Brookfield's (1987) work, *Land Degradation and Society*, where they described their explanatory approach as following a 'chain of explanation' (Blaikie & Brookfield 1987: 27).

'Chains of explanation' (described metaphorically as the peeling off of successive layers of explanation like one would the layers of an onion (Forsyth 2008)) sought to explain human-environment interactions by placing them within progressively wider or denser contexts – Bassett (1988) termed such an approach human ecology in context. To do this in practice, one began with the decision maker, looking at the changing patterns of their decisions, and the nature of their relationship with the physical environment. Calculations, based on considerations of human ecology were then placed in broader contexts as the researcher slowly “refocus[ed] their analytical lens to “understand the social context of decisions, the economic context of those social systems, and the political context of that economy” (Robbins 2004: 38).

'Chains of explanation' thus sought to nest local interactions within larger and larger scales, with the aim being to account for the explanatory factors operating at such scales. As

such the methodology drew on cultural ecology in understanding the human ecology of how the practices of the land manager were constrained by the environmental conditions and how the practices of the land manager affected the physical environment. In addition, however, this approach sought to contextualise these practices within a broader political economy. Methodologically this involved moving away from the land manager in order to understand the social, political and economic institutions which governed local actions. Thus the methodology sought to understand the degree to which (among other things) local officials, laws, market prices and tenure relationships affected the possible suite of behaviours at the disposal of the land owner. These forces were then further contextualised within the broader policies of the region and eventually the state and globe more generally. Thus Blakie's work – although problematic for reasons of method and epistemology (Blaikie 1999) which will be addressed in Chapter 4 – provided a means for systematically dealing with the issues of global political economy which had previously stifled work in cultural ecology.

This early period of political ecology has been termed its 'structuralist phase' (Walker 2005). It was characterised by a focus on human ecology and political economy where the intention was to understand events in context (Bassett 1988). The result, with its focus on power, was to locate explanations for environmental problems within systems of marginalisation and exclusion, rather than in outdated, or inappropriate, modes of production and population pressure (Blaikie 1985). The result of such findings were profound as they shook to their very core conservation efforts, which aimed at addressing environmental problems by controlling access to resources, generally through the exclusion of people (Neumann 1998, Chapin 2004).

Political ecology, then, was initially founded on dealing explicitly with the political elements of environmental problems which, up to that point, had been left out of dominant apolitical, neo-Malthusian explanations and articulations. Notably however there has also

been movement within the field of political ecology subsequent to the illumination of the role played by structural socio-political factors generating environmental problems. Here the focus on power and marginalisation has inevitably lead to questions about the persistence of particular formulations of environmental problems. As such Blaikie (1999) reflecting on his earlier (1985) work points out that he had taken for granted that soil erosion, as an environmental problem, was real and did in fact exist. In this vein and in a context of ascendant post-structuralism within the social sciences, political ecologists began to query such assumptions, interrogating not only the role of politics in the generation of conditions which could be conceived of as environmental problems but, more fundamentally, at the processes of representation (and the location of power in that representation) that allowed such processes to be defined as problems in the first place.

This period, during which the focus fell on understanding the environment as a construct, and thus on the power which is both expressed and inheres in generating dominant constructions, has been termed the 'post-structuralist phase' in political ecology (Walker 2005). It produced a significant amount of work focussed on the perceptual nature of environmental problems and lead Forsyth (2008) to extend the onion metaphor (used previously to describe chains of explanation) so that now, more than simply peeling away the layers of the onion, political ecology was concerned with examining who is holding the knife (Blaikie 1999, Forsyth 2008).

The post-structural turn in political ecology (captured most explicitly by Peet and Watts (1996)) meant that the field required some re-definition. For here it was not that political ecology was political for the degree to which it actively sought to understand political economy, while neo-Malthusian accounts were apolitical for the degree to which they failed to account for such features. Rather it was that both political ecology and neo-Malthusian ecologies were inherently political and it was simply that political ecology

sought to be explicit about the politics of its ecological theorising. To this end Forsyth (2008) describes Blaikie's long term project in political ecology as a "politicised acknowledgement of the co-production of environmental knowledge and social values in ways that, tentatively, try to reconstruct environmental explanations and interventions" (Forsyth 2008: 762).

Thus much of what political ecology came to focus on was the politics of what had previously been cast as apolitical ecologies. In this regard the post-structural turn in political ecology lead to a host of work which sought to undermine particular narratives of environmental problems (Blaikie 1999). It criticised what had previously been perceived as 'science' in the study of environmental problems and undermined what had until recently been understood as well established 'environmental truths', such as the crises of desertification (Mortimore 1998, Lambin et al. 2001), land degradation (Tiffen, Mortimore & Gichuki 1994) and deforestation (Fairhead & Leach 1995). Its tools for this task included science studies (Forsyth 2003, Bryant 1998), policy studies (Keeley & Scoones 2003), ethnographies and discourse and narrative analysis (Adger et al. 2001).

One result of this epistemological shift to post-structural, critical analysis has been the opening up of political ecology to critiques of nihilism and to claims that it is advocating the irrelevance of science. The response by political ecologists has been to adopt a position generally referred to as 'critical realism' (Forsyth 2003). According to political ecologists this position maintains that the material world is real and has a meaningful impact on society (realism). Notably however, such a reality remains unknowable in any objective sense due to the contextually specific situatedness of any observer. Thus political ecologists generally argue that the scientific method can help us in systematically understanding the nature of the material world however there is, at the same time, a need for (critical) assessment of any truth-claims so that their potential biases may be revealed and impacts for policy be more transparently debated.

As such political ecology today represents a broad, and growing, body of literature. That said, it is considered to be characterised by certain general traits and assumptions. These include the fact that the costs and benefits of environmental change are unequally distributed, and the role of political ecology is to de-naturalise these outcomes, showing how they are contingent upon power and are not inevitable (Robbins 2004). As such political ecology tends to focus on multi-scalar interactions in understanding environment-society relationships as well as on issues of history, political economy, ethnography, discourse analysis and ecological fieldwork (Neumann 2005). It should be noted however that few studies are thought to contain all of these features and certainly not to an equal degree. Some mix of these features is, however, thought characteristic of the field (Neumann 2005).

Having presented the evolution of political ecology to its contemporary state, it should be noted that the field is not without its critics (Walker 2005, Walters & Vayda 2009). In this regard, I have already made mention of the fact that the 'chains of explanation' approach suffers from some practical issues pertaining to its implementation and overly simplistic conceptualisation of the relationships between structure and agency (Robbins 2004, Blaikie 1999, Rocheleau 2008) and note here that further critiques[6] of the field will be dealt with in Chapter 4 of this thesis.

The above description of political ecology as field focussed on environment-society interaction makes a weak case for its use in a study exploring the specific relationship between environmental change/stress and human mobility. While the explicit case for using this theory will be made later in this chapter, it is necessary to now introduce the second body of theory which will inform this study: migration theory.

Migration theory presents a number of theoretical frameworks from which to understand the varying aspects of human migration. Such frameworks attend to the forces

6 Such critiques include that political ecology serves a question-begging research agenda which privileges the role of social features in explaining environmental problems.

which initiate migration, structure its form (choice of destination, extent and duration), maintain its existence and explore its impacts (in both sending and receiving areas). Since such questions are crucially important to questions about the potential relationship between environmental change/stress and human mobility, an account of relevant theory is provided below.

Migration Theory

The following section of the chapter outlines the major migration theories, what their focus has been, their limitations and critiques, and the evolutions that have taken place within them. The aim of the section is threefold. Firstly it seeks, through a discussion of the relative merits of different migration theories, to inform conceptual and methodological approaches that will be employed in this work (and will be discussed in Chapter 4). In this regard an account of the dominant, contemporary approaches to migration will be used to highlight the consonance between migration theory and political ecology, thus justifying the mix of approaches used in this study.

Secondly, because of the multi-dimensionality and multi-disciplinarity of migration studies (Brettell & Hollifield 2000); and because of the general acknowledgement that a full understanding of contemporary processes of migration is unlikely to be achieved using only one discipline, or by focussing on one level of analysis (Brettell & Hollifield 2000, Massey et al. 1993), a presentation of the competing theories of migration is offered here to inform discussion of the empirical findings from the work. The intention then is to provide a background of theoretical information against which accounts of (non)mobility can be assessed and in terms of which it can be understood. As no single theory is likely to explain all the aspects of mobility decisions, all theory thought relevant to the study is provided here.

Finally, it hoped that a sense of the variety of approaches, and their limitations, in conceptualising human migration will allow for a more critical reading of the existing literature on 'environmental refugees'[7]. In this regard it will aid in the application of a critical political ecology in understanding the narratives and discourses involved in the construction of the 'environmental refugee' a means of representation for an environmental problem about which there is simultaneously polarised debate and general consensus (see Chapter 3).

Disciplinary Approaches to Migration Theory

Internal and international migration theories are not entirely synonymous. Within work on migration theory greater attention has generally been paid to international migration while internal migration has been covered in development literature on urbanisation and social change, having received less, explicit, theoretical attention. That said, there is thought to be a fairly large conceptual overlap between international and internal migration, and as such international migration theory presents a useful conceptual basis from which to explore dynamics of internal migration. With this in mind, while the rest of this chapter will focus principally on theories of international migration, it is noted that such theory does not stem from explicit work on internal migration. The conceptual overlap between the two will be discussed in Chapter 10, where I reflect on this findings of the thesis.

Massey et al. (1993) and Castles and Miller (2009) point out that early interest in migration focussed primarily on what it was that initiated movement. Within such studies early theorising drew heavily on neoclassical theory which analysed migration in terms of push-pull models and conceptualised the initiation of migration in terms of conditions which either pushed migrants out of their areas of origin and/or pulled them to their destination.

7 Chapter 1 alluded to the controversial nature of the term 'environmental refugee'. As will become clear later in this work, the author is well aware of the terms contested nature and a more thorough discussion of this will be presented in Chapter 3.

Within such conceptualisations push factors included low wages, poor standards of living and political repression, while pull factors would include demand for labour, access to facilities and the existence of political freedoms. The logic underlying neoclassical, push-pull, models has tended to conceptualise the decision to move in terms of rational, cost-benefit analyses whereby the rational behaviour of the migrant is reduced to monetary assessments of profit maximisation (Massey et al. 1993). Neoclassical models thus rely on rational choice and, as such, are characterised by an individualistic conception of the potential migrant and by an ahistorical conceptualisation of the conditions under which the potential migrant makes decisions (Castles & Miller 2009).

The most well known of the migration models, born of neoclassical theory, is that of Harris and Todaro (Harris & Todaro 1970), which views the initiation of migration as lying in geographic differences in the supply of, and demand for, labour. In the Harris-Todaro model areas with high labour to capital ratios have correspondingly low equilibrium market wages, while those with low labour to capital ratios have high equilibrium market wages. With migrants acting as rational profit maximisers (in a monetary sense), migration is predicted to take place from areas offering low wages to those where labour is worth more. Within this conception migration will take place until labour to capital ratios (and thus equilibrium market wages) equalise across regions. In a similar fashion relative scarcities of different labour kinds (e.g. skilled labour) across regions would also lead to migration into areas where relative scarcities drive up wages (Massey et al. 1993).

The simplicity of this model and its amenability to up-scaling (and therefore to macro analysis) means that it has had a major impact on migration thinking and policy-making. Castles and Miller (2009), however, point out that despite the model's powerful intuitive logic, it suffers from an inability to describe actual migration flows – a major problem for a model whose strength lies in its simple incorporation into predictive models. In this regard

Castles and Miller (2009) point out that assessments of actual migrant experiences show, unlike the model would predict, that it is rarely the poorest of the poor who migrate (a logical outcome of viewing migrant decisions as predicated on profit maximisation) and that migrants do not simply move in the direction of regions where their wages are worth the most. The explanation for these failings in neoclassical theory is thought to lie in the fact that such theory conceptualises the migrant as an unencumbered actor with full information about markets and thus with the ability to make decisions based solely on rational calculations of costs and benefits. In this regard Castles and Miller (2009) argue that such a view is absurd and that in reality migrants have limited and contradictory information, and are subject to a range of constraints (Castles & Miller 2009). In addition Castles and Miller (2009) point out that empirically, migrant behaviour appears to be heavily influenced by historical experiences as well as by family and community dynamics.

While neoclassical theories of migration sit within an economic framework not all economic theories are limited to neoclassical accounts. Within the economic framework, and as a response to some of the criticisms of neoclassical theory, described above, more recent theorising on migration has resulted in what is termed 'the new economics of labour migration'. This approach (emergent in the 1980s (Castles & Miller 2009)), focusses on related groups (usually families or households), as opposed to the individual, as the locus of migration decisions. At the level of the group the new economic approach prioritises risk management (as opposed to simple cost-benefit) calculations as the major framework from within which mobility decisions are undertaken. In this regard, groups are thought to use migration as a means to spread risk by diversifying the sectors into which they invest their collective labour, thereby diversifying their access to different income streams (Massey et al. 1993). In addition, the new economic approach to migration accounts for mobility as a means to acquire capital that might be necessary to undertake income diversification and risk

spreading (Massey et al. 1993, Castles & Miller 2009). Methodologically and conceptually then, from a new economics of migration standpoint, understanding migration decisions requires an appreciation of the livelihood context of the individual migrant. This, in turn, requires, an understanding of both the individual's role in the larger social group, and of the variety of livelihood sources upon which this larger group is reliant.

Shifting beyond solely economic explanations of migration, dual labour-market theory provides a sociological account of migration (Massey et al. 1993). The claim of dual labour-market theory is that wages are defined by factors more complex than simple labour-to-capital ratios. Instead they are defined, in part, by social hierarchies which link wages with social status and job type. Within this conception the motivation to do work is not simply explained by the wages available, but also the social status attached to those jobs. As such migration can be explained through an understanding of the differences across economies and in the forces which structure wages and motivations in different forms of employment.

According to the theory modern, industrial and service economies, which rely on specialised activities, are characterised more by social hierarchies which preclude established members of these societies from engaging in low paid, risky labour practices that are associated with low social standing. Less-industrialised economies, on the other hand, are not so hierarchical, experience limited access to capital and are founded on highly risky income streams. As such labourers from less-industralised economies are drawn to modern ones where they, because of the lack of social stigma attached to certain work, are willing to undertake the risky, low paid and socially stigmatised work that established members of the industrial economy are unwilling to engage in. The dual labour-market theory thus ascribes migration to structural differences in the labour demands between more and less industrialised economies.

In addition to problems with accurately predicting migration, the models provided above suffer from two other major failings. The first, highlighted by Castles and Miller (2009), is that they do not appreciate the degree to which a migrant's choices may be curtailed (sometimes physically) by legislation governing access to certain regions. In this regard migrants may simply not be able to gain access to the regions to which they are being pulled and/or be able to leave the ones from which they are being pushed. This problem is clearest in the case of international migration, but also has relevance to internal migration in contexts such as Ethiopia where international borders have been redrawn and where there has been an intense process of decentralisation (see Chapter 5).

The second general problem with economic models is their focus on push and pull factors. The problem here is that such an approach fails to appreciate the degree to which the push and pull factors are themselves part of a larger economic system. Zolberg et al. (1989) get at the heart of this problem when they point out that an analysis of labour migration really requires a conception of workers being propelled to move by the dynamics of the transnational capitalist economy which is actually the super-structure determining both push and pull factors in a simultaneous fashion (Zolberg, Shurke & Aguayo 1989). The problem with the 'push-pull' heuristic of the economic models then is that it seeks an explanation for migration in what is only a fractional element of a broader structure in which the explanation for migration really lies.

A more systematised response to the above critique has been the generation of world systems theory. World systems theory is similar to dual labour-market theory in that it explains migration in terms of unequal economic developments in different parts of the globe. However world systems theory (heavily influenced by Marxist political economy (Castles & Miller 2009)), differs in that instead of describing the structural differences between economies and societies, it differentiates them, along the lines of dependency

theory, into 'core' and 'periphery' economies (Castles & Miller 2009). From world systems theory patterns of migration can be explained by looking at the manner in which capital from the core economies has penetrated peripheral economies to the benefit of those economies at the core. In this regard, the general claim of world-systems theory is that patterns of migration are dictated by the political and economic organisations which dictate the expansion of the global market (Massey et al. 1993).

A powerful element of world systems theory is its ability to explain migrant's choices of destination (something which neoclassical theories struggle with), by tying them to particular historically established material and ideological relationships between the core and periphery. In this regard strong migratory relationships between core countries, with a colonial history, and their former colonies are explainable in terms of their material and ideological linkages (Massey et al. 1993), despite wage differentials being possibly greater elsewhere. World systems theory is thus much broader than economic theories, being able to account for a host of connections between the core and the periphery. Such a theory also moves beyond the fractionalised approach of the push-pull models as, according to it, it is the global socio-political system, governing market expansion, which simultaneously determines both push and pull factors.

Within this conception migration is an inevitability of capitalist penetration into peripheral economies, where migration follows the international flow of goods and capital, but (usually) in the opposite direction (Massey et al. 1993). On this front it is worth noting, as Massey (1993) does, that although the means by which the forces of capitalism penetrate peripheral economies may have changed with time – from colonialism to neocolonialism – the bringing of land, raw materials and labour under the influence and control markets will inevitably result in migration (Massey et al. 1993). The deep historical nature of this approach however suggests that we should expect migration to vary where the context of

capital penetration varies.

Although historically oriented approaches to migration seem encouraging, they are not without their own problems. Most notable among the critiques is that they tend to deny, or underplay, the agency of the individual migrant in mobility decisions (Castles 2003). As example Castles and Miller (2009) point to the "frequent breakdown of labour policies" which suggest that historical approaches may overstate the dominance of the "logic of capital and interest of Western states" (Castles & Miller 2009: 27). Thus while neoclassical theories tend to place too much emphasis on agency, and deny the importance of structural constraints, historical-structural approaches fall into the trap of denying agency altogether. As such both approaches appear to be too one-sided, suggesting that we should be wary of any theoretical explanation of migration which relies on either a characterisation of unconstrained human agency or an explanation rooted in structural, historical, socio-economic and political relations which views these structures as monolithic (Massey et al. 1993, Castles & Miller 2009).

To this end, Castles and Miller (2009) point out that migration is a complex process for which it may not be best to simply seek a single unifying theory. Instead it would be worthwhile to seek a conceptualisation in which economic, political, social and cultural factors all work together, and in which due account is afforded to both structure and agency in decision making. In this regard Castles and Miller (2009) note that "migration decisions are influenced by a range of conditions in both sending and receiving areas. These conditions are not static but in a process of constant change ... [in this regard migration decisions are] ... linked both to global factors and to the way these [factors] interact with local historical and cultural patterns" (Castles & Miller 2009: 25-26). As a way through this Castles (2009) points to an interdisciplinary trend in migration theory.

One such interdisciplinary theory is migration systems theory. It explains human

migration in terms of the existence of prior links between sending and receiving regions such as trade, political influence or cultural ties. A migration systems approach involves looking at a sending and receiving region and attempting to understand all the linkages between the places concerned. Castles (2009) claims that crucial to this approach is an appreciation of the degree to which any migration needs to be understood in terms of interacting macro- and micro-scale structures. In such a conception macro structures refer to large-scale institutional factors while micro-structures embrace the networks, practices and beliefs of the migrants themselves (Castles & Miller 2009). Crucially these micro- and macro-structures are thought to be linked to one another through intermediate mechanisms and institutions termed meso-structures (Faist 1997). Notable in migration systems theory is that two regions need not be geographically close for migration to occur between them (Massey et al. 1993).

The discussion above, which focuses on the forces governing the initiation of migration, has highlighted the importance of the inter-linkages between the micro and macro forces shaping migration. Such a focus, however, has itself resulted in an appreciation of the dynamic nature of migration so that it is now widely acknowledged that once migration has taken place, it has impacts on both the sending and receiving areas such that subsequent migrations may be driven by forces which act in quite distinct ways from the forces which initiated movement. In this regard there is a fairly extensive theoretical literature on what forces sustain migration as opposed to those forces which initiate it. Such theories are important for understanding contemporary migration as such migrations are inevitably shaped by the migrations which have gone before them.

Most prominent among the theories describing how migration is sustained (as opposed to initiated) between regions are *institutional* and *network theories*. Institutional theories are not worth mentioning here because they pertain principally to the formal institutions that arise surrounding the politics of international migration[8]. Network theory,

8 Such institutions include both 'formal' and 'informal' created to facilitate the administrative tasks of

however, is relevant to this work. In it 'networks' refer to sets of interpersonal relationships that connect migrants, former migrants, and non-migrants in origin and destination areas through ties of kinship, friendship, and shared community origin (Massey et al. 1993). The logic underlying this theory is that networks increase the likelihood of migration because they lower the costs and risks of movement and increase the expected net returns. Networks achieve this through their ability to store and generate social capital in the form of connections between potential migrants in sending areas and established migrants in receiving areas (Massey et al. 1993). Such social capital is important for migration as it acts, among other things, to reduce settling-in costs, provide social security and establish connections for sending back remittances. What is notable in network theory is that for every arriving migrant the costs of subsequent migrations are thought to fall, thereby increasing the likelihood of subsequent migrations taking place. This means that with time the importance of the factors that drove the initial migration may come to be less important than the factors which sustain it.

This last element of network theory – that the costs of subsequent migrations are reduced with every additional migrant from the same sending region – is elaborated upon in greater detail by Massey (1990) in a theory termed 'cumulative causation' (Massey 1990). This theory details a number of conditions which give reason to distinguish the initial reasons for migration from the forces which sustain it as they become increasingly unrelated. Such conditions pertain mostly to increasing pressures in the sending region by generating wealth inequalities between social groups with access to migrant remittances and those without. In this regard the pressure to send a migrant increases as households in receiving areas find themselves falling behind in terms of both social status and material well-being, relative to households who have migrants sending back remittances.

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international travel (e.g. visa acquisitions and transport logistics) and to protect the rights of international migrants for whom basic civil liberties might be denied on grounds of national status.

The other important factor in cumulative causation is the degree to which migrants impact the cultural values in both the sending regions (e.g. changing lifestyle expectations) and receiving areas (e.g. certain jobs being labelled as immigrant jobs[9]). This generates what Massey (1986) refers to as a culture of migration which can be very effective in sustaining migration once it has begun (Massey 1986). With this in mind it should be noted that Fussell and Massey (2004) do acknowledge limits to cumulatively caused migration (Fussell 2004).

While the focus on connections between the micro and macro forces shaping migration highlighted the importance of the dynamic nature of human movement, such an understanding has been enriched by a further appreciation of the manner in which feedback loops in migration have, themselves, changed with time. Evidence of this comes from Castles and Miller (2009) who point out that the contemporary elements of globalisation mean that network effects are more powerful today than they were previously. This is so, as not only are the physical connections between places reduced with globalisation, but also because the information connections are improved which means that migrant groups are able to stay in better touch with their sending regions. Thus it becomes clear that in addition to migration having dynamic implications for future migrations, the manner in which this dynamism operates is itself influenced by contextual factors which may have little relation to the initial act of migration.

Due to the subject matter of this thesis there is one other body of theory detailing human movement which is worth detailing here: refugee theory. Refugee theory pertains to a particular type of human movement which is considered especially important due to its implications for both sending and receiving areas as administrative categories, for its importance to humanities' shared conscience and for the implications it has on the well-being of the migrant him or herself. Regarding the importance for sending and receiving areas,

9 This sort of theoretical claim shows the overlap that exists between the different theories, in this case with dual labour-market theory.

refugees are an important category of migrant for the manner in which they affirm either the legitimacy, or illegitimacy, of modern, liberal democratic states and thus the relevance of those state's claims to sovereignty. For humanity's shared conscience, refugees represent important objects in that the insurance of their well being constitutes a basic element of universalised humanitarian sentiment, which both acknowledges and affirms the notion that humans are, by their very existence, entitled to some basic form of rights and protections. Regarding the well being of the individual migrant, the theory surrounding who, or what, constitutes a refugee is of profound importance as the granting or denial of asylum status can mean the difference between life and death for the individual applicant.

With the political importance of the refugee laid out it must be acknowledged that the discussion of who is, and who is not, a refugee is not in any way a simple matter. In this regard Shacknove (1985) points out that the answer to this question lies in a number of definitions of the refugee, the most seminal of which comes from the United Nations Convention Relating to the Status of Refugees, for which the definition describes: a person 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 to or, owing to such fear, is unwilling to avail himself of the protection of that country" (UNHCR 2010).

This definition has been criticized for being too narrow, in that it excludes groups who make other legitimate claims to humanitarian concerns and which lie at the heart of the reasons for classifying refugees as a separate form of migrant in the first place. Particular concerns relate to refugee status only applying to migrants crossing an internationally recognised border and doing so only for the reason of a fear of persecution. As such the United Nations Convention definition of a refugee has been critiqued for way that it has operationalised the notion of the 'refugee', so that, in certain instances, individual migrants

who make legitimate claims to humanitarian assistance from the international community are excluded from receiving the kind of assistance that is necessary to buttress the claims to sovereignty made by states whose legitimacy is based on modern, liberal and democratic principals.

With this brief description of the tensions underlying the definitions of the administrative category of protected persons it can be said that at the heart of the issue pertaining to who should be considered worthy of protections (by whatever administrative means) is the issue of distinguishing between 'forced' and 'voluntary' migrants. The broader category of forced migrants are of concern for the reasons described above which pertain to general sentiments about basic standards of liberty, both due to the infringement of liberty implied by any sense of coercion in ones decision to move, and for the more practical elements of ensuring the positive freedoms needed for liberty in the receiving area of the migrant. The issue of distinguishing between forced and voluntary migrants is however of considerable complexity[10]. The unresolved tension between structure and agency, already mentioned above, applies as much in this discussion as it does anywhere else. For any discussion of a 'forced migrant' suggests a lack of choice (or a lack of agency), however this conflicts with the generally acknowledged inevitability of human agency. Exactly how this issue will be resolved in this study is discussed in Chapter 4. For now however it sufficient to have outlined why the refugee presents as a unique object in migration theory and that central to tensions in the definition are conceptual debates about what constitutes a forced or voluntary migrant. As such this chapter turns now to discuss the conceptual overlap between migration theory and political ecology.

10 It should be noted here that the distinction between forced and voluntary migrants, although of much interest to migration theorists, is not relevant in the case of the United Nations Convention Relating to the Status of Refugees. While the issue of forced and voluntary migration has become important in discussing the relevance of the refugee convention definition, the definition itself is not concerned with the either the degree of structure affecting, nor by the degree of agency expressed by, the migrant. Rather it is simply concerned with the existence of a 'well founded fear of persecution'.

Political Ecology and Migration Theory

Given that the focus of this work is the relationship between changes in the physical environment and human mobility, it should not be too surprising to see that the major theoretical frameworks adopted in this analysis are political ecology and migration theory. The use of migration theory as a means for exploring mobility decisions, in terms of why people move, where they go, how far they travel and how long they remain, should be evident from the theory presented above, which describes a long history of interest in these questions and provides sophisticated means for answering them.

Regarding political ecology, although the details of the study methodology as well as the literature on environmental refugees will be discussed in the chapters which follow, it can be noted here that both the structuralist and post-structuralist phases of political ecology will have relevance for this work. Post-structuralist features will be relevant in exploring the manner in which the notion of an 'environmental refugee' has been presented as an environmental problem. Here, political ecology's post-structural tradition of interrogating the construction and representation of 'environmental problems' is thought to be particularly useful. This is especially the case given its established history of engaging with neo-Malthusian accounts of environmental crisis which are aimed at gaining political will for the precautionary principal (Forsyth 2003) – the following chapter will detail how such an approach as a central part of the literature on environmental refugees.

As such a political ecology approach will allow for an exploration of the power contained in representations of environmental crises, portrayed through the narrative of 'environmental refugees'. This, in turn, will allow for clarity on the 'environmental refugee debate', and thus create an analytical position from which to frame this study so that it might transcend that debate, allowing it to focus on the features of the relationship about which we

have reason to be concerned.

Further to this, regarding the structuralist elements of political ecology, the field's systematised approach to understanding social and environmental change through an exploration of the linkages between human ecology and the broader social context, provides a fruitful avenue for exploring the manner in which environmental stress/change shapes household/individual mobility decisions. Importantly here such an approach will allow for a robust exploration of the complex relationship between environmental and non-environmental factors in mobility decisions (see Chapter 4 for a full justification of the relevance of this question), in a manner which I will argue below, is amenable to contemporary migration theory.

Likely notable in the descriptions of political ecology and migration theory presented above, is the degree of conceptual overlap between the two. This, I have stated, is a strength of political ecology in this context, where it provides an established method for exploring environment-society interactions which is consonant with the body of migration theory and which is at the heart of this thesis. Such a case is encouraging as it suggests that the two bodies of theory should be able to engage in a common conceptual project, wherein notions of root cause and features of concern for explanation are shared. Given the importance of this sort of overlap in inter-diciplinary work, I detail the areas of overlap between the two bodies of theory below.

An initial observation of political ecology and migration theory notes their shared focus on root causes which has lead to a common focus on agency. For migration theorists, concerned with the causes of migration, discussions about agency have focussed on the migrant themselves and the degree to which it is the will of the migrant that shapes migration flows. For political ecologists this focus has fallen on the land manager, where interest has been in the degree to which individual decisions drive processes of environmental change.

Importantly however, while both approaches are actor oriented, both grew out of critiques of the neoclassical representation of the individual as unconstrained, fully informed and profit maximising. In the case of political ecology it was a rejection of neo-Malthusian accounts and the degree to which they drew on narratives describing a *Tragedy of the commons* (Hardin 1968) which invigorated a search for the role of structure in individual decision making. For migration theory, it was the failure of neoclassical models' ability to predict migration flows that lead to their rejection of migrants as fully agentive and unencumbered. As such both political ecology and contemporary migration theory are wary of models, or narratives, which rely on a representation of unencumbered agency. This has resulted in political ecology and contemporary migration theory sharing a conceptualisation of individual decision making which is locked in the puzzle of teasing out the relationships between structure and agency (Blaikie 1999, Castles & Miller 2009, Carr 2005).

From a shared interest in this puzzle there stem two other important features of theoretical and conceptual overlap. The first is a prioritisation of history and political economy as a means for understanding the presence and persistence of the socio-political and economic structures which constrain agency and shape preferences. Among migration theorists, this historical political economy approach can be identified in the contributions from both World Systems Theory and Dual Labour-Market Theory. Among political ecologists, historical political economy has been born out of accounts focussed on understanding how issues of access and the location of power have come into being, how they are maintained and how they shape livelihood strategies.

The second shared feature which arises from a focus on understanding the relationship between structure and agency pertains to a focus on exploring the linkages between features operating at multiple scales. In political ecology this focus stems from a desire to understand how decision making at the local level is influenced by structural

features, for which the origins might lie in macro-scale processes. In the case of migration theory such focusses have come from the new economics of labour migration, world systems theory and dual labour-market theory. In all of these some concern lies in how factors operating at increasingly large scales shape the mobility decisions taken by the individual. Similarly in political ecology, interest has focussed on how individual decision on issues of land management have been impacted by structures operating at increasingly large scales. Such an interest is best captured by Blaikie's (1987) 'chains of explanation'.

With the above overlap in mind, in addition to the contribution made by the post-structural elements of political ecology, there appears to be other value to combining these two bodies of theory. This takes the form of 'chains of explanation' via which political ecology provides an explicit methodology for empirically investigating the roles of structure and agency in shaping local-level decision making. Migration theory then provides a rich variety of ways for interpreting these relationships and as such provides the theoretical framework by which one can isolate which of the multiple structures to explore in successive links of the chain of explanation. Migration theory then also provides a means for interpreting the manner in which different forms of migration manifest in response to the multiple factors of influence.

Conclusion

This chapter has focussed on motivating for the use of a fusion of political ecology and migration theory in this work. To do so the chapter began with an introduction to political ecology, describing how a general concern with the relationship between environment and society has, today, crystallised into the critical field that is political ecology. The chapter then went on to outline the different disciplinary approaches to understanding migration theory

and how these have evolved with ongoing research in migration.

Having described the contemporary form in which migration theory and political ecology find themselves, the chapter then described the relevance of each to these to this particular study and highlighted conceptual overlap between the two in terms of their shared focus on the relationship between structure and agency, their focus on historical political economy, and a focus on multi-scalar relationships.

As far as the author is aware, such a fusion of political ecology and migration theory has not been presented elsewhere. The only possible exception comes from Saunders' (2000) work detailing with the origins of the term 'environmental refugee', however this work does not much explore the state of the contemporary literature on environmental refugees, does not seek to combine assumptions from political ecology with migration theory and does not undertake any sort of empirical work. With this in mind the two fields are thought to present as an elegant synergy, particularly useful for exploring the focus of this thesis: the relationship between environmental and non-environmental factors in shaping mobility decisions.

With a sense of the theoretical framework to be used by this study, the following chapter of this thesis provides an account of the literature on environmental refugees. The intention in so doing is to provide a critical account of this literature in light of the theory provided by political ecology and contemporary migration theory.

3

THE ENVIRONMENT AND MOBILITY: EXPLORING CONCEPTS AND DEBATES

Having introduced the theoretical literature that will inform this study, in the previous chapter, this chapter serves to introduce the reader to the body of literature on 'environmental refugees'. The chapter's main focus is on highlighting the degree to which the 'debate' on 'environmental refugees' is more about the representation of the potential relationship between environmental change and migration, than it is about the appropriate conception of that relationship. To achieve this the chapter introduces early writing on environmental refugees before discussing early work which was critical of the concept. The chapter then describes the increasing polarisation of the literature on the topic, before describing what appears to be a significant amount of conceptual agreement regarding the relationship between environmental change and human migration.

To explain the highly polarised nature of the writing on environmental refugees, despite general agreement about the processes linking environmental change to human migration, the chapter seeks to apply post-structuralist elements of political ecology, exploring the manner in which the construction of the 'environmental refugee' generates particular policy responses. Notably, in this case, the desired outcomes for environmental policy are at odds with scholars working on migration issues.

The chapter then closes with an account of what are thought to be persistent conceptual problems in the literature on 'environmental refugees'. Such a critique is offered as an analytical platform from which this study seeks to transcend the polarised debate, focussing on historicising and politicising the context in which environmental stress is being experienced. Such an approach is justified as a means for exploring the manner in which both environmental and non-environmental factors are likely to interact in generating human

migration.

'Environmental Refugees': A Cause for Concern

Although the term environmental refugee is often credited to Essam El-Hinnawi's (1985) United Nations Environment Programme (UNEP) paper, and although it is often seen as an emergent issue under contemporary concerns about climate change, Saunders (2000) has effectively argued that the term's initial use came as early as the 1970s when Lester Brown (founder of the World Watch Institute) first used it (Saunders 2000). With such accuracies in mind, the degree to which El-Hinnawi's paper brought the term to public prominence is generally accepted (Jacobson 1988), and is in fact, the reason credit for the term is most usually afforded to it.

Much of the reason for the effectiveness of El-Hinnawi's paper in raising the profile of the 'environmental refugee' lies with the fact that it provided a formal definition of what the term constituted. Such a definition operationalised the term enabling a blossoming of subsequent work, focussed on documenting the existence of migrations forced by environmental crises and on formulating numerical projections of future 'environmental refugees'. Important amongst such early works was a paper by Jacobson (1988), which is notable for providing both the first estimate of the existing number of 'environmental refugees' and suggesting the potential role climate change might play in displacing people in the future. Jacobson's (1988) estimate of 10 million existing 'environmental refugees' – based on an assessment of the number of people displaced by the drought(s) in the African Sahel in the 1980s – is important because it leant legitimacy to the notion of the 'environmental refugee', allowing the media, charities and even other academic works to pick up on the notion, citing 'environmental refugees' as real and not hypothetical. In addition, as will be

described later in this chapter, Jacobson's (1988) observation of the potential role of climate change in human displacement was a harbinger to what would become the dominant concern in writing and thinking on 'environmental refugees'. El-Hinnawi's (1985) and Jacobson's (1988) papers were thus important for producing alarming predictions of 'environmental refugees', which were amenable to both media representations and policy discussions, and were therefore important in popularising the idea of a link between the state of the environment and human mobility.

An increased awareness about 'environmental refugees' manifest in the growth of literature linking environmental crisis with human displacement in the early 1990s. Notable in most of this is that despite Jacobson's (1988) reference to the potential impacts of climate change, much of the writing on the topic revolved around neo-Malthusian concerns, linking population growth with social and economic crisis, and migration (Westing 1994, Westing 1992, Islam 1992, Otunnu 1992, Trolldalen et al. 1992). Evidence of the neo-Malthusian inclinations of these authors was the repeated reference to the notion of 'carrying capacities', with Westing (1992) going so far as to state that the appropriate conception of the 'environmental refugee' problem was to see it not so much as an issue of land shortage but rather one of population 'longage' (Westing 1992: 206).

For authors writing on 'environmental refugees' in the latter half of the 1990s neo-Malthusian accounts, similar to those described above, increasingly came to mention climate change. In such accounts population growth remained a central concern with the notion of 'carrying capacities' persisting (Ramlogan 1996, O'Lear 1997). In fact to a certain extent the importance of population growth became even more central as authors began to identify hotspots for 'environmental refugees' by overlaying predicted changes in the physical environment (forecast under climate change models) onto projections of population growth (Döös 1997, Myers 1993, Myers & Kent 1995, Myers 1997, Myers 2002). Amongst these

writings classic neo-Malthusian representations of irresponsible, inappropriate or outdated farming methods persisted with such features often being cited as a problem in addition to the challenges posed by anthropogenic climate change. In this conception climate change was presented as an additional stressor, effectively reducing the carrying capacities in areas that were already environmentally stressed by population pressure. A common theme among these works was the notion of an increasingly large population reliant on an ever dwindling resource base. In such a context migration was viewed as an inevitable outcome of the combined impacts of the ravages of climate change and the degrading practices of the local population (Ramlogan 1996, Döös 1997, Myers 1993, Myers & Kent 1995).

Amongst early authors linking climate change, population growth and migration, concerns tended to be twofold. Firstly there was concern about the vulnerability of forced migrants and the hardships they might endure – both in their experience of environmental decline and in their place of destination (Islam 1992, Otunnu 1992, Myers 1993). Second was concern about the impacts 'environmental refugees' would have on populations in receiving areas. Illustrative of the latter was Jacobson's (1988) work which linked the 'environmental refugees', arriving from the Sahel, with the expansion of shanty towns, the exacerbation of pollution and the spread of urban crime in Sahelian cities. In a similar vein Westing (1994), taking such concerns one step further, forecast conflict to accompany the arrival of 'environmental refugees'. Here conflict was hypothesised to take the form of xenophobia, manifest as a result of competition over access to land, resources and jobs. In the case of international migration, Westing (1994) forecasts that tensions between arriving and receiving communities will generate cross-border conflict.

Similarly concerned with security, Ramlogan (1996) talks in more general terms, citing refugees as vectors of disease and harbingers of poverty in their destination areas. Both Ramlogan (1996) and O'Lear (1997) make the link between population pressure and

destabilisation, arguing that the arrival of large populations will degrade the resources of receiving areas and have similar destabilising effects in those areas as they had in the sending regions. In the case of international migration, O'Lear (1997) argues that such security concerns are sufficient grounds for restricting migrant access to the United States (O'Lear 1997).

Particularly notable in the literature linking concerns about population growth, climate change and mass human displacement is that it is marked by an almost complete lack of empirical evidence. Work by authors such as Westing (1992), Islam (1992) and Otunnu (1992) simply cite the concept as it was espoused in El-Hinnawi (1985), before uncritically citing Jacobson's (1988) figure of 10 million existing 'environmental refugees'. Similarly authors such as Ramlogan (1996), Döös (1997) and O'Lear (1997) simply cite various works by Myers when justifying their use of the concept. Jacobson (1988) and Myers (1993 & 1995) have thus clearly been important in popularising the notion of the 'environmental refugee'. As the particular contribution made by Jacobson (1988) has been detailed above, the exact contributions made by Myers still needs to be provided.

Myer's contribution to the literature on 'environmental refugees' is notable both because it is the most characteristic of the writing which brought the 'environmental refugee' to prominence, and because he is the most prolific author of this type. In addition, Myers' sat on the editorial board of the academic journal *Environmental Conservation* which published both of Westing's (1992 and 1994) papers as well as Ramlogan's (1996) paper. As such his conception of the 'environmental refugee' has become fundamentally important in shaping how the term has been taken up amongst academics, policy makers and the public.

Myers direct contribution to the literature spans the period 1989 to 2005. During this time he has written papers and books dealing directly with 'environmental refugees' as well as authored a number of peripheral papers commenting on the links between environmental

change and migration more generally. Myers' work is notable for citing massive numbers of 'environmental refugees', scaling up Jacobson's (1988) figure from ten, to twenty-five million – a number greater than the number of 'convention refugees[11]' recognised at the time – and placing future estimates as high as 200 million environmental refugees (by 2050) (Myers 1993, Myers & Kent 1995, Myers 1997, Myers 2002, Myers 2005).

For Myers, like other authors from the 1990s, such large numbers of 'environmental refugees' are hypothesised to be the result of the combined impacts of population growth and climate change (Myers & Kent 1995). By this account the relationship between climate change and migration will be driven most acutely by the processes of sea-level rise and desertification. Sea-level rise is predicted to generate increased physical flooding (referring to both a more frequent occurrence of temporary events and the permanent inundation of areas where people currently reside) and salt-water intrusion into farmlands and aquifers. These combined forces will, in the first case, drive people from their homes, while in the second it will undermine their livelihoods to a point which threatens their survival.

In the case of desertification, Myers cites both aggregate drying of areas as well as the enlargement of marginal lands as cause for concern, with both undermining people's livelihoods, reducing the number of people the land can support and thereby inducing displacement. For Myers, climate change presents as an additional stress to population growth by which carrying capacities are forecast to be exceeded with inappropriate farming methods leading to both overstocking and soil erosion and depletion. Such factors will further undermine livelihoods, leaving territories unable to support even stable populations, let alone growing ones. As such, large-scale human displacement becomes an inevitability.

Myers' approach thus focusses on diminished agricultural production, reduced water availability and damage to physical infrastructure as the mechanisms driving migration. His

11 'Convention refugees' refers to those individuals currently being provided asylum as a result of signatory countries obligations under the 1951 United Nations Convention on Refugees and the 1967 protocols.

large predictions of 'environmental refugees' are bolstered by his conception of population growth, which is not only responsible for degrading the environment, but also for leaving more people residing in drylands and low-lying areas (Myers & Kent 1995). Within this model Myers' predicts developing nations, Pacific island states and deltaic regions to be most vulnerable to sea-level rise. He predicts the African Sahel to be the region most vulnerable to desertification-induced displacement (Myers & Kent 1995).

Responding to the Alarm: Critical Work on 'Environmental Refugees'

While the alarmist works, just described, span both the later part of the 20th Century and the beginning of the 21st Century, critical work on the topic also extends as far back as the early 1990s. Early critics tended to be migration theorists who found that their experiences studying migration – undertaken in response to changes in the other spheres of society (such as social, political and economic relations) – conflicted with, or were not entirely captured by, the characterisation of human movements hypothesised to take place in response to changes in the physical environment. As such these works tended to be critical of a number of elements of the 'environmental refugee', including both ideas presented in writing on the topic and which were assumed by the term itself.

Regarding the term 'environmental refugee', Bilsborrow (1992) criticises it for the manner in which it affords primacy to changes in the physical environment in decisions about human migration. This, she argues, overlooks the potentially important role played by other factors in the process. On the other hand, McGregor (1994) takes issue with the characterisation of the 'environmental refugee', arguing that the construction of the relationship between environmental change and migration (in works on the environmental refugee) characterise the migrant as passive, denying them any ability to endure or adapt to

changes in their physical environment. In a similar fashion Suhrke (1992) criticises authors such as El-Hinnawi (1985) for characterising all forms of movement as refugee-like, despite differentiating them on grounds of spatial and temporal extent, the former of which undermines the legal relevance of the 'refugee' as defined by the 1951 Convention[12].

Despite the importance of these criticisms – for their implications remain debated today – it should be noted that none of the authors mentioned above claim the outright irrelevance of the 'environmental refugee' as a concept. What was at issue for them was the assumed relationships between a changing physical environment and the manner in which individuals made decisions about their patterns of mobility. In this regard authors who were initially critical of the 'environmental refugee' were not opposed to the existence of the term. Rather they were simply opposed its application to such a broad set of migrants responding to such a wide-ranging set of events. As such Bilsborrow (1992) suggests that the term should not be scrapped entirely, but rather that it only be applied to a sub-set of migrants; namely those fleeing rapid and/or drastic changes in the physical environment.

From this context Suhrke (1994) comes to identify two schools of thought on 'environmental refugees'. The first she describes as 'maximilist', and among whom she places authors such as El-Hinnawi (1985) and Jacobsen (1988). Such authors, she claims, describe large numbers of existing 'environmental refugees' and predict greater numbers in the future. These authors, claims Surhke (1993 & 1994), tend to conceive of the link between changes in the physical environment and human migration as simply causative and direct. As such they predict large scale human migrations as a necessary outcome of large-scale change in the physical environment.

Suhrke (1993 & 1994) contrasts this maximilist account with, what she terms, the 'minimalists', and among whom she includes authors such as Billborrow (1992) and

12 The 1951 United Nations Convention Relating to the Status of Refugees

McGregor (1994) who, she claims, emphasise the complexity of the interaction between environmental and social systems, and thus question the assumption of a direct causal link between environmental change and migration. While it should be noted that Suhrke (1993 & 1994) locates herself amongst the minimalists - making the point that migration is not mono-causal and thus contesting the relevance of the adjectival prefix 'environmental' in 'environmental refugee' – what is probably more important in her work is the degree to which her characterisation of the minimalist and maximilisit perspective highlighted the grounds of debate which would pervade much of the writing on 'environmental refugees' for the following ten years.

Conceptualising the 'Environmental Refugee'

Within the debate described above, limited acceptance of the validity of the 'environmental refugee' had been hinged upon its deployment in a more discerning manner. Much effort was therefore spent by minimalist scholars in providing an appropriate conception of the 'environmental refugee'. In this regard authors sought to sub-categorise migrants responding to environmental stimuli so that the term 'environmental refugee' could be more appropriately applied (Bilsborrow 1992, Suhrke 1994). As grounds for such a distinction, the vast majority of this literature uses the scale of change in the physical environment, and the time period over which that change occurs, as a means for justifying their use of the notion 'refugee'. In this conception it has been argued that the 'environmental refugee' is a more relevant term for describing migrants responding to high change-to-time-ratios[13] in environmental quality (Suhrke 1993, Bates 2002). Adding further detail to this conceptualisation, Suhrke (1993) distinguishes between an 'environmental refugee' and a 'voluntary migrant' based on the degree to which migrants seem able to relocate in advance

13 The term generally used in the literature to describe such ratios is 'dramatic' changes in the environment.

of deteriorating environmental conditions. Those who act pre-emptively she labels ‘migrants’ while those who leave only once conditions can no longer sustain their livelihoods are ‘environmental refugees.’

Hugo (1996) expands on this approach. Writing from within the minimalist school, he takes as given the potential for environmental change to act coercively in generating migration. As such he conceptualises refugee-hood based on the degree of choice and/or coercion in the migrant’s decision to move. To this end Hugo (1996) invokes the use of a continuum of choice to describe the difference between a voluntary and an involuntary migrant. At one end of the continuum the choice and will of the migrant is the overwhelmingly decisive element encouraging people to move and on the other, migrants are faced with death at the hands of a hostile and degraded environment if they remain in their present place of residence (Hugo 1996). Like Suhrke (1993), Hugo (1996) understands choice in terms of the degree to which a potential migrant can move pre-emptively.

Bates (2002) continues in this vein; she implicitly agrees that environmental change is capable of driving migration and similarly invokes the concept of a 'continuum of choice' to differentiate between types of environmentally motivated migrants. Bates’ (2002) continuum however is comprised of three categories. Those ‘involuntary migrants,’ for whom the change in environment has been so drastic that a failure to migrate would result in death, she terms ‘refugees.’ Those ‘compelled’ by environmental change she terms ‘environmental migrants,’ and those who move ‘voluntarily’ she terms ‘migrants’. In addition, Bates (2002) adds another level of sophistication to her conception as she attempts to make greater sense of the ways in which environmental change induces migration by generating typologies of environmental disruption based on the nature of the change in environment: its origin (natural or technological), its duration (acute or gradual), and the degree to which migration is a planned outcome of the disruption (intentional or not) (Bates

2002).

'Environmental Refugees': A Polarising Issue

By the late 1990s, in spite of the objections of the minimalist school, the efforts at a more appropriate form of conceptualisation, and despite the lack of empirical evidence to support their claims; maximilist writing on the environmental refugee continued to grow. As was shown above literature continued to be produced throughout the late 1990s (e.g. Ramlogan (1996), Döös (1997), O'Lear (1997) and Myers (1997)), and the alarming predictions of authors like Myers gained increasing traction amongst the general public. At the same time however, increasingly radical critiques started to appear within the minimalist school. Whereas Bilsborrow (1992), McGregor (1994), Suhrke (1994) and Hugo (1996) had acknowledged the potential relevance of the term 'environmental refugee', in 1998 Lonergan denied its relevance entirely.

For Lonergan (1998) the problems of separating environmental processes from the social, economic, political and institutional structures meant the adjectival prefix 'environment' was entirely invalid. As such any notion of an 'environmental refugee', 'environmental migrant' or 'environmentally displaced person' was nonsensical. With this in mind Lonergran (1998) does concede that there are grounds for exploring the degree to which environmental change might be a factor in human migrations, but notes that there is currently insufficient knowledge about the character of that relationship to make any reasonable future predictions. To aid this argument he cites circumstances in which areas experiencing environmental degradation (such as Mexico City), which in maximilist models would lead to out-migration, have, in fact, attracted migrants.

In further denying the legitimacy of the 'environmental refugee' Lonergan (1998)

points out the significant role development plays in generating vulnerability to environmental change, and thus argues that at the root of what often appears to be environmentally determined migration is actually the developmental disparities between the Global North and the Global South (Lonergan 1998). Lonergran (1998) also echoes the sentiments of Bilsborrow (1992) and McGregor (1994) when he calls into question the manner in which maximilist works have failed to account for the ability of populations, affected by environmental change, to adapt to that change in ways that mitigate the need to relocate (Lonergan 1998).

In polarising the literature on 'environmental refugees', although Lonergan (1998) rejected the sensibility of the term, the clearest, outright rejection of the entire concept comes from the writings of Black (1998 & 2001). Black's (2001) argument (titled nothing less than *Environmental refugees: Myth or reality*) is the most drastic attempt, to date, at debunking the environmental refugee thesis altogether. Taking specific aim at the works of Myers, Black (2001) makes use of three attacks on the maximilist conception. Firstly he undermines the desertification-migration thesis, citing literature which calls into question the rate at which desertification is assumed to be taking place in the Sahel. As such he undermines the narrative of environmental crisis, thereby removing the presumed driver of migration. Secondly he elaborates Surkhe's (1992) critique, arguing that the 'refugee' label is not suitable for describing all migrants responding to environmental change. To do so he points to evidence which indicates that vegetative cover has historically rebounded from cyclical droughts in the Sahel and thus argues that migration among nomadic Sahelian herders is a fundamental part of Sahelian livelihoods, not an exceptional refugee-like movement. Thirdly, in addressing sea-level rise as a cause of 'environmental refugees', Black (2001) echoes Lonergan's (1998) sentiments, calling into question the primacy of environmental change as the driver of migration. Here Black (2001) argues that it is poorly planned development and

global, north-south, disparities that are largely to blame for generating vulnerability to hazards such as flooding. Thus environmental change is, if anything, only a proximate cause of displacement while the root of the problem lies in global developmental inequalities (Black 2001).

From the above description, it would appear that the writing on 'environmental refugees' was becoming increasingly polarised at the start of the 21st century. What should be noted however is that a close reading of this work actually suggests that there is a great deal of consonance between the maximilists and minimalists. For when reading the work advocating either position one cannot help but be struck by the conceptual concessions made by scholars from both schools. As such, despite common references to the 'debate on environmental refugees' (Castles 2002, Stavropoulou 2008, Morrissey 2009, Gill 2010) and strong claims about the (in)validity of the term (Myers 2002, Black 2001), it is quite possible to read work on 'environmental refugees' and identify significant portions of conceptual overlap. This next section of the chapter seeks to provide such a reading before seeking to explain the apparent paradox of consensus about the ambiguity of the relationship between environmental change and migration, and debate about 'environmental refugees'.

Consonance in Approach: Agreement on 'Environmental Refugees'

From the above account three major objections can be posted against the maximilist account of the 'environmental refugee'. First, it problematically labels all migrants as refugees. Second, it assumes that the environment is easily distinguishable from the social, political and economic context in which it exists. Third, migration in response to difficult environmental conditions is often short distance, temporary and cyclical. It is not, as the maximilists suggest, long distance and permanent. This next section of the chapter seeks to

challenge these characterisations of the maximilist account, citing instances where such features are acknowledged by authors writing classically from within the maximilist school.

Beginning with the minimalist critique of labelling all migrants responding to environmental change as 'refugees', I point to work by Islam (1992) who, when advocating for the acknowledgement of 'environmental refugees' as an indicator of Bangladesh's developmental problems, argues that there is a difference between individuals migrating in search of a better life and migrants having to leave an area for fear of dying as a result of environmental destruction. The former he describes as 'migrants' while the latter, he claims, are effectively conceived of as 'refugees'.

Similarly, Ramlogan (1996), of the maximilist school, argues that at the heart of the issue of who is an 'environmental refugee', lies the decision making process of the migrant which distinguishes whether that migrant is 'forced' or 'voluntary' and thus determines for which migrants the title 'environmental refugee' is appropriate. Notably these conceptions echo the sentiments of minimalist scholars, such as Suhrke (1994) and Hugo (1996), who distinguish 'migrants' from 'refugees' by distinguishing between forced and voluntary migrations, which they see as determined by the nature of environmental change.

On not being able to separate environmental change from the social, political and economic context in which it occurs (Lonergan 1998) and on the degree to which factors other than environmental change will inevitably be embroiled in migration decisions (Bilsborrow 1992); I point to work by Otunnu (1992) who, while advocating for the legitimacy of the 'environmental refugee' and at the same time forecasting large numbers of future environmental refugees, states:

> "Various factors … directly or indirectly lead to environmental deterioration ... It should be indicated straightaway that there are no impenetrable walls between environmental, political and economic factors - they are, at one and the same time, causes and effects of environmental

crisis. ” (Otunnu 1992: 11)

In addition, Otunnu (1992) blames the conditions in sub-Saharan Africa which are generating 'environmental refugees' on “the nature of the state, the political economy of sub-Saharan Africa, and the international economic system” (Otunnu 1992: 11). Similarly, Islam (1992) places 'environmental refugees' on the continuum of *economic* refugees and then blames (what he views as) the impending environmental refugee crisis, in Bangladesh, on the laws of peripheral capitalism and the nature of the aid industry.

Even Westing (1992) and Myers (1993, 1995, 1997 & 2002) in their strong maximilist arguments both, at least, acknowledge the importance of the political context when they cite that the problems of environmental refugees will be worst in the context of developing countries because they are both “ill-equipped to deal with ... threats to their sustainable development” (Westing 1992: 205) and the “costs of [adaptation] measures are likely to prove too high for many [of them]” (Myers 1993: 753). Similarly Ramlogan (1996) and Döös (1997) account for multiple drivers of migration in their descriptions of 'environmental refugees', with Ramlogan (1996) citing poverty as an important component of migration in the Sahel and Döös (1997) citing wars, religious intolerance unemployment, poverty and wage differentials.

Finally, despite it forming a fundamental feature of minimalist critiques, maximilist scholars openly acknowledge that migrations in response to environmental change may well occur over short distances. In this regard, Ramlogan (1996) acknowledges that environmental change will generate both internal and international migrants while the following quote from Myers' (1993) is explicit about the complications of defining 'migration' in terms of geography:

“And if they do move what constitutes true migration? Some people …

> may need to move their place of residence only a short distance; [for example] certain coastal communities may find that residents need simply move across town" (Myers 1993: 757).

From the other side of the debate, it has already been mentioned that a number of minimalist authors, wary of the problematic use of the term 'environmental refugee' have been careful not to deny its legitimacy altogether (Bilsborrow 1992, Bates 2002, Hugo 1996, McGregor 1994). In this regard even Black (2002) states that he is not arguing that changes in the physical environment do not play an important role in migration decisions. This point is evident in his writing where an important part of his critique is his example of circular migration in response to periodic drought in the African Sahel (Black 2001). As such there appears to be general agreement on the fact that features in the bio-physical environment may play some role in shaping mobility decisions.

The above work thus appears to problematise the notion of a clear and well articulated debate about the existence of 'environmental refugees' and about the nature of the relationship between changes in the physical environment and human migration. As such the work presents as something of a paradox in which there appears to be a highly polarised debate over a subject matter about which there is a large amount of agreement. The argument I would like to make in the next section of this chapter is that such a paradox is possible as disagreement pertains to the use of the term 'environmental refugee' and not to the notion of a link between environmental change and human migration. As such the 'debate on environmental refugees' is a debate about how a problem is represented, not about the problem itself. To highlight the relevance of this observation I invoke the theoretical underpinnings of the post-structuralist phase of political ecology, described in the previous chapter, which focusses on how power is manifest in the representation of environmental problems.

As such the following sections of this chapter is focussed on exploring how

'environment' and 'refugeehood' have been constructed (both individually and in their relationship with one another) and how those constructions draw on particular contexts and perspectives. In so doing the following section will explore the conceptual origins of the 'environmental refugee', looking at the relationship between the development narratives which it prescribes, the policy responses which stem from it and the institutions which generated it.

The 'Environmental Refugee': An Evolving Concept

Looking at the origins of the 'environmental refugee', while the opening section of this chapter located the first use of the term with Lester Brown, the term does appear to have significant antecedent conceptual roots, reaching as far back as the 1930s (Saunders 2000). In this regard, Saunders (2000) cites evidence of linkages between neo-Malthusian concerns and outmigration, going back as far as a 1931 paper by Dennery which warns of the linkages between 'overpopulation' on the Indian sub-continent, outmigration as a result, and the implications of this for the West. Subsequent to this Saunders (2000) identifies more concrete references to the 'environmental refugee', citing Vogt (1949) who invoked the notion of 'ecologically displaced persons' when writing on migrants leaving the north American prairies during the dust-bowl years of the 1930s (Saunders 2000).

While it is enlightening to see how far back the notion of 'environmental refugees' actually reaches, what is most notable about these early works is the degree to which they highlight long-standing development narratives (Adger et al. 2001) which persist in the debate into the 1990s. In this regard, Dennery's (1931) work, titled nothing less than: *Asia's teeming millions: And its problems for the West,* points to the pervasive narrative of neo-Malthusianism, environmental problems and migration; while Vogt's (1949) work initiates a

focus on the process of desertification as a hazard capable of driving migration.

Along with neo-Malthusian logic and a concern over drylands and desertification, the literature on 'environmental refugees' is quite clearly pervaded by a politics of environmental protection and conservation. Notable in this regard is the coining of the term by the World Watch Institute, and its popularisation in a UNEP paper – which Westing (1992) explicitly states was written with the intention of garnering support for addressing environmental problems. Further evidence of this is that Jacobson's (1988) seminal piece was also a World Watch Institute Paper. As such it seems that the notion of the environmental refugee has long standing ambitions of achieving environmental conservation/protection, particularly against the, perceived negative, impacts of population growth in dryland regions. With this in mind it is worth briefly exploring precisely how the notion of environmental refugees was used as a means to advocate for environmental conservation.

An examination of the maximilist literature on environmental refugees reveals that the argument for environmental protection appears to be reliant on two features. The first is to cast human mobility as a *problem.* The second is to present this problem as occurring on a *scale* which makes palliative measures at addressing it seem impossible. Regarding human mobility as a *problem,* two senses of the word are relevant. The first stems from the environmentalism of the 1970's which, the previous chapter has shown, was popularly informed by notions of balance and equilibrium. In such a paradigm the existence of 'environmental refugees' was used to suggest significant changes in the physical environment. Since such change was conceived as a shift away from some idealised, climax equilibrium, it was thought to be inherently problematic and as such the 'environmental refugee' became emblematic of an environmental problem. Adding to this account was the fact that people were portrayed as being forced to move. Such a description suggested not only that the environment was changing but that it was changing drastically and in a way that

left it no longer able to support human populations.

The second sense in which the maximilist literature casts 'environmental refugees' as a *problem* pertains to how the migrants themselves are a problem. This is again done in two ways. The first focusses on the vulnerability of migrants, presenting 'environmental refugees' as an humanitarian problem (Islam 1992, Otunnu 1992, Myers 1993), while the second focusses on problems of security and stability in receiving areas, casting environmental refugees as a problem for the receiving areas (Westing 1994, Ramlogan 1996, O'Lear 1997, Myers & Kent 1995). Notable in this second sense of environmental-refugees-as-a-problem, is the manner in which it draws on the paradoxical nature of the 'refugee' as, at one and the same time: hapless victim and resourceful agent. The former being acutely vulnerable and, incapable of responding to changes in the social context or physical environment, while the latter is capable of destabilising entire nation states.

With the 'environmental refugee' cast as both the result of a problem and a problem in and of itself, the second prong of the argument in favour of environmental protection was to present the 'environmental refugee problem' on a *scale* which would make it impossible to address in any palliative fashion. Such narratives focus on the impossibility of absorbing migrants, or of the great suffering such migrants would undergo while, at the same time, highlighting the scale of the damage that was being done to the environment. By such an account policy prescriptions aimed at addressing the cause of the problem – environmental degradation – are presented as the only rational solution.

With the importance of scale in mind, the ability to draw on the paradoxical notion of the refugee (as both victim and agent) is important in understanding the effectiveness of maximilist accounts in advocating for environmental protection. On the one hand, the security narrative, which transfers the costs of environmental problems in one place to another through the movement of people, provides an individualist motivation for

implementing policies aimed at addressing 'environmental problems'. On the other, the vulnerability narrative, generates a humanitarian imperative by which it is similarly rational to undertake measures which will address 'environmental problems' at the root of people's migration. Thus maximilist accounts are particularly effective at achieving action on environmental policy because, by drawing on the paradoxical notion of the refugee they can generate allegiances across the political spectrum, thus uniting groups that are usually at odds, particularly on issues pertaining to immigration and the environment.

With the environmental refugees' neo-Malthusian conceptualisation and aims of environmental protection, it should come as no surprise, given the description of the environmental movement in the 1970s (described in the previous chapter) to identify the 1970s as the moment Lester Brown first breathed life into the term. Similarly, it should not be too surprising to hear that it was with the second wave of contemporary environmentalism in the late 1980s and early 1990s (Young 1990) that the term was reinvigorated through the writings of El-Hinawi (1985). Exemplary in this regard is the fact that it was in 1988 (the year that Jacobson published her paper warning of the potential for climate change to drive future human migrations) that the IPCC was established.

Thus it appears that the notion of an environmental refugee has long been deployed as a means to garner support for environmental protection. Evidence of this comes from the fact that the narrative in which it has been presented has prescribed policy to this effect, that the moments during which the term has risen in popularity have coincided with global attention on environmental issues and that the institutions which have produced maximilist writing on the term have principally been concerned with the state of the bio-physical environment. Although this analysis is revealing, it does not present an explanation as to why there has been such a forceful dismissal of the 'environmental refugee'. With the above in mind, one might well query: what's wrong with trying to protect the environment? To answer

this question, I turn to a brief exploration of the changing political context around issues of asylum and migration, in which the portrayal of asylum seekers and migrants as 'problems' has been an issue growing concern.

The Changing Politics of Migration and Asylum

While the changing politics of the environment has been detailed in the previous chapter's description of the evolution of political ecology, in order to understand the polarisation of writing on the environmental refugee we require some understanding of the changing politics of migration and asylum through the latter half of the 20th century.

During the Cold War asylum seekers, moving from the Soviet Union into Western Europe, were viewed as highly resourceful individuals,who by voting with their feet, were capable of pursuing a life they valued, an act much vaunted as an indictment of state-led socialism and an economic and moral victory for liberal capitalism (Gibney 2004). By the 1970s however, a rise in the number of ethnically and racially distinct asylum seekers (Bosswick 2000) – the result of improved air travel and an escalation in Cold War shatter-belt conflicts – generated early animosity towards asylum seekers, casting them as a security threat, on grounds of socialist subversion (Geddes 2003).

In the 1990s, with the cessation of the Cold War, the instrumental value of the 'refugee' as evidence of capitalism's victory over socialism was lost. Simultaneously the discourse changed, magnifying the mistrust and animosity that had registered in the 1970s, so that the once pervasive descriptions of refugees as resourceful, bastions of capitalism morphed into a focus on lazy, dishonest welfare cheats, cast as a drag on the system (Gibney 2004, Joppke 1999). Accompanying this shift was an animosity towards generous asylum policies which were attacked by a discourse focussed on being 'swamped', 'flooded' or

'overwhelmed' by outsiders (Bosswick 2000). Within this context refugees have come to be seen as a problem, with the notion of 'bogus asylum seekers' becoming pervasive in public fora. As such, the late 1980s, through to the present, has seen an ongoing process of increasing restrictionism directed at the South-North movement of people.

Thinking about the changing politics of asylum, migration and the environment, what is noticeable in the writing on 'environmental refugees' is that as much as it came to prominence during periods of popular environmentalism (Young 1990), it also coincided with moments in which migrants and asylum seekers were increasingly being perceived as a problem. This makes sense given the degree to which the maximilist narrative of 'environmental refugees' is reliant on the portrayal of refugees/migrants as a problem in order to rationalise policy aimed at environmental protection. From this perspective the increasingly polarised nature of the literature on 'environmental refugees' becomes intelligible as such a representation of the 'environmental refugee' serves to actively buttress growing anti-immigrant and anti-asylum rhetoric (McGregor 1994).

Resolving the Paradox

In this context the polarising writing of Black (2001), described above, begins to make sense. His objection to the term 'environmental refugee' does not lie with the notion of a link between environmental change/stress and human mobility, but rather with how the environmental politics of the 'environmental refugee' has the potential to undermine the protections currently afforded to refugees (as defined in the 1951 Convention) as well as buttress growing anti-immigration sentiment (Black 2001). As regards refugees, Black (2001) fears that the citing of large numbers of 'environmental refugees' could allow states to shirk on their Convention-defined responsibilities to asylum seekers. According to Black

(2001) the problem is that the lack of reference to 'environment' in the 1951 Convention means that receiving states could, citing the huge numbers of 'environmental refugees', reasonably claim that at least some of the asylum claimants they receive are fleeing environmental catastrophe, not political persecution. Since signatory states to the 1951 Convention have no obligation to address issues of environmentally motivated migration, they could refuse asylum to a multitude of asylum seekers on the grounds that addressing their plight falls outside of their convention-defined responsibilities.

Regarding the linkages between 'environmental refugees' and anti-immigrant or anti-asylum sentiment, concern is based on the manner in which maximilist literature plays into the general notion of states being overwhelmed and/or overrun by immigrants. Explicit evidence of how such narratives might be manipulated is referred to by Lonergan (1998) as a 'greening of hate'. It includes the sorts of sentiment contained in works such as that of O'Lear (1997) who (invoking a neo-Malthusian narrative of population pressure, environmental decline and social crisis) warns that the United States should restrict migration (and not afford asylum to 'environmental refugees'), as to fail to do so would only drive up population pressure in the U.S. and thus result in similar environmental and the social crises as had been experienced in the sending countries (O'Lear 1997). In addition, writing on the security threat posed by 'environmental refugees', plays into other long-standing anti-immigrant narratives which connect migrants with crime, violence and disease.

What then does this tell us about the paradox in the literature on environmental refugees? The argument I would like to make is that it can be explained if we see the polarised literature on environmental refugees as a discursive debate about the legitimacy of the term, rather than a debate about the appropriate conception of the relationship between environmental change/stress and migration. For advocates of the 'environmental refugee', concern lies with generating a response to what are perceived as looming environmental

crises, not with the details of how environmental change manifests in migration. In the case of those authors who reject the notion of an 'environmental refugee', the issue is not with the fact that there might be a link between environmental change and migration. Instead the issue lies in the discursive linkages which the term invokes, and which it is thought fuel anti-immigrant sentiments that are detrimental to the rights of asylum seekers. Thus authors on both sides of the 'debate' are capable of agreeing on the fact that environmental change could have a role to play in mobility decisions. They are willing to agree that other factors matter in these decisions, that mobility (as a strategy for dealing with environmental change) might generate varying degrees of duress and involve migrations of a variety of temporal and geographical extents. What they disagree on however is the degree to which such features (in)validate the usefulness of the term 'environmental refugee'.

As a result I would like to suggest a new language for describing the different positions on 'environmental refugees'. In this regard I would like to move away from Suhrke's (1994) 'maximilist' and 'minimalist' positions, based on the degree to which different authors conceptualise a simple, or complex, link between environmental change and human migration. Instead, because of my prioritisation of the discursive debate over the conceptual one, I would like to suggest the terms 'proponents' and 'critics' of the 'environmental refugee'. This is because such a characterisation, allows for the conceptual agreement, while highlighting the different degree to which authors (in spite of their agreement on the conceptualisation of the term) disagree about its relevance due to the discursive linkages it invokes.

Having somewhat resolved the paradox within the literature on environmental refugees, we are in a position to make sense of writing on the topic that took place up to the beginning of the millennium. What is left to do now is introduce how the construction of the 'environmental refugee' has evolved to the present day.

The Debate Today: From 'Environmental Refugee' to 'Climate Refugee'

While Black's (2001) objections to the term 'environmental refugee' are valid, a critique of his outright dismissal of the term is that it focusses only on refuting neo-Malthusian accounts of environmental crisis. As such it fails to account for the effects of climate change and the impacts it might have on patterns of human mobility. Such an omission may seem remarkable given the fact that Jacobson (1988) first hypothesised a link between anthropogenic climate change and migration twelve years previously, but it should be noted that climate change only came to dominate the discussion on 'environmental refugees' in the early period of the new millennium – after the publication of Black's (2001) piece.

With the above in mind, the shift in focus from predominantly neo-Malthusian conceptions of environmental change to those focussing on anthropogenic climate change has been significant both for the degree to which it has occurred and for the manner in which it has raised the profile of the 'environmental refugee'. Regarding the latter, a shift to focussing on climate change has altered the nature of the discussion on 'environmental refugees' in ways that have been important in shaping both the research agenda and popular perceptions of the term.

The most notable element of the shift to a focus on anthropogenic climate change is that there is far greater evidence for the negative impacts associated with climate change than with those of population growth – which have been heavily criticised (Mortimore 1998, Lambin et al. 2001, Tiffen, Mortimore & Gichuki 1994, Helldén 1991). Similarly the scale of the impacts associated with climate change (although difficult to predict accurately – see Chapter 4) need not draw on unsubstantiated alarmism in order to raise concern about the potential linkages such change might have with decisions about human mobility. As such the

most significant impact of the shift towards focussing on anthropogenic climate change has been to legitimise future scenarios of environmental change, strengthening the thesis that such change might have significant impacts for human mobility.

A second important impact of shifting the focus of discussions around 'environmental refugees' to concerns about anthropogenic climate change stems from the particular distributional characteristics of climate change. Appreciation of the fact that emissions in the global north are what will drive environmental changes which will be felt most acutely in the global south, has lead to notions of the 'environmental refugee' being taken up as a rallying cry for campaigners working from an environmental justice framework. Such cases have sought to portray 'environmental refugees' as victims, focussing on iconic cases, such as the inundation of small-island states. The central tenet of such arguments has been that compensation cannot be provided for the sorts of losses that will be experienced as a result of climate change – one cannot be compensated for a lost sense of home or personal dignity. The resultant development narrative has argued that the only just policy solution is to prevent climate change (limit emissions) in the first place (Barnett & Adger 2003, Bell 2004).

In a similar fashion the particular distributional aspects of climate change have reinvigorated the term and, in particular, portrayals of the 'environmental refugee' as a problem for receiving states. Here the focus has fallen on how the 'environmental refugee' represents a redistribution of the costs of environmental crisis. Where previously this redistributive logic was used as a means to provide an incentive to care about environmental problems 'over there' it has now been used as a compelling way to internalise the costs of GHG emissions.

Such distributional features of climate change have thus acted to raise the stakes in debates about 'environmental refugees'. Not only have the particular formulations about

environmental justice and self-interested security added to the weight of paradoxical constructions of refugees/migrants as simultaneously passive victims and agentive security threats, but the notion of a simple link between climate change and migration has created concern about the potential for future North-South compensation for the impacts of climate change. In this regard the language of 'environmental refugees' has become even more politically charged as concern about acknowledging linkages between climate change and migration might be considered tantamount to acknowledging responsibility for human displacement as well as other impacts. At the same time however, a dilution of the severity of the link, by suggesting that factors other than climate change might play a role in people's decision to move, has left environmentalists worried that the threat of climate change might be underplayed. Such a context has raised the stakes in the fight for discursive legitimacy of the term 'climate/environmental refugee' and therefore further polarised the manner in which the topic is presented (as will be discussed below).

A final important impact that the focus on climate change has had for writing on 'environmental refugees' comes from the finding that climate change no longer only presents as a potential problem for the future, but rather constitutes an inevitability, with only the scale of the impacts remaining uncertain (Wigley 2005). Such findings have meant a shift away from simply invoking the 'environmental refugee' as means to garner policies focussed on environmental protection, and instead generated a dual focus which is also asking: will migration take place as a result of climate-driven environmental change, and if so, what might we do about it? Such concern has lead to growing interest in the potential linkages between environmental change and migration aimed at understanding how such migration might take place so that its potentially deleterious impacts can be mitigated against (Mortreux & Barnett 2008).

The degree to which the focus on anthropogenic climate change, and particularly the

failure of a global agreement on climate change, has influenced the discussion on 'environmental refugees' is best evidenced by the observation that the term 'climate refugee' has entered the popular lexicon (Wikipedia 2010). Such an observation provides a suitable segue for exploring the contemporary literature looking at 'environmental refugees', in a context of growing concern over climate change.

While findings on climate change have impacted writing on the relationship between environmental change and human migration, it is also true that debate on the notion of the 'environmental refugee' has had an impact on the manner in which climate change has been represented, with the back and forth on the validity of the relationship entering into climate change reports and policy documents (Raleigh, Jordan & Salehyan 2008). In this regard it is remarkable to note that the IPCC initially warned that "the gravest effects of climate change may be those on human migration as millions are displaced by shoreline erosion, coastal flooding and severe drought" (IPCC 1990: 20). Subsequent reports represented a change in tone, focussing on the complexity of the processes which had been described in the literature on 'environmental refugees', and describing migration in terms of human vulnerability (Raleigh, Jordan & Salehyan 2008). Notably the 2001 report had eliminated any reference to human migration as a consequence of climate change (Raleigh, Jordan & Salehyan 2008, Watson & Albritton 2001). The most recent, 2007, report, on the other hand, seems to have reverted back to a focus on environmental change and migration, dedicating a text box[14] to 'Environmental Migration' where it tries to engage with the potential severity of the link while also highlighting its complexity (IPCC 2007).

In a similar fashion neither the 1992 United Nations Framework Convention on Climate Change ("UNFCCC"), and its Kyoto Protocol of 1997, explicitly address human displacement or migration(UNHCR 2011). The Cancun Agreements of 2010[15], however,

14 Box 7.2

15 Decision 1/CP.16, The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention, in Report of the Conference of the Parties on its sixteenth

invites all parties to undertake adaptation action, including "measures to enhance understanding, coordination and cooperation related to national, regional and international climate change induced displacement, migration and planned relocation."

Today, discussion on the relationship between environmental change and human migration, and on the relevance of the term 'environmental refugee', has been rejuvenated by claims of huge numbers of future 'environmental refugees'. Notably however the literature purporting proponent accounts has moved out of the academic realm and is now principally circulated by policy think tanks (Conisbee & Simms 2003, UNU 2005) and charities (Christian Aid 2007, Rajan 2008). Amongst these groups it has been common to uncritically recycle the figures and models put forward by Myers and Kent (1995) with some institutions going on to scale-up Myers' predictions, to 1 billion 'environmental refugees' by 2050 (Christian Aid 2007).

While proponent accounts have generally fallen out of the academic literature, work on the security threat posed by climate change and migration has continued to grow (Myers 2005, Tafesse 2007, Barnett & Adger 2007, Gleditsch, Nordås & Salehyan 2007, Reuveny 2007, Reuveny 2008, Smith 2007, Campbell 2008). The vast majority of these works smooth over the complications of the links between environmental change and migration, taking the propnent argument as a given, and then engaging with the degree to which conflict might be an outcome of migration/environmental change. Two principal accounts exist of this scenario: the first involves environmental-change-driven scarcity wars which in turn lead to out migration in the usual way that conflict links to migration. The second approach involves environmental change driving migration, which then leads to conflict in the receiving area.

As might be expected such accounts (both pertaining to conflict and migration) have generated a response from critical scholars. Among such responses the critiques remain

session, Addendum, Part Two: Action taken by the Conference of the Parties, FCCC/CP/2010/7/Add.1, 15 March 2011, para. 14 (f)

much the same. They point out conceptual problems with the term (Gill 2010, Brown 2008, Adamo 2008) and question the degree to which it is possible to separate out issues of the environment (Gill 2010, Raleigh, Jordan & Salehyan 2008, Adamo 2009). Critical authors have also made much of the fact that the notion of an 'environmental refugee' is meaningless given the current legal definition of a refugee which makes no mention of 'environmental factors' (Gorlick 2009) and requires that migrants cross in international border. Regarding the latter, authors have tended to cite selective empirical literature (which will be discussed in the following chapter) which suggests that migration in response to environmental stress affects is only employed by a small number of people (Mortreux & Barnett 2008, King 2006, McAdam 2010), is temporary (Gill 2010, Raleigh, Jordan & Salehyan 2008) and undertaken over short distances (Gill 2010, Massey, Axinn & Ghimire 2007, Tacoli 2009).

Finally, exploring the conceptualisation of the potential relationship between environmental change/stress and migration, some authors query the characterisation of migration as the end point of vulnerability. For these authors the question has become the degree to which migration represents a potentially important avenue for adaptation (Bilsborrow 1992, Gill 2010, Tacoli 2009) while at the same time continuing to criticise the model which jumps from vulnerability to migration without describing the intervening steps (Tacoli 2009).

Work, critical of the environmental-stress-conflict nexus, frequently points to empirical examples which undermine the claim that either environmental scarcity or migration simply link to conflict (Barnett & Adger 2007, Goffman 2006, Salehyan 2008, Hartmann 2010). Exemplary in this regard is Salehyan (2008) who points out that for every instance of environmental change or migration being characterised by conflict, there are a host of such changes and movements of people which do not (Salehyan 2008).

An important outcome of this critical-proponent back and forth is that there now exist

accounts in the academic literature which, on the one hand, describe a future in which hundreds of millions of 'environmental refugees' are the norm, and on the other, in which they do not exist at all. The result is that subsequent desk-based reports and advocacy positions are able to cite whichever figures best fit their political ends.

Keeping the above in mind a notable feature in the critical literature is the fact that although the portrayal of the mechanisms linking environmental change to migration are problematic, there is still a good deal of concern that the scale of climate change could result in conditions of acute vulnerability in which migration could play some role. The general resolution of this problem has focussed on understanding the interplay between environmental change and the social, economic and political contexts in which such change occurs so as to understand the relationship between migration and environmental change (Gill 2010, Tacoli 2009). As such there has been a strong calling amongst these groups for more empirical research on the mechanics linking the vulnerability generated by environmental change to actual migration decisions (Adamo 2009).

Similar sentiments to those described in the above paragraph have resulted in some scholars seeking to determine suitable protection mechanisms for those instances in which environmental change and migration generate particular conditions of human vulnerability (See 2007, Williams 2008, Biermann & Boas 2010). Such works, like work exploring linkages with conflict, have, for the sake of rationale, often invoked the proponent position simply linking environmental change to migration in uncritical terms.

Probably the most dynamic literature on 'environmental refugees' is coming from groups/individuals who have decided to heed the calls of critical contributors and undertake empirical work which seeks, explicitly, to understand the dynamics which link environmental change to migration decisions. Findings from this work have provided evidence of both a simple deterministic link between environmental change and migration

(Verschuren, Laird & Cumming 2000, Meze-Hausken 2000, Yesner 2001, Huang et al. 2003, Wouterse & van den Berg 2004, Hunter 2005, Feng, Krueger & Oppenheimer 2010) and shown the complexity of the relationship (Carr 2005, Mortreux & Barnett 2008, McAdam 2010, Massey, Axinn & Ghimire 2007, Lein 2000, Paul 2005, McLeman 2006, McLeman & Smit 2006, Smith et al. 2006, McLeman & Smit 2006, Barrios, Bertinelli & Strobl 2006, Arenstam Gibbons & Nicholls 2006, McLeman et al. 2007, Gray 2008, Filcak 2008, Warner et al. 2010). Much of what these studies have found has been determined by the methodological approach they have taken, an issue which will be discussed in the following Chapter (4).

Finally, novel areas of research in this field include a focus on the role of tipping points (Rajan 2008, Smith 2007, Filcak 2008, Warner et al. 2010, Alley et al. 2003, Cairns 2005, Gilman, Randall & Schwartz 2007, Shen, Downing & Hamza 2010). Here concern stems from findings that complex systems (of which the environment-society system is certainly one) can, in response to certain perturbations, reach a tipping point at which, what were previously, linear responses to the perturbation become non-linear. Concern pertains to cases in which perturbations in the climate system generate non-linear, biophysical, responses resulting in even more drastic biophysical changes. These are thought even more likely to generate acute stresses on social systems, thereby driving displacement. Also of concern however has been the possibility for social systems, as well as the interacting social-physical system, to generate non-linear responses in humanitarian crises (Shen, Downing & Hamza 2010). Although of significant importance this field has suffered not only from the difficulty in predicting non-linear changes in deterministic systems such as the climate, but from the current impossibility of doing so for complex social systems (Warner et al. 2010).

Other novel areas of investigation into 'environmental refugees' include theories of justice and their implications for how we address pollution. Areas of interest here have

included locating potential protection mechanisms (McAdam 2008, Zetter 2011). It has also focussed on the welfare of existing and future 'environmental refugees' (Bell 2004) and the manner in which a discourse of 'environmental refugees' has been deployed by organisations that might be responsible for formulating global solutions, such as the UNDP, UNEP and UNHCR (UNHCR 2011, McNamara 2007).

So far this chapter has focussed on describing and contextualising the literature on 'environmental refugees' in terms of the changing politics of environment and migration/asylum. The chapter's central argument has been to show that much of the 'debate' about environmental refugees has pertained more to issues of representation than conception. It should be noted however, that in making such a claim, I am not suggesting that there are no conceptual problems with proponent accounts of the relationship. As such this last section of the chapter is aimed at providing a nuanced critique of proponent models. In doing so the aim is to provide something of an analytical position from which this study can move beyond the polarised debate.

Providing a Nuanced Critique

It has already been pointed out that proponent accounts have replaced neo-Malthusian narratives of change with accounts of anthropogenic climate change. Within such an assessment however one should be wary of overstating the degree to which a neo-Malthusian logic has been purged from proponent accounts. Additionally, as Forsyth (2003) notes, narratives of environmental crisis have long been used as a means for raising awareness and gaining political will for the precautionary principal in environmental politics, and these narratives often generate simplistic conceptualisations of environmental problems. With this in mind a close reading of proponent accounts linking climate change to migration suggests

that a great many neo-Malthusian and simplistic conceptualisations of environment-society relations persist and are not accounted for in the resolution of the paradox described above. Specifically, the proponent account is reliant on two problematic conceptualisations. The first pertains to a simplistic account of migration. The second is a neo-Malthusian-inspired conception of the developing world which is both ahistorical and de-politicised[16].

Beginning with the simplistic view of migration, some elements of this problem are addressed in the critical literature described above. Relevant here is work highlighting the failure of proponent accounts to describe how environmental change generates migration, having instead only offered a description of how particular environmental changes will generate household stress, assuming that migration will present as an inevitability from there (Castles 2002, Mortreux & Barnett 2008). To some extent, such an approach has been defended by moderated proponent accounts, such as Perch-Neilsen (2008), which argue for the relevance of what they term 'common sense models'. 'Common sense', in this regard, refers precisely to the assumption that migration is an inevitable outcome of vulnerability. Despite claims to such connections being 'commonsensical', such an approach is not without its problems, which, in light of the migration theory from the previous chapter, I argue, are threefold.

The first major problem with 'common sense' assumptions about the links between environmental change and migration, pertains to the degree to which they draw on a mix of push-pull models of migration and neo-classical conceptions of the migrant. Invoking the push-pull heuristic, proponent models simply see increasing environmental stress as increasing the push factors out of the rural areas. By the neo-classical conception of the rational migrant, increasing push factors result in outmigration to areas which are less vulnerable. Here vulnerability has replaced wages so that, by proponent accounts, migration

16 An exception to this is work by Otunnu (1992) and Islam (1992) who, while citing population growth as a root cause of social crisis in sub-Saharan Africa and Bangladesh, respectively, also explicitly describe the role of aid, capitalism and colonialism in the generation of environmental crisis.

occurs as the rational end point of vulnerability. The critique of such an approach is that it takes no account of how migration may be constrained (Massey et al. 1993, Castles & Miller 2009) and fractionalises the drivers of migration so that it pays no attention to the broader structural features which may be shaping both the manner in which 'push' factors operate and the existence of 'pull' factors in receiving areas (Zolberg, Shurke & Aguayo 1989). In addition, such an approach leaves us guessing about the temporal and geographical extent of mobility strategies, a weakness acknowledged even by proponent accounts (Myers 1993).

The second problem in proponent accounts is its conception of society as normally sedentary so that migration represents a response to some disruption of the normal way of life. Such a view draws on a pervasive and long standing notion of migration, particularly in the less industrialised Global South, where it has been viewed as indicative of a failure of development (Bakewell 2007). This has had particular relevance in the climate change debate where migration has been suggested as an indicator of people's 'failure to adapt' (Warner 2009). The problem with such an approach is that it makes migration exceptional, placing it at the locus of a social problem. Such a view fails to account for the fact that migration and mobility might be a long-standing livelihood strategy which is as ordinary a response to changing livelihood options as diversifying, or changing, one's income stream.

The third and final critique of proponent account's conception of migration is that they ignore its dynamic nature. This is a product of proponent models taking a quantum view of time through their approach which simply overlays predicted environmental change onto predicted population distributions at some, single point in the future (see Chapter 4 for more detail on this). This quantum approach, fails to account for the dynamic nature of migration and the changing relationships generated by positive and negative feedback loops, as well as the flow of information and remittances between sending and receiving areas (Castles & Miller 2009) – see previous chapter. Since such processes can have important impacts on

migration flows (Massey 1990), their omission presents a significant over simplification of migration processes.

Having described the problems associated with a simplistic conception of migration as invoked by proponent accounts I turn now to discuss the pervasive neo-Malthusian elements of their conception. In describing the consonance in approaches between the maximilist and minimalist schools earlier in this chapter, it was pointed out that minimalist critiques were overstated in their argument that the maximilists had failed to acknowledge the importance of factors other than environmental change as important drivers of migration. Evidence of this was that even the most alarming accounts of Westing (1992) and Myers and Kent (1995), had acknowledged that the impacts of climate change would be worse in the developing world, and as such had tacitly acknowledged that context matters. This however remains insufficient. For, as I will argue below, the problem with such proponent narratives is not that they don't take account of context, rather it is that they assume a particular context in the developing world which, because of their modernist assumptions about the process of development, is both apolitical and ahistorcial.

The previous chapter described how neo-Malthusianism's apolitical and ahistorical approach was buttressed by teleological, modernist accounts of development. Such a conception is crucial to neo-Malthusian explanations because it naturalises poverty and vulnerability, viewing them as the inevitable state of a less industrialised society. This, in turn, allows for a dismissal of the importance of historically specific, socio-political events in (re)producing poverty and structuring inequality. Such a conception denies the importance of internal differentiations in wealth and takes no account of the ability of local production systems and technologies to adapt or change. Only in a social system which is conceived of as technologically and socially static can neo-Malthusian models flourish. For it is only in such a context that population growth becomes the variable with the most predictive power.

Although the driver of 'environmental refugees' has now shifted away from neo-Malthusianism, proponent models still invoke modernist and teleological accounts of environment-society relationships in developing countries so that they are viewed in an ahistorical and apolitical light. This is evidenced by the manner in which proponent accounts will frequently acknowledge the important role played by poverty in shaping vulnerability to climate-related stress but then fail to provide any account (or suggest any understanding) of the historical and contemporary processes constructing both the production and reproduction of poverty. Instead poverty is simply explained away as the natural and inevitable state of a pre-industrial society. Similarly no attention is given to society's ability to adapt and change – a critique which has been pointed out already in the critical literature.

Notably, such apolitical and ahistorical accounts are not only a conceptual failing of proponent models but are in fact necessary for the production of their discursive legitimacy and particular development narrative. Ahistorical accounts are important because they simplify the link between environmental change and migration. This is because such accounts, need not be obscured by references to antecedent socio-political events which both structured contemporary and historical patterns of vulnerability, and which shape persisting structures that marginalise societies' and their ability to build resilient social systems. This allows the proponent model to focus on environmental change as the principal driver of migration, a requirement for claiming that the best policy response is to address the environmental problem.

In addition, ahistorical and apolitical accounts allow for vulnerability to be homogenised across large regions. For if industrialisation is the only feature that matters in building resilience, then a lack of industrialism generates equally vulnerable societies. This homogenisation of society is important because it allows for the assumed relationship between poverty, climatic stress and migration to be applied across large geographic areas.

This allows large numbers of migrants/refugees to be forecast and rules out the palliative policy option, instead making the the case for addressing the root perceived environmental problem which prescribes conservation.

Thus, while a focus on the discursive implications of the term 'environmental/climate refugee' is meaningful for explaining the increasingly polarised nature of a literature in which there is actually a great deal of conceptual agreement, certain conceptual problems persist within the proponent account. A number of these have been pointed out in the existing critical literature which has pointed to a simplistic view of migration (Castles 2002, Mortreux & Barnett 2008, Tacoli 2009) and a failure to account for other features that might affect migration (Bilsborrow 1992, McGregor 1994). From this more nuanced critique it seems that at the root of these problems is the proponent accounts' particular sedentary bias and their teleological, modernist view of development. The latter having generated an ahistorical and apolitical view of the Global South.

Conclusion

This chapter has served to introduce the reader to important literature on the topic of environmental refugees. In doing so it has focussed on the evolving concern about the relationship between environmental change and migration, before describing critical responses to writing on this concern. The chapter has then traced out the increasingly polarised nature of the literature on 'environmental refugees' prior to contextualising it in the politics of environment and migration/asylum. In so doing the chapter argued that such polarisation was more about representation than it is about conceptualisation, with the use of the 'environmental refugee' as an advocacy tool for achieving environmental policy relying on characterisations of migrants and refugees which could have negative implications for

their well-being. Following this the chapter went on to describe the contemporary literature on environmental refugees and the multitude of approaches that have been taken to studying the relationship between environmental change and human migration.

The chapter then closed with a critique of proponent models which echoed the sentiments of other critical works, but which located the root of the conceptual failings of these models. To this end it was noted that the proponent models were fundamentally problematic for the manner in which they conceive of both migration and development. Regarding the former they assume a normally sedentary society while the latter is characterised by a teleological account which results in an apolitical and ahistorical analysis of the Global South.

In mentioning such a critique this chapter provides the analytical grounds from which this study will be conducted. Although the details of this process will be dealt with in the following chapter, it is worth stating here than an explicit intention of this thesis is to politicise and historicise the context in which environmental stress is being experienced. The aim being to explore the relationship between environmental and non-environmental factors in shaping mobility decisions. The following chapter now goes about describing literature which has sought to empirically investigate the relationship between environmental stress/change and human migration. Such work is described with the intention of motivating for the specific form this study will take.

4

ISSUES OF METHOD AND METHODOLOGY: JUSTIFICATION, DESCRIPTION AND DISCUSSION

The previous chapters have introduced the literature on 'environmental refugees' and described the relevance of both political ecology and migration theory to a study exploring the linkages between environmental stress and human mobility. While the focus of this work is on the particular Ethiopian case study, before discussing this work it is neccesary to, first, motivate for the methodological approach taken in the study, and then to describe the precise study design. As such this chapter will provide an account of the dominant methodological approaches that have been taken in studies of the relationship between environmental change and human migration. Following this, the chapter justifies the analogous approach used in this study, and for its focus on drylands.

In discussing the literature on human mobility in dryland areas this chapter will articulate the particular conceptual approaches and methods used in this study before discussing their merits and limitations. In conclusion the chapter will explore some of the considerations and ethical concerns that pertain to a study of this nature.

Methodologies

As was mentioned in the literature review, work on 'environmental refugees' has shifted from its initial concerns about neo-Malthusian drivers of environmental change to looking at climate change. In this regard it was pointed out that the scale of climate change, predicted in a context with no agreement on GHG emissions, was so grand as to account for the contemporary high profile of the 'environmental refugee'. As such, prior to describing the

methodological approaches available to the study of the relationship between environmental change and human migration, it is considered valuable to point out some of the complexities involved in any study aiming to contribute to the knowledge base on the social impacts of climate change.

Methodological Problems

Morrissey (2009) points out that any study aimed at understanding the social impacts of climate change will face some major challenges. The first of these pertains to how one defines 'change' and distinguishes it from 'variability', while still making intelligible statements about the causative relationships between climate change and social impacts. At the crux of this problem are two factors. One lies in the relationship/distinction between 'climate' and 'weather', and the other in our definition of 'change'. Regarding the former, it should be understood that any weather event is possible under any set of average climatic conditions. All that changes in a 'changed climate' is the probability distribution of different weather events. The second issue, pertaining to how we define 'change' (which will be discussed in more detail later in this chapter), revolves around the fact that change and variability are distinguished only by the time scale over which the variable of interest is observed. For the sake of generalisability, 'climate change' can be defined by changes in average climate proxies, over decadal time-scales (National Snow and Ice Data Centre). The implications of this are that for any weather event to be labelled: 'caused by climate change', that weather event has to have occurred in a period during which the average climate conditions vary from, at least, the ten year average.

Stemming from the above are two major problems for this sort of study. The first is that it will be impossible to define any migration as impacted (or caused) by climate change

prior to at least a ten year period in which average climatic conditions can be described as significantly different from the average conditions for the preceding ten years. This presents temporal problems in attributing migration to climate change, as one would have to wait for significant amounts of time after a weather event before one could even theoretically attribute the cause to 'climate change'. The second problem is that because climate change is described as a change in average climatic conditions, and because any weather event is possible under any set of climatic conditions, all migrants whose movement was undertaken in a climate deemed to have 'changed', should be considered 'climate change migrants'. For as long as their decision to move was determined in some way by either a weather or climatic event, then that event would have been the result of a changed climate. This is the case even if the weather conditions to which migrants are responding are not significantly different from those which could have routinely occurred under an 'unchanged climate'.

A second major problem, when working on the social impacts of climate change pertains to the lack of consensus over the scale on which climate change is expected to occur. As Morrissey (2009) points out this problem comprises disagreement on two processes. The first pertains to how much GHG will be released into the atmosphere and the second concerns to the relationship between GHG emissions and changes in the earth's temperature. Regarding the quantity of GHG to be released, the authoritative word comes from The Special Report on Emission Scenarios (SRES) (IPCC 2001), which describes four different developmental pathways, in which different social and economic pathways account for differing amounts of GHG in the atmosphere. Notably, these four developmental pathways represent very rough approximates and difficulty in any such estimation should always be acknowledged (Morrissey 2009).

Regarding the relationship between GHG emissions and changes in the earth's temperature – the technical term for this is 'sensitivity analysis' – scientific uncertainty about

the relationship means that a range of temperature increases is provided for any emission scenario generated by The SRES. On top of these issues, accurate predictions on the impacts of GHG emissions are further compromised by the potential for non-linear responses in the climate system (Morrissey 2009). Non-linear responses which are of concern, and about which there is limited understanding, include the rapid melting of the South West Antarctic Ice Sheet (SWAIS) or the shutting down of the North Atlantic Thermohaline Circulation. The exact dynamics of these events are unknown and despite the fact that their social impacts would be enormous they remain impossible to predict with any degree of rigour (Morrissey 2009).

The most common response in work aiming to quantify the impacts of climate change has thus been to forecast social impacts for the four different scenarios described by the SRES (e.g. Nicholls (2004) and Arnell et al. (2004)). Regarding the problems of sensitivity analysis, little robust work has been done on the disputed implications for human mobility, with authors tending simply to follow the reports of major institutions.

Non-linearity in the climate system has not been dealt with in much detail in work on the relationship between environmental change and human mobility (see chapter 3 for literature on tipping points), however the general result of this sort of uncertainty is for estimates and predictions about the size of populations likely to be affected to either cover large ranges, or be avoided altogether. In the case of migration, where the exact nature of the relationship between environmental change and social change is not well understood, the range of predictions can be very large (Morrissey 2009).

Given the difficulties in distinguishing between change and variability, described above, a note on the language of the rest of this paper is necessary. For reasons which will become clear by the end of this chapter this work will focus on the relationship between environmental *stress* and human *mobility.* In this regard, it is acknowledged that the stress

being observed could be the result of either longer term trends of change or shorter term patterns of variability. Regardless, I will use a language of *stress* and *mobility* when describing the aims of this project. When describing the literature of other authors however, I will use the language they have invoked in their work. Here it is acknowledged that such language, describing *change* and/or *migration* might be controversial or refer to poorly defined parameters of the physical environment and human mobility. Such an approach has been chosen, however as a means to compromise between accurately representing the work of the authors and avoiding the necessity of unwieldy caveats throughout the thesis. Importantly, the precise manner in which this thesis distinguishes between mobility and migration and, similarly, between change and variability is detailed later in the chapter.

Different Methodological Approaches

With the above problems in mind one can identify three major methodologies aimed at exploring the relationship between environmental change and human migration. These include, paleo-climatological and archaeological methods, 'common sense' models and contemporary analogous approaches. Paleo-climatological and archaeological approaches have been of fundamental importance in making the case for a potentially important link between changes in the physical environment and human migrations. The approach in this method focusses on finding temporal correlations between historical changes in the climate and historical movements of populations. In such studies, changes in climate are determined through a number of paleo-climatic reconstruction methods including: phonological phenomena, long human records (Verschuren, Laird & Cumming 2000, Fang & Liu 1992) and soil analysis (Huang et al. 2003). Shifts in population distributions have generally been measured by historical reports (Fang & Liu 1992), and archaeological evidence (Huang et al.

2003, Tyson et al. 2002).

Paleo-climatic and archaeological methods have gone a long way to establishing the link between environmental change and human migration through their documentation of remarkable correlations between changes in the physical environment and the location of human populations. Problematically however, this correlative approach, while making the strong case for a link between environmental change and migration, is unable to provide much information on the dynamics of the relationship due to its poor temporal resolution and a limited ability to shed light on the subjective content of decisions about human mobility.

While most authors acknowledge the limitations of the paleo-climatic and archaeological method, many speculate on the mechanisms by which environmental change might have been linked to migration. In this regard the role of famine (Huang et al. 2003) and of conflict (Verschuren, Laird & Cumming 2000, Huang et al. 2003, Fang & Liu 1992) remain prominent. Similarly authors using these methods acknowledge that social conditions might have played an important mediating role in the relationship between environmental change and migration, citing issues such as the political and social context (Huang et al. 2003, Tyson et al. 2002) and the availability of technologies (Yesner 2001, Tyson et al. 2002) as important in shaping mobility decisions. Within these methods there is also some debate on the characterisation of migration, in response to environmental change, as being dominated by 'push' or 'pull' factors (Yesner 2001).

Paleo-climatic, archaeological methods have thus been important in highlighting the link between environmental change and human mobility. Problematically however, it seems that without a revolution in the methods available to archaeology and palaeoclimatology these approaches will not be able to tell us a great deal more than the fact that we have good reason to be aware of the potential for a strong relationship between environmental change/stress and human mobility.

Based on the generalised findings of the paleoclimatic and archaeological studies, a second important approach taken by scholars working on this subject is what Perch Neilsen (2008) terms 'common sense models'. As was mentioned in the previous chapter, the general approach in 'common sense models' is to assume that large scale environmental deterioration will result in migration through the impoverishing effects of that change on certain population groups. As such these models seek to overlay predictions of environmental change onto predictions of future population distributions. The assumption within these models is that either all the people in the affected region will migrate, or that there will be some sort of percentage of the population that will migrate – such as the percentage of the population exposed to water stress.

While these models have been important in the generation of estimates about migration flows in a future, changed, climate, they are not without their problems. Like the paleoclimatic studies which motivate them, they tend to leave out the details of how it is that (climatically driven) environmental change/stress generates migration. In this regard studies making use of this approach have been rightly criticised for equating vulnerability with migration (Mortreux & Barnett 2008), and therefore requiring a 'logical leap' to go from exposure to an environmental stressor to human migration (Castles 2002, Mortreux & Barnett 2008).

As was pointed out in the previous chapter, the lack of detail in these models is often acknowledged by their advocates who accept that migration may be undertaken over a variety of distances, that they may be permanent or temporary, and that they may or may not result in conflict(s). Further, while individuals using these models have been heard to say that they represent wild estimates of the impacts of climate change on human mobility (Brown 2008), they are generally justified by arguments that one is better off being 'partly right then precisely wrong' (pers. comms. Myers 2008).

As was discussed previously, the political context surrounding the debate on 'environmental refugees' has been important in polarising the literature on the topic and the different methodologies to understanding the impacts of environmental change on migration have certainly played their part in this process (Castles 2002). In this regard, compelling evidence from paleoclimatic studies was used to generate common sense models which drove proponent representations of the relationship between environmental crisis and human migration. These models were refuted, by critical authors, who, although unable to refute the paleoclimatic data, could cite contemporary events in which migration, in response to environmental stress, contradicted the notion of a direct causative relationship. The latter studies have become the mainstay of academic discussion on the relationship between climate change and migration. This has been the case particularly where contemporary events effectively mimic the conditions predicted under future climate change, leading me to term these works *contemporary analogous studies*. Such studies are thought particularly useful as they provide a context in which the actual dynamics of the relationship between environmental stress and mobility might be assessed, while allowing a for a suitable degree of comparability with the changes predicted to accompany climate change.

Of the three methodologies described above it is thought that a focus on contemporary analogous studies provides the most fruitful avenue for exploring the relationship between environmental stress and human mobility. This is not to say that there is no value in paleo-climatic and archaeological studies, nor that common sense models have no use. It is simply that, at this point in time, it is the mechanics of how environmental change translates into migration that is of most interest (Castles 2002, Mortreux & Barnett 2008). Since paleo-climatic and archaeological methods appear, at this point, to be unable to tell us a great deal about this relationship, and since 'common sense' models are in fact reliant on assumptions about these mechanics, this work will focus on undertaking one such

contemporary analogous study. In so doing the aim is to take on board the findings of paleoclimatic studies which suggest that an array of factors are important in both mediating and influencing the degree to which migration is enacted as a response to environmental change. As such it is hoped that this work will serve as an initial step towards clarifying the hypothesised relationships mentioned in paleo-climatic studies and nuancing the outputs of existing predictive models.

The analogous conditions I will explore in this thesis are soil erosion, reduced farm size and climate variability – in the form of drought (see below for more detail). My motivations for this choice are that examples from sub-Saharan drylands have been fundamental in early writings on the 'environmental refugee' (Jacobson 1988, Myers & Kent 1995) and because the mechanisms by which land degradation/desertification and drought are likely to generate migration are much less clear than are the cases of sea-level rise or rapid onset, extreme events. Degradation and drought are also thought likely to affect greater numbers of people (Raleigh, Jordan & Salehyan 2008), the majority of whom will be the highly vulnerable populations of sub-Saharan Africa (Barnett & Adger 2003, Hansen 2004, O'Neil & Oppenheimer 2002). Thus a detailed understanding of the mechanisms by which climate change might lead to migration in dryland areas is more urgently required. This is both because the forces at work are more complex and because the potential scale of human insecurity is much greater.

Having made the case for using an analogous approach and justified the exploration of dryland conditions I move, now, to explore some of the existing work on human mobility in drylands. The intention here is to situate this research at the leading edge of the existing knowledge on the relationship between environmental change/stress and human mobility.

Existing Work: Drylands, Migration and Environmental Change

A great deal of the work on the relationship between environmental change and migration, including much of the work which has been cited amongst both proponents and critics of the 'environmental refugee', comes from work exploring the impacts of the Sahelian droughts of the 1970s and 1980s. Much of this literature, however was not itself focussed explicitly on the role played by mobility in the drought, however research into the topic soon revealed the extent to which different forms of mobility had been employed as a response.

The most obvious form of this link is in established patterns of nomadism within the Sahel, where mobility has been described as one of the most fundamental components of nomadic livelihood strategies for dealing with environmental stress (Swift 1973, de Bruijn & van Dijk 2003, Brooks 2006). However, while the case of nomadism bolsters the case for a link between environmental change and human migration (Black 2001), it also undermines the proponent discourse on 'environmental refugees'. For as Black (2001) pointed out in the previous chapter it would seem a misnomer to ascribe the title 'refugee' to a group of people who seasonally migrate as part of a well established strategy for dealing with seasonal variations in rainfall (Bilsborrow & DeLargy 1990). Similarly it would seem insufficient to use the existence of such patterns of human mobility as grounds for arguing that environmental/ecological (and thus social) collapse is imminent (Black 2001).

With the above in mind, work on the impacts of drought suggest that we should be wary of thinking that because nomadism is an established form of livelihood, drought has no impact on mobility. Evidence of this comes from findings which highlight changes in established mobility strategies in the context of environmental stress.

In this regard work by Apeldoorn (1981), on the drought conditions affecting Nigeria in 1972-1974, found that, among sedentary farmers, drought conditions resulted in an

intensification of existing migratory patterns. He also found that droughts resulted in migration which: had longer periods of non-return, was more likely to involve an urban destination and occurred over greater distances (Apeldoorn 1981). Other details from Apeldoorn's (1981) account include migration being most pronounced in the most drought-affected regions, times of departure becoming irregular during drought and migration tending to become a strategy involving the whole household – whereas outside of drought it would be undertaken by only a single household member. Notably Apeldoorn (1981) found that during times of drought, migration shifted from being a strategy aimed at economic betterment, to one aimed at survival.

Also citing changes to established migration patterns, Mortimore (1989) describes how the number of migrants increased during times of drought, while Findley (1994) documents forms of 'crisis migration' enacted in response to severe drought conditions in Mali. Hampshire (2002), working on the impacts of limited recovery times between the Sahelian droughts of the 1970s and 1980s, documents a novel form of drought migration (termed 'exode') among agro-pastorlaists in Burkina Faso which she describes as notable for taking people beyond the national borders of the country for extended periods, and removing them from the agro-pastoral sphere.

While the above studies suggest agreement that environmental stress has particular effects on human mobility, what is most notable about them is the degree to which their findings appear contradictory. While Apeldoorn (1981) found persistent drought to result in more persistent forms of migration, Mortimore (1989) found that drought, generating two years of harvest failure and several years of food shortages in Nigeria, only provided limited evidence of a permanent redistribution of populations. Instead Mortimore (1989) documents increasing patterns of circular migration as a means for dealing with the variations in production, in both the rural and urban economies, during times of drought. Likewise,

Findley (1994), working with migrants during the 1983-1985 drought in Mali, documents increased incidences of temporary, 'distress migration' which replaces strategies of more permanent inter-continental migration. Like Mortimore (1989), Findley (1994) describes how this 'distress migration' privileges temporary movements as a means to maintain access to both the rural and urban economy (Findley 1994). Other contradictions include Wouterse and van den Berg (2004) finding that instead of severe drought generating new patterns of migration, drought in Burkina Faso resulted in the intensification of existing migration patterns whose origins could be found in the practice of forced payment of colonial taxes.

In terms of this thesis what is most important in the above studies is the explanations authors find for the differing types of mobility decisions, and thus how they explain their contradictions. As a means for explaining the privileging of circular, over permanent, migrations Mortimore (1989) cites the unpredictability of both rural and urban livelihoods, and the need for migrants to maintain access to both. Notably, Mortimore (1989) ascribes such unpredictability to the low technological inputs, unpredictable climate, low education levels and vulnerable national economies in the African Sahel. Findley (1994), taking a more localised perspective, describes how the factors determining for whom more permanent (international) migration will be privileged over intra-continental, circular migration, are generated by the state of household assets. Here Findley (1994) finds the availability of labour (to cover the labour lost in a permanent migration), capital (to cover the higher costs of transport and integration of migration to Europe) and education (required to compete in the European labour market) are the features most determinant of the different mobility strategies. Findley (1994) thus suggests that since drought depletes household assets, migrations undertaken in response to drought conditions will be more likely to privilege short distance, temporary circular patterns – a finding which has informed much of the contemporary literature which is critical of the 'environmental refugee', and which was

mentioned in the previous chapter.

Wouterse and van den Berg (2004) corroborate Findley's (1994) localised findings by arguing that in Burkina Faso it is only those relatively well-off households that engage in more permanent, long distance migrations with the aim of sending back significant remittances. Short distance migrations, on the other hand, are undertaken among larger households where, because such migrations do not yield significant remittances, the aim is relieving the pressure on household grain stores (Wouterse & van den Berg 2004). Finally, Hampshire's (2002) findings among Fulani villages in northern Burkina Faso similarly found that households employing migratory strategies could be distinguished by wealth. In her study Hampshire (2002) found that migration was pursued by wealthier households while poorer households did not undertake migration. Hampshire's (2002) explanation for this was that migrations simply did not make sense for poor households for whom the benefits would be few (as they had less cattle to sell) and the opportunity cost (in the form of lost rural labour) would be large. Thus Hampshire (2002) found that within drought prone regions, less vulnerable households were not only more likely to undertake migration but that they stood to benefit more from such migrations (Hampshire 2002).

What the above cases appear to show is a two-fold effect. The first is that non-environmental factors seem to combine with conditions of environmental stress to shape mobility strategies. Such factors include other macro-economic conditions, such as urban job availability and education levels. The second is that intra-household dynamics, such as relative levels of wealth and capital, determine what type of migratory strategies will be enacted under conditions of drought. The relevance of such an hypothesis is strengthened by findings from Ezra and Kiros (2001 & 2001) who link outmigration rates with food insecurity for the period 1984-1994, in Ethiopia (Ezra & Kiros 2001, Ezra 2001). While such findings don't differentiate mobility strategies across households they do highlight that the

link between environmental change and migration is manifest through the impact of environmental stress on livelihood strategies. This causal pathway is emphasised by Meze-Hauksen (2000) who (also working on drought in Ethiopia) describes climate change as a 'second order' driver of migration, suggesting that it is not the changed climate that shapes mobility, but rather the impact such changes have on livelihood security (Meze-Hausken 2000). These findings, in the context of work which points to the importance of local differentiations in both regions and livelihoods, suggests that any understanding of the relationship between environmental change/stress and mobility will require a thorough understanding of how that relationship is mediated by non-environmental factors.

Hampshire and Randal's (1999) work highlights the importance of this localised, contextual approach. They note, in observing the types of contradictory findings described above, that studies on mobility in the Sahel make the mistake of homogenising the ethnicity and production systems of different Sahelian inhabitants (Hampshire & Randall 1999). As such Hampshire and Randal's (1999) study focusses on migratory strategies employed by Fulani populations (comprised of different sub-ethnic population groups) in Burkina Faso who engage in a variety of different livelihoods (ranging from pastoralism to agro-pastoralism to cultivation). Their findings suggest that although migration tends to increase with wealth, this picture is complicated by the fact that agriculturalists are more likely to migrate than pastoralists (Hampshire & Randall 1999). They attribute this to the fact that agricultural groups need only work their farms for a limited period of the year while pastoralist groups are required to tend their cattle on a year-round basis (Hampshire & Randall 1999). Thus for pastoralist groups, migration (beyond nomadic pastoralism, i.e. into a new economic function) represents a less viable livelihood strategy. As such they suggest that while migration among sedentary agriculturalists might represent a process of accumulation, migration amongst nomadic pastoralists represents more of a survival strategy

(Hampshire & Randall 1999).

The conclusions Hampshire and Randal (1999) draw from this study are that one needs to view migration as a particular strategy which is only employed when it compliments the entire suite of livelihood strategies. Notably, because environmental change represents a 'second order driver of migration' (Meze-Hausken 2000), and therefore interacts with other livelihood strategies, one needs to understand migration options in terms of the degree to which they compliment or inhibit the host of other coping and adaptation strategies which are employed to deal with the vagaries of the Sahelian climate.

While the Sahel has proved useful as an analogous means for exploring some of the complexities of the relationship between drought and human mobility, in the context of concern over 'environmental refugees', work from the Sahel also proves useful for understanding the relationship between human mobility and longer term trends in environmental change thought likely to accompany anthropogenic climate change. This is a result of a general drying trend in the Sahel over the last 40 years of the 20th century. In such a context an exploration of analogous events allows for an understanding of how longer term trends in environmental change can shape migratory strategies as well as allowing for the potential identification of non-linear trends in migration.

The above work which links environmental stress to a host of non-environmental factors, operating at multiple scales, suggests that the relationship between long term changes in the physical environment and human mobility will be mediated by a set of highly complex interactions with non-environmental factors. For in the case of long-term environmental change one also needs to account for the processes of change affecting important contextual non-environmental factors that will mediate migratory responses. Work by de Bruijn and Van Dijk (2003), based on fifteen years of interviews and observations from the Sahel, highlight such complexity. Their work shows how the Fulbe of the Sahel

have been undergoing a general southerly migration since the 1960s. de Bruijn and Van Dijk (2003) attribute this to the droughts of the 1980s which forced pastoral groups to sell large numbers of cattle stocks in order to purchase cereals. Transactions in cattle were undertaken between nomadic pastoralists, in the north, and sedentary farmers in the south. This transfer of cattle, from nomadic to sedentary farmers, resulted in a labour shortage among the sedentary farmers, who now needed labour to tend their larger herds, and impoverishment among the nomadic farmers for whom cattle was the major store of wealth. The result was the southerly migration of the nomadic pastoralists in order to find employment among the sedentary farmers, where they worked, tending the cattle they had once owned (de Bruijn & van Dijk 2003).

If the complexity of the mechanisms relating environmental change to migration amongst the Fulbe is not already sufficiently clear, de Bruijn and Van Dijk (2003) reveal how even more complex mechanisms impacted on rural-urban migration in a subsequent set of movements. Here de Bruijn and Van Dijk (2003) show that the initial southerly migration of the Fulbe was principally undertaken by individual household members, who had intended to send remittances back to their families. Wages in the south were so low however that such a task was often impossible and as such, following the first migration, there was a second movement of people who travelled to the cities seeking employment to account for their lost herds and the failed remittances (de Bruijn & van Dijk 2003).

In conclusion de Bruijn and Van Dijk (2003) found that the result of these processes was the wide dispersion of the Fulbe people. Further to this, it was found that the Fulbe had come to represent a population invisible to the state, intensely impoverished, exploited by the sedentary farming groups and living on the margins of society (de Bruijn & van Dijk 2003). Their migratory patterns now appear varied with some groups settling on the outskirts of single villages, others roving between a number of villages and still others setting up their

own small settlements (de Bruijn & van Dijk 2003). Their motivations for migration are also thought to have changed from being principally political in nature to principally ecological and economic (de Bruijn & van Dijk 2003).

Further complicating this picture is work by Basset and Turner (2007) which points out that the southerly movement described by de Bruijn and Van Dijk (2003) included a southerly shift in nomadic pastoralism and not just a movement of labour. Regarding this shift in nomadic territory, Basset and Turner (2007) argue that a view of the southerly movement of Fulbe, as a rapid movement, undertaken in the wake of the droughts in the 1970s and 1980s – which reduced grazing in the north while at the same time reducing tsetse fly populations in the more humid south – is inappropriate. Instead they point to practices among the Fulbe which had sought out information on available range lands in the south and which involved the cross breeding of their existing herds with hardier southern varieties (Bassett & Turner 2007). Notably what Bassett and Turner (2007) point out is that rather than a dramatic shift in the distribution of the Fulbe population their southerly migration, in response to changing climatic conditions, represents more of a migratory drift, based on practices undertaken over decadal time-scales. This incremental movement, they argue, was a necessity given the levels of wealth among the Fulbe who would not have been able to undertake a single large adjustment in their biophysical environment (Bassett & Turner 2007).

As a final contemporary analogous work documenting the relationship between environmental change and human mobility, I move away from the iconic Sahelian case and look to the experience of the dust bowl, among the great plains states of the U.S., in the 1930s. Such a case, as well as being another iconic case in the literature on 'environmental refugees' (Jacobson 1988), is thought useful as its geographical and economic distinctiveness allows us to interrogate the generalisability of claims made about the relationship between

environmental change and human mobility, which have been based on literature from the Sahel.

For farmers in the dust-bowl, McLeman and Smit (2006) and McLeman et al. (2007), found that among poor groups of Oaklahomans, for whom climatic events had played a role in the collapse of the cotton crop, migration to California was undertaken as a means for survival and was a strategy least available to the poorest members of the affected society. In a case similar to that pointed out by Basset and Turner (2007), it was found that migrations by many of the poorer groups were undertaken in a series of smaller moves with migrants having to stop in numerous states along their way to California (McLeman & Smit 2006, McLeman et al. 2007). Additionally, McLeman et. al. (2007) found that different political responses to the dust bowl, enacted by presidents Hoover and Roosevelt, were important in shaping the migratory response. Notably however, acting as a contradiction to many of the findings from the Sahel and as further evidence of the potential for non-linear responses to different events of environmental change, McLeman et. al. (2007) found that migrants experiencing drought tended to undertake longer and more permanent migrations in response to the drought. This was because historically established migratory patterns failed as traditional destination areas had also been hit by this particularly severe and far reaching drought.

What then do these contemporary analogous studies tell us about the relationship between environmental change/stress and human mobility? Firstly, they appear to confirm the findings of paleo-climatic and archaeological studies; that environmental change can play a substantial role in shaping mobility. Secondly, it suggests that environmental change/stress is capable of generating both novel and particular patterns of movement. Importantly, there seems to be evidence that established migratory responses do not respond to processes of environmental change/stress in a simple linear fashion. Notable features of

this relationship then appear to be the intensity, frequency, duration and geographical extent of events (McLeman et al. 2007, de Bruijn & van Dijk 2003, Hampshire 2002, Bassett & Turner 2007). Thirdly it seems that environmental change/stress is capable of changing the character of established patterns of mobility so that what was previously aspirational becomes about survival (McLeman et al. 2007, de Bruijn & van Dijk 2003, Apeldoorn 1981, Hampshire & Randall 1999). This suggests that environmental stress can have significant impacts on whether mobility decisions are suitably characterised as 'voluntary' or 'forced'. Such evidence appears to support the proponent position on 'environmental refugees' as it suggests that environmental stress might present as a unique factor in generating mobility of a sort which could engender extreme levels of human insecurity.

However, what such findings also suggest is that paleo-climatic and archaeological studies were right to speculate on the potential importance of socio-political and economic factors in shaping migratory responses. For there can be little else that explains the variety of migratory responses undertaken in response to the same environmental stressors. How else can one explain some droughts resulting in temporary migrations (Wouterse & van den Berg 2004, Findley 1994, Hampshire 2002, Mortimore 1989), while others generate more permanent ones (McLeman et al. 2007, Apeldoorn 1981)? How some result in an increase in long distance migrations (McLeman et al. 2007, Apeldoorn 1981, Hampshire 2002, Bassett & Turner 2007) while others result in a preference for cyclical movement (Wouterse & van den Berg 2004, Findley 1994, Hampshire 2002, Mortimore 1989)? How sometimes individuals migrate and how on other occasions whole households move (de Bruijn & van Dijk 2003)? Even more notably, how can one account for differential propensities to migrate, and differing migration strategies across different members of an affected society (Wouterse & van den Berg 2004, McLeman & Smit 2006, Findley 1994, Hampshire 2002, Hampshire & Randall 1999) without accounting for the role played by a host of factors, in addition to

environmental change? Most compellingly how can one account for the same drought event in the U.S. dust bowl manifesting in different migratory strategies under different U.S. presidents (McLeman et al. 2007)? The answer must be that critical accounts of the 'environmental refugee' are also correct: Socio-political and economic contexts must play a role in shaping the mobility response to environmental stress. Such a conclusion presents itself as the stepping off point for discussing the specific design of this study.

Methodological Approach

The above section described the different approaches to understanding the potential impacts of climate change on human mobility, emphasising the value of contemporary analogous approaches. Further, in an exploration of findings from other studies, pursuing such an approach, I have pointed to the fact that the role played by environmental stress in mobility decisions appears to be heavily mediated by a host of non-environmental factors, operating at a variety of scales. As such, while the details of the exact methodology for this study will be detailed in the rest of this chapter, it is worth noting, at this stage, that this work will comprise a contemporary analogous study, focussed on understanding the interaction between environmental stress and a host of non-environmental factors, in mobility decisions.

As a means for focussing on the interactions between environmental and non-environmental factors in mobility decisions the work will compare those decisions in two areas in which the environmental stresses are believed to be relatively similar, while the socio-political and economic context is markedly different. The aim of such an approach is to (as much as is possible) isolate the particular relationships between environmental and non-environmental factors shaping mobility strategies. Further, learning from both the above studies, which highlighted the importance of locally differentiating features, and the

theoretical approaches identified in the previous chapter, this study will seek to explore the importance of multi-scalar interactions. To this end the study seeks to differentiate mobility decision to the level of the individual, and then contextualise those decisions in terms of both non-migrant accounts and the broader livelihoods and political economy context, in which they were taken. As such the work aims to detail the variety of ways in which non-environmental factors, operating at a host of scales, interact with a context of environmental stress to shape mobility.

In terms of understanding mobility, the focus of the study will fall on the temporal and geographical extent of movement, as well as the motivations for, and conditions of duress under, which mobility decisions are taken. The reason for this focus is described in Chapter 3 which pointed out how such characteristics have been important for the literature on 'environmental refugees', both in terms of the legitimacy of the term and because they have important implications for human security and well-being. Having justified the methodological approach which will be used in this study I turn now to a description of the actual research methods which were used in the field.

Methods, Field Site Selection and Sampling

Methods

Based on two considerations, the methods used in this research were exclusively qualitative. The first of these pertains to the focus of the work, which fell on understanding the character of migrations in terms of their temporal and geographical extent, their underlying logic and the conditions of duress under which such movements were taken. Such objects of enquiry are not usefully explored using quantitative methods.

The second reason for focussing on qualitative approaches was the exploratory nature of the work which aimed at understanding the role played by different factors in mediating the relationship between environmental stress and human mobility. In such a context qualitative approaches are thought to be more effective at managing a research question in which the processes are not well understood and where the exploration of these processes will be undertaken in a constantly evolving manner. An additional reason for prioritising a qualitative approach lies in the fact that good quantitative data is hard to come by in northern Ethiopia, particularly for the factors which proved to be of interest to this work.

With the above in mind, the predominant research methods used in the study were semi-structured interviews, participant observation and transect walks. The last of these was confined solely to the rural areas. Semi-structured interviews were the dominant research method and were undertaken with a mix of focusses on accounts of migrants, rural livelihoods and rural life histories (see appendices A, B and C for details of the semi-structured interview outline). In total 361 interviews were completed with approximately[17] 60 being conducted in each of the six field sites (see below for details). Participant observation and transect walks were far less dominant features of the research method but they still formed important components of the work. In addition to interviews with farmers and migrants, the work undertook 51 interviews with a variety of academics, aid staff and government officials, situated at a variety of bureaucratic levels.

Semi-structured interviews were privileged as they allowed me to focus on what I thought was pertinent to the research, while at the same time affording interviewees the opportunity to bring up their own ideas (Willis 2006). Such features were important given

17 An 'approximate' is given here for 3 reasons. Firstly there were small discrepancies between how many interviews were done in each field site. Secondly, during certain interviews both livelihood and life histories were recorded. As such it would be misleading to refer to a single interview or to multiple interview respondents. Thirdly, in some instances the poor quality of the interview meant that it was begun and then cut short early. As such a simple representation of the number of interviews undertaken would be misleading. With this in mind, the '361 interviews' referenced here accounts for the 361 people who completed the majority of the interview.

the exploratory nature of the fieldwork where my focus on particular elements of livelihoods and migrant experiences might be explored in more or less detail in different interviews. Additionally the loose structure of the semi-structured interview allowed me to amend interviews to focus on different pieces of information, and thereby account for the rich livelihood context, which I could not have fully conceived of before entering the field (Vandsemb 1995).

The ability of semi-structured interviews to allow for the input of the respondent was also important for this work because of the focus on the migrant and non-migrant experience of environmental stress. As such within the semi-structured interview format, narrative accounts (or migrant story telling) were encouraged. This was done to exploit the fact that what respondents choose to express, highlights features of the experience that were important to them (Stubbs 1984). As such the semi-structured interview allowed for a particular window into understanding the migrant experience of environmental stress and (non)migration.

Transect walks were used, principally, in the rural areas where they allowed the researcher to gain a more comprehensive understanding of activities comprising daily life, and therefore a greater understanding of livelihood activities. Much of the information gained while on transect walks was fed back into semi-structured interviews. To this end transect walks were usually undertaken with farmers or young children. While walking the researchers would enquire about the livelihood structure of the farmers in these areas. Questions were wide ranging and while an exhaustive list would be impossible to compile, they generally pertained to details about land use at different times of year and to unusual landscape features, such as wells, woodlots or small dams. Points of interest generally pertained to issues of usefulness, access, management and any notable changes that had taken place.

Participant observation was only undertaken to a limited extent in the study. In this regard it dovetailed with the transect walks where farmer behaviour was observed. Limited participant observation was also undertaken in the urban areas where it was used as a means to explore the conditions of urban livelihoods, both in their domestic and commercial spheres. Such contexts allowed for asking of appropriate questions about urban livelihood security and personal aspirations.

Site selection

Site selection for the study was informed by Masters-level (M.Phil) field work undertaken in 2007 (See Chapter 1). This Masters dissertation pursued a similar question to that posed in this doctoral research project. The fieldwork for the masters work was based on interviews with both governmental and non-governmental officials working in Ethiopia, wherein, with the intention of limiting the question begging elements of the research, the approach had been to locate a rapidly growing town in an area considered to have experienced a decline in agricultural potential as a result of biophyscial environmental stress. The result of this investigation was the selection of the town of Weldiya as a base-point from which to explore migrant's motivation for moving and determining whether or not environmental stress had proved an important feature in mobility decisions.

The success of the M.Phil project meant that Weldiya was, again, sought as a research site for the doctoral fieldwork. The task of site selection for this project thus focussed on finding a comparable site to that of Weldiya, in Tigray. Elements thought to be important for comparison included a rapidly growing town located in an area considered to have had its agricultural potential decreased by the occurrence of stresses located in the biophysical environment. In addition, livelihoods surrounding the urban centre needed to be based on

mixed farming practices, in a fashion which was similar to farming methods surrounding Weldiya. To achieve this I again undertook interviews with both governmental and non-governmental officials whose mandate covered issues such as rural development, agriculture, food security and urban planning. Academics with relevant interests were also consulted as to where they thought suitable field sites might exist.

Initial exploratory interviews were conducted in Addis Ababa where not only was the need for a field site mentioned, but so too was the entire logic for the thesis. With the overall idea of the study receiving general approval and the likelihood of finding a suitable town in Tigray thought to be good, I travelled to Mekele (the capital of the Tigray National Regional State (NRS) – see Map) in order to try and find a suitable field site. Again the approach was to consult with both governmental and non-governmental officials as well as academics at Mekele University about a suitable field site. The towns of Wukro and Atsbi (see the below for a more detailed account of the field sites) were eventually decided upon and scoping exercises were undertaken in each site, which again included interviews with local officials to determine the feasibility of work in both areas.

Drawing on the literature, discussed in the previous chapter, which cited migrants generally short distance moves in response to slow onset changes in the physical environment (Wouterse & van den Berg 2004, Findley 1994, Hampshire 2002, Mortimore 1989), it was decided to undertake research in both Atsbi and Wukro comparing the choices migrants make about their destinations in terms of medium and small towns. This, it was thought, would provide greater insight into the decision making process regarding mobility. To make this work comparable with work in Amhara, another field site was added there, based on my knowledge of the area, gained during the M.Phil. This field site was chosen as Kone, based on its size and status as an administrative centre which resembled that of Atsbi.

Having selected the urban field sites, rural field sites were picked based on: their

proximity to both of the urban field sites, the accounts of migrants which referenced them as sending areas and the access I could get to these sites given their relative proximity to a road. Within the rural areas the 'field site' was delineated by the boundaries of the *PA*/*kebele* (see section on 'Sampling' below) which is the most localised political institution.

As such the field sites were selected on the criteria that they were comparable in size, growing rapidly, and located in areas historically affected by rainfall stress and problems of soil erosion and depletion. Such features were thought important for limiting the degree to which the interview questions would have to solicit motivations for mobility in which environmental stress was a cause, while at the same time making the research sites comparable in terms of urban function and prominent environmental stresses.

Sampling

Notably, the the sample amassed for this study was not random and thus the inferences which can be drawn from it should be cited with caution (as will be discussed in the limitations section, below). Instead of random sampling, a host on non-probability sampling methods were used, including: convenience sampling, purposive sampling and snowballing.

In the rural field sites convenience sampling was undertaken in a random fashion, speaking to people that were in homesteads, or tending fields or cattle, that we passed. In this process purposive sampling was undertaken to ensure that all the areas and ecologies of the *PA*/*Kebele* were covered. Additionally purposive sampling was undertaken to ensure responses from a cross-section of respondents on issues of age, sex and wealth. Purposive sampling was also directed at ensuring that households with unique features were incorporated in the study. Unique features of interest might include a large herd of cattle, a particularly vibrant vegetable garden or access to a perennial water source. Finally, particular

groups, such as female headed or elderly households, and other social features identified as important from completed interviews, were also purposively accounted for. In this regard, snowballing formed an important sampling strategy with respondents informing subsequent interviews, both in terms of the content of the questions and character of the respondents.

In the urban field-sites convenience sampling was directed at areas where rural-urban migrants were thought likely to either live or work. Such areas included market places, bars, tea houses, construction sites, and rental accommodation on the outskirts of town. In the urban field sites, snowballing was of particular importance as walking through neighbourhoods, enquiring with people if they had migrated from the rural areas to the towns, would frequently lead to people pointing us on to neighbours or friends whom they knew had migrated and whom they thought would be amenable to being interviewed. Due to the social diversity and dynamism of urban economic and social structures, purposive sampling was less effective. That said, efforts were still made to ensure representation across age, sex and wealth categories.

The informal nature of the sampling approach, in both rural and urban field sites, meant that what were initially one-on-one interviews would, on occasion, morph into focus group discussions as passers by or family members joined the conversation. In such instances the nature of the interview was tailored to focus less on individual experiences, and more on community-wide dynamics, such as processes governing individual access to resources or the impacts of societal change.

Data recording and analysis

Interviews from the fieldwork were recorded by taking notes with a pen and paper. This approach was preferred to the use of a voice-recorder which, it was thought, might

compromise my ability to ensure respondents of their anonymity in the study. Every evening interview and field notes were transcribed into a more formal framework. This was always done within one or two days of undertaking the interviews. During the transcription, field observations were fleshed out and exploratory questions for the following day were formulated. The transcription process was also used as an opportunity to capture the interviews in *NVivo*, where dominant characteristics or themes from the fieldwork were identified. In rural field sites, dominant themes pertained to issues of interest determined by the theoretical framework. They thus included issues of livelihood dynamism and interaction, as well intra-community differentiation. For the urban field sites the dominant themes focussed on the central motivation for people's decision to leave the rural areas.

The data was then reorganised into by categories of interest, identified from the *NVivo* analysis, using a variety of word processing software. Here the data from the different field sites was combined into one document, where different colour text was used to identify different field sites. By this approach different field sites were agglomerated under themes of interest. This process provided me with some sense of how non-environmental and environmental factors interacted across the field sites; showing which interactions were common to multiple sites and which were site-specific.

In determining which findings to represent in this thesis, all of the above analysis was contextualised in terms of broader field notes and institutional interviews, which were transcribed in a similar fashion to that described above.

Conceptual Frameworks: Structure and Agency

Having described the research methods used in this study I move now to discuss, in detail, some of the conceptual frameworks and analytical tools which have been used to make sense

of the often messy and always complex research environment. Given that a central concern of this thesis, and of the theoretical frameworks used in it, is the relationship between structure and agency in shaping mobility decisions, I begin with a discussion of how I have conceptualised both. Notably some of this discussion has already been covered in the theoretical discussion on the overlap between political ecology and migration theory. What this next section does is ground that theoretical discussion in the details of how these features will be explored in this study.

The importance, to both migration theory and political ecology, of an approach focussed on agency yet aware of the important role played by structural features in limiting that agency was highlighted in chapter 3. The point was made that in political ecology the need to focus on agency had been addressed through a focus on the land manager, while in migration theory the focus had fallen on the migrant herself. As a starting point, this research will adopt the same approach, prioritising agency. To this end the focus will initially fall on understanding rural and, to a lesser extent, urban livelihoods, and migrant narratives describing the logic underlying the decision to migrate.

The focus on rural livelihoods provides a useful conceptual starting point as it allows for an understanding of the *human ecology*: both the manner in which the physical environment shapes household livelihood options and how local actors impact on the environment. In the context of this study, such an approach is imperative given the findings of Meze-Hauksen (2000) (described above) which highlight how environmental change presents as a 'second order' driver of migration. In this regard the focus on livelihoods is crucial for understanding both how household productions systems are reliant on the physical environment and also how changes in the physical environment might stress those livelihoods.

In addition, a livelihoods focus amongst rural farmers is useful in that, by virtue of its

focus on farmers as non-migrants, it allowed the research to understand what might constitute some of the constraints on an individuals' desire to migrate (Castles & Miller 2009). The livelihoods focus among non-migrant, farmers is also crucial for understanding the migration dynamics described by Hampshire and Randal (1999), which highlight that migration in response to environmental change is only undertaken by those individuals for whom it makes sense in relation to the entire suite of other livelihood strategies. Thus the livelihoods approach is useful for contextualising how migration is viewed as a livelihood strategy, relative to other livelihood strategies. Simultaneously such a focus on rural livelihoods provides insight in to what other factors shape livelihood options and thus play a role in determining the extent to which mobility becomes a viable/desirable strategy. Finally, a livelihoods approach allows the researcher to disaggregate households by the variety of livelihood strategies available to them. Such an approach is thought powerful for revealing local level differentiation which Findley (1994), Hampshire (2002) and Wouterse and van den Berg (2004) all found to be important in shaping mobility strategies.

In the urban areas, an exploration of rural-urban migrants' urban livelihoods reveals information about the nature of the relationship between the rural and urban areas. This is thought important for acknowledging the dynamic elements of migration and accounting for the reflexive effects in both sending and receiving areas (Castles & Miller 2009, Massey 1990, Fussell 2004). To this end a focus on migrants' urban livelihoods will serve to illuminate the importance of relationships between the urban and the rural areas by which both commodities and information (in addition to humans) might move. Additionally, a focus on urban livelihoods is revealing of the stresses experienced by migrants as well as their level of livelihood (in)security in the urban areas. Such issues are of enormous importance if a central concern in our understanding of the relationship between environmental change and human mobility lies in ensuring human wellbeing in the context of a changed climate

(Mortreux & Barnett 2008).

The second part of the agentive focus lies in the exploration of migrant narratives describing the logic underlying an individual's decision to move. This focus is useful for the manner in which it allows us to verify the role played by environmental change in people's mobility decisions. Additionally, accounts of the migrants' logic reveal both what factors, other than environmental change, might be important in mobility decisions, as well as how these factors might interact. Finally, and absolutely crucially in bringing the discussion back to the literature on 'environmental refugees', an exploration of migrant narratives will allow for the exploration of factors affecting the character of mobility strategies such as their geographical and temporal extent, and the conditions of duress under which movement is undertaken.

In addition to exploring these features and the manner in which they interact, the study focusses on contextualising livelihoods in terms of ever broader social, economic and political structures in a manner described as 'chains of explanation' (Blaikie & Brookfield 1987) (see Chapter 2). During the study, this conceptual method of enquiry was informed by the livelihood and narrative assessments (just described) so that, as the research progressed, different interviews contained different questions, exploring the structural constraints on livelihoods. Specifically the interviews focussed on understanding how and why livelihood strategies differed by household/individual and what the implications such differences might be for engaging in mobility. The principal means for assessing this context was to understand the range of livelihood options available to households, determine the necessary capital constraints and inputs required to engage in such livelihoods and then to enquire as to how an individual might access those different sources of capital and inputs. In this regard the work was focussed on understanding how access to the different resources required to undertake different livelihoods strategies interacted with livelihoods for which the suite of

strategies available made migration more or less viable.

The findings from each field site would then be compared against other field sites in an attempt to understand the extent to which it was the nature of environmental constraints, or socio-political and economic contextual interactions, which dominated both the decision to move and the character of that movement.

Analytical Tools

The above section has described the degree to which this work will be focussed on livelihoods, chains of explanation and migration narratives as a means to make sense of the interplay of structure and agency in the relationship between environmental stress and human mobility. With this in mind it remains important to describe what exactly I mean by 'livelihood' 'chains of explanation', and 'migration', and (more importantly) how I will operationalise these concepts in this study.

Livelihoods, chains of explanation and entitlements

This work makes use of the generalised notion of livelihood put forward by Chambers and Conway (1991), described as being comprised of "people, their capabilities and their means of living including food, income and assets" (Chambers & Conway 1991: i). Such a general account is thought to be useful for the purposes of this thesis because more specific accounts tend to fall into the trap of being overly prescriptive, and therefore not wholly capturing the complexity of the means by which people maintain their lives. In addition, since this work is not trying to be prescriptive about livelihood interventions, but instead aims to understand where migration fits into people's livelihood strategies in a context of environmental stress,

such a general approach is thought sufficient.

With the above in mind it is worth providing some nuance to the livelihood concept. In this regard Chambers and Conway (1991) describe livelihoods in terms of four components: (i) People and their capabilities (ii) The activities that people undertake (iii) assets, both tangible and intangible, and (iv) outputs. Tangible assets refer to resources and stores of wealth, while intangible assets refer to claims and access. 'Resources' refer to those assets which produce the materials necessary for people to live and include things like trees, land and water. 'Stores' refer to assets in which wealth can be held and includes things like jewellery and equipment. 'Claims' refer to demands and appeals that can be made for material, moral or other practical support or access. Notably there is conceptual overlap between 'resources' and 'stores' of wealth (such as in the case of livestock which can be both a resource, facilitating income generation, and a store of wealth) as well as between 'claims' and 'access' (because access is often achieved through claims). For reasons of conceptual clarity however it is thought meaningful to separate the groups out as the manner in which they are invoked in livelihood strategies is distinct (Chambers & Conway 1991).

In addition to these details, Chambers and Conway's (1991) description of livelihoods includes two more features which are worth noting for the purposes of this thesis. The first is that multiple activities are undertaken as part of a single livelihood in order to provide for a host of human needs. The second is that livelihoods are dynamic, in that they are capable of perceiving, predicting, adapting to and exploiting changes in the social and physical environment (Chambers & Conway 1991). Both of these elements of livelihoods will be explored during the fieldwork.

A second important analytical tool for understanding the relationship between environmental stress and mobility pertains to 'chains of explanation'. This notion has already been described in Chapter 2 as a process by which the researcher continually refocusses their

analytical lens at increasingly larger scales so as to contextualise the agentive elements of any individual action within a set of broader social structures. Given the centrality of this approach in this study it is worth discussing some of the problems with applying chains of explanation, and suggesting how I have negotiated them.

The principal problem with an approach focussed on 'chains of explanation' pertains issues of method (Blaikie 1999), principally to the difficulty of ascribing causation to events working across scales, in what are incredibly complex systems. One danger of the approach is that, like cultural ecology before it (see Chapter 3), it can result in explanations for events which are worth little more than 'just so stories' in that they result in narrative explanations of practices which are neither verifiable nor falsifiable. As an hypothetical example, ascribing local actions, such as changes in seed choices, to global processes, such as the relationship between the changing global financial system and seed companies, may well be reasonable. However in a system as complex as that which links local actions to global processes, such a narrative can be hard to falsify. For there is no clear counter-factual which can be drawn upon to refute the linkages, and as such the claim can always be made that in other contexts, wherein such links do not hold, it is context-specific interactions which lead to the relationship being important in this case.

This critique is a serious one, yet it does not mean that chains of explanation are without use. For while it may be hard to uncontroversially prove particular linkages between the micro and macro scales, acknowledgement of such multi-scalar linkages is of fundamental importance to any study aimed at understanding the relationship between environment and society. In order to manage the degree to which the connections that I draw between the local and the global might be spurious, I have tried to substantiate my claims in terms of other literature which describes similar connections. Where other literature is not available I have tried to consult with Ethiopian academics and policy makers as a means for

substantiating the emphasis I have placed on particular connections.

A final critique of 'chains of explanation' is that despite being a tool aimed at understanding complexity, the notion of 'chains of explanation' still fails to account for the full complexity of connections experienced in the rich context of people's lived existence. The problem here is with the metaphor 'chains' and with the implied meaning in 'explanation'. Both suggest a one-way dynamic by which structures constrain agency, while the 'chains' metaphor focusses exclusively on hierarchical linkages – wherein structures operating at one scale impact features at other scales, only through the structures located at scales adjacent to the feature of interest. As such the metaphor fails to account for an individual's ability to shape the structures around them while at the same time failing to account for the complex means by which some structures can cross scales, or operate at multiple scales, to shape and/or constrain individual agency (Robbins 2004). A good example of the latter kind of structure is the role played by the media in shaping people's aspirations, expectations and world view. In this regard the media, is a highly macro level structure. In the Ethiopian case, where the media is controlled by the State, the forces governing what is broadcast are shaped by macro-level political concerns. Notably however the impact of the media on society filters through at numerous scales, in some instance beaming directly into people's homes, while in others it filters through community discussions and discourse creation. Such complex relationships are simply not captured by the notion of a 'chain'.

Critiques of this overly simplistic construction, of the multi-scalar relationships between actors and structures, have suggested the notion 'webs of relation' instead of 'chains of explanation' (Robbins 2004, Rocheleau 2008). The notion of a 'web' transcends the limits of the hierarchical and proximate idea contained in the notion of a 'chain', while 'relations' better accounts for the manner in which more macro-level structures may be shaped by local

level agents, and not simply the other way round. With this in mind, this work seeks to make use of 'chains of explanation', understanding the importance of its particular scalar and proximate failings, and of the dialectic-type interaction between individuals and structures (as will be discussed in Chapter 8). The term, 'chains of explanation' is, however, retained in this work, because it is generally more intelligible to the wider political ecology readership. Further to this, such a conception is not thought to be problematic as very few researchers use 'chains of explanation' as a hard and fast research methodology that needs to be rigorously applied to the research setting. Rather it is used as an heuristic device to make sense of the complicated linkages between factors operating at multiple scales (Neumann 2005) while doing justice to issues of both structure and agency (Rocheleau 2008).

Mention of the two-way dynamic between structure and agency provides a useful segue for a brief discussion of the concepts: entitlements and institutions in the conceptual framework. Leach et al (1999), in their seminal work on entitlements, refer to 'institutions' as broadly understood structures which are defined by regularised patterns of behaviour between individuals and groups in society" (Leach, Mearns & Scoones 1999: 105). These they distinguish from organisations which are considered to be actors (although often comprised of many individuals) for whom institutions shape patterns of behaviour. Within this framework Leach, Mearns & Scoones (1999) view communities of people as not being simply governed by rules (structures), but instead as being composed of people who actively monitor, interpret and shape the world around them (Leach, Mearns & Scoones 1999). In this regard Leach, Mearns & Scoones (1999), through their assessment of entitlements, provide a meaningful conception of the dialectic relationship between structure and agency which was sought out in this research.

The relevance of Leach, Mearns & Scoones' (1999) work for this study pertains not only to their conception of the dialectic relationship between structure and agency but also to

their conception of 'community' which is critical of its construction as an homogeneous, bounded and static entity. In this regard they point out how institutions (in which the rules dictating entitlement are situated) can act to differentiate populations at the sub-community level. Within this conception they point to the interaction of institutions and individuals as governing both which assets people are endowed with, and how those endowments map on to entitlements (Sen 1982). In this context they make the case that intra-community differentiation has meaningful implications for how resources in the natural environment will be managed and the impact such arrangements have for different livelihoods (Leach, Mearns & Scoones 1999).

Leach, Mearns & Scoones (1999) conception of endowments and entitlements parallels with Chambers and Conway's (1991) notion of tangible and intangible assets. What is valuable for this thesis in the work of Leach, Mearns & Scoones (1999) is the active acknowledgement of intra-community differentiation, of the manner in which institutions govern the processes by which such differentiation is legitimised and the fact that local actors draw on multiple institutions (shaping them as they go) in order to make claims to specific assets (or endowments and entitlements). Within this work, expanding on the findings about local level differentiation, cited at the beginning of this chapter, such features were sought out as a means for interrogating the degree to which macro-features (such as changing environmental conditions) have differentiated impacts at the local level, thereby shaping both the degree and extent to which mobility forms a reasonable livelihood strategy for different households and/or individuals.

Migration and mobility

Like the discussion of chains of explanation above, the conceptualisation of migration that

will be put forward in this study has already been covered to some extent in Chapter 2. With this in mind a work focussing on mobility does require some explanation of what is meant by the term and what features of that phenomenon will be focussed upon.

In this regard it is important to note, at the outset, that while this work is being undertaken in the context of the broader discussion on 'environmental refugees', in order to avoid the polarising elements of the debate, it will explore the implications of environmental stress for *mobility* (rather than migration) strategies at the level of the household and individual. A focus on mobility is thought useful as it seeks to overcome the sedentary bias that has pervaded so much of the literature on environmental change and migration. To this end the conceptual approach in this work seeks to understand mobility as a reasonable livelihood strategy and not as some proxy for livelihood insecurity or evidence of developmental failures (Bakewell 2007). In addition to trying to re-conceptualise mobility as a livelihood strategy, the focus on mobility is thought useful for the manner in which it avoids the intractable problems involved in defining a migrant in terms of some specific temporal and geographical extent of their movement. Thus instead of trying to focus on the temporal and geographical extent of mobility strategies as a means to potentially legitimise the title 'environmental migrant/refugee' this work seeks simply to understand the interaction of factors determining the timing, conditions of duress and extent (geographical and temporal) of mobility strategies.

With the above in mind, it should be noted that while this study will refer to mobility, rather than migration, it will, for reasons of convenience refer to 'migrants' rather than some derivative of 'mobile person'. In this regard the term 'migrant' will be applied when describing any individual who considers themselves to be living in a location outside of their previous place of residence, regardless of both the time for which they have been doing so or their intent to return in the future.

The characteristics of human movement pertaining to the conditions of duress under which mobility decisions are taken has already been mentioned in Chapter 2. There it formed part of the discussion on refugee theory with the central point being that the conceptual distinction between a forced and voluntary migrants was more important than the bureaucratic distinction of a refugee – as crossing an international border and motivated by political persecution. As such, for the purposes of this study it is necessary to detail how I intend to conceptually distinguish between 'forced' and 'voluntary' migrants.

Any discussion of 'forced' and 'voluntary' migrants is plagued by the tension of providing a reasonable conception of a 'forced migrant' that acknowledges the limited choice of an individual, but which maintains the analytical truth that no individual is without agency. This study has addressed this tension in a number of ways. First it appreciates that the point at which a migrant is delineated as 'forced' or 'voluntary' will inevitably be arbitrary. The general approach has been to conceive of forced migration on a continuum of 'forced' to 'voluntary' (Turton 2003). In this conception, migrations at one end of the continuum are characterised, overwhelmingly, by the active choice of the migrant while at the other, the active choices of the migrant are rendered negligible by overwhelming structural forces shaping the migrant's decision to move. Notably however, at every point on the continuum a migrant's experience is characterised by both forced and voluntary elements.

Although this conception is useful it remains necessary to define how one might measure, or interpret, '(in)voluntariness'. There is no single answer to this question and different authors have drawn on different frameworks in order to address it. Richmond (1994) focusses on the degree to which a migrant might be able to plan their movement as the measure of how much choice they have in their decision to move. In this assessment a long time to plan suggests a less forced move while a short planning horizon suggests a more forced move (Richmond 1994). Van Hear's (1998) approach is similar, but instead of time to

plan it focusses on actual choices, looking at the number of options available to the migrant in their decision to move. In this conception a large number of options, or alternatives to movement, suggests a voluntary move while few options suggests a move which is more forced (Van Hear 1998). The benefit of Van Hear's options-proxy is powerful because it appreciates that situations might arise in which an individual has a long time to plan, but still has few options available to them. Such cases might include populations experiencing well established patterns of structural marginalisation. Finally Gibney (2004) invokes the simple push-pull heuristic, looking at the degree to which push or pull factors dominate the migrant's decisions to move[18]. In this case the preponderance of push factors suggests a forced move while a preponderance of pull factors suggests a migration which is more voluntary in nature (Gibney 2004). This study will draw on all three models in trying to make sense of the conditions of duress under which mobility strategies are enacted in northern Ethiopia.

Change and variability

Having discussed the manner in which livelihoods, entitlements, chains of explanation and migration/mobility will be conceived in this work I turn now to a final conceptual discussion regarding what I mean by 'change' with reference to the bio-physical environment. The beginning of this chapter already concerned itself with the implications of defining 'change' in the identification of causative relationships between climate change and social impacts. This next section pertains to how one delineates 'change' from 'variability' in a more general

18 Note this conception, although simplistic, is not at odds with the critique of the push-pull model described in Chapter 2. This is because Gibney's (2004) heuristic is aimed at understanding the experience of the migrant and the degree of agency exercised in their decision. In this regard the experience of push and pull factors is relevant. The critique of the push-pull model, mentioned in the previous chapter, is levelled at using the individual migrant experience (of push and pull factors) as a means for explaining the *reasons* a migration has taken place, not for understanding the character of that migration.

sense than that pertaining to conventions around climate change[19].

What is most notable in distinguishing 'change' from 'variability' is that the difference between the two pertains to either the time-scale over which one seeks to observe change, or to some understanding of the dynamic of the system one is observing. Regarding time scales, the distinction between 'change' and 'variability' is political. In making such a distinction all that is being done is that the changes in the observed variable are considered to be occurring over a time scale which is long enough for the implications of such change to be of deemed worthy of social importance[20]. Regarding our understanding of the particular system being observed, it could be argued that there is reason to describe the system as 'changing' if we understand the difference between two states (measured in time) to be qualitative. Such cases may include changes in state which are quantum, or changes in collections of variables that describe new equilibrium dynamics.

Political ecologists have tended to challenge narratives of 'change'. In the case of the political delineations of change and variability, political ecology has revealed the particular politics of those individuals defining 'change' and the degree to which they have excluded certain other accounts. In the latter case of change-as-a shift-to-a-new-equilibrium-point, studies in political ecology have made much of the problems of viewing ecosystems as in balance, or in states of equilibrium. Putting forward, instead, models which describe environmental systems in a state of dynamic dis-equilibrium. As such political ecologists have historically problematised notions of 'environmental change' showing that they are the product of particular constructions of the environment which tend to reflect particular interests.

Given this study's use of political ecology, it would be remiss of me not to speak of how I distinguish 'change' from 'variability'. What should be noted in this regard is that this

19 For which it was mentioned above, an agreed account is to use, at least, a ten year average.
20 Convention on climate change has been to use, at least, a 10 year average.

work is focussed on the impact of environmental *stress* on mobility decisions. Here *stress* is the analogy by which the likely future impacts of climate change are being explored. This work is not concerned with whether the sources of environmental stress, experienced by households, are the product of long term trends which could be meaningfully described as *change*, or simply cyclical patterns of *variability*. Similarly this work is not concerned with the politics of defining an 'environmental problem' and its relation to human mobility[21]. Instead the study's interest lies in understanding the manner in which shifts in the variables that we use to describe the biophysical environment impact on household mobility decisions so that we might better understand how predicted changes in the biophysical environment might manifest as mobility strategies in the future.

To this end, given that it is the mobility decisions of farmers in which this work is interested, this study focussed on what farmers described as longer term changes as opposed to shorter term features of variability. The work also explored the degree to which migrants and farmers described mobility strategies as a means to deal with either. Thus in this work descriptions of environmental change, as opposed to variability, are meant to describe those patterns which farmers described as such. Because of the above, the politics contained in the speech act which distinguishes change from variability are not thought applicable because this work has based the distinction on the conception of the potential migrants themselves.

Scale

In both Chapter 3 and the above sections of this chapter, I have made repeated mention of issues of scale. Principally this has been covered in discussions about 'chains of explanation' and the amenability of this method to describing the multi-scalar phenomenon that is human mobility and the factors which impact on it. In this regard, Chapter 2's description of the

21 The reasons for this problematic political position should have been made clear from the previous chapter

multi-scalar approach to understanding migration focussed on the 'micro-', 'meso-' and 'macro-scales' as being of analytical importance. In this work the terms 'micro' and 'macro' are used, as they are in the general migration literature, to denote local scale, structural, features operating at the scale of the individual and large scale, structural, features operating at the global level, respectively (Castles & Miller 2009).

Notably, however, use of the term 'meso' in this work, is not always used as it is in the more general migration literature. In such literature the term 'meso-scale' frequently limits itself to structures focussed on social relations, which account for the role played by different institutions in mobility decisions (Faist 1997). In this work however I use the notion of 'meso-scale', as an intermediary scale between the micro- and macro-scales. As such 'meso-' is used to denote structural forces operating on a sub-national, regional scale. Within this discussion I refer to the social structures and institutions, usually captured by the term 'meso-', in terms of 'social capital'. This has been done because of the primacy afforded to the livelihoods model, in which the notion of 'social capital' is more familiar. If one wishes for a scaled account of this social capital, I follow Castles and Miller's (2009) delineation of social capital as a micro-scale feature (Castles & Miller 2009: 28).

Having now discussed and justified the methodological approach to the study as well as the methods and conceptual tools that will be used; I introduce the field sites before turning to a discussion of the limitations of the study and its methods as well as some of the considerations and ethical concerns of the work.

The Field Sites: A Contemporary Analogous Approach

Having motivated for the specific design of an analogous study, and having described the conceptual and analytical tools that were used in the work, a brief description of the precise

field sites is necessary as a means to both make clear the conditions of analogy upon which this study will draw and to generally introduce the contexts in which the study was undertaken.

Field sites for this research were located in the *Misraqawi* (Eastern) Tigray Zone, in the Tigray NRS, and the *Simein* (North) Wollo Zone[22], of the Amhara NRS. In Tigray the study areas were the towns of Wukro and Atsbi, located in the Wukro and Atsbi-Wumberta *weredas* respectively, and in the rural area surrounding Habes, in the Atsbi-Wumberta *wereda*. In Amhara the field sites focussed on the towns of Weldiya and Kone, in the Weldiya and Wadla *weredas* respectively, with the rural focus falling on the areas surrounding Ahuntegegne, located in the Gubalafto *wereda* (see map and table, below).

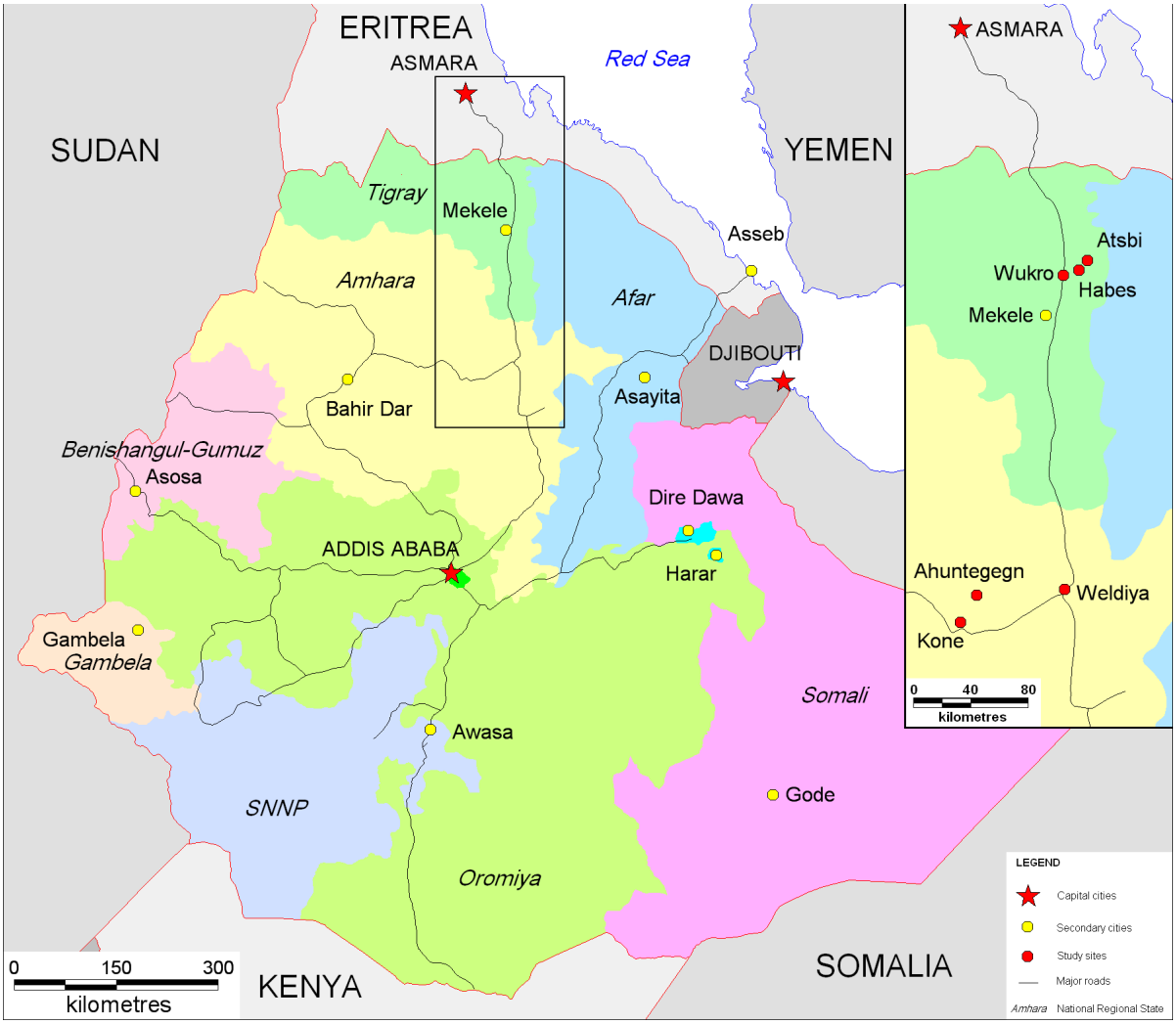
The town of Wukro straddles the North-South, Addis Ababa-Asmara highway. The town was founded as a religious centre based on the location of rocks suitable for hewing in the fashion of Tigray's rock-hewn churches. Bolstered by its location on the existing trade route between Asmara and the South of the country, Italian occupation and the instalment of a military garrison (see chapter 5), the town has grown to support a population of around 31 000 inhabitants[23] (Worku, G, Eyesus & Getinet 2008).

To the east of the town an escarpment rises about 500m onto a flat plateau in the Atsbi-Wemberta *wereda.* The administrative capital of this *wereda* is the town of Atsbi, located about 35km from Wukro. Also settled initially around a church, the town has grown as a result of its location on the route by which caravans brought salt out of the Danakil depression and as a result of a natural spring on top of which a mineral water processing plant has been built. The town of Atsbi now has a population of around 6000 inhabitants (Worku, G/Eyesus & Getinet 2008), with a great deal of growth occurring after 1991,

22 Note that under the *Derg* the provincial boundaries of the country were different so that what is today North and South Wollo were amalgamated along with regions from what is today the Afar NRS. Changes to these boundaries were made with the institution of the countries' federal model (see chapter 5 for more detail)

23 These numbers are not a true reflection of town function due to the large number of military personnel who reside in the town but who are not enumerated as being resident in it (Worku, G/Eyesus & Getinet 2008).

following the cessation of violence between the *Derg* and the TPLF (Pers. Comms. Anonymous Interview 2009a).



Map 1. Showing the different National Regional States of Ethiopia, by shading, with the study sites inset (Repeated, for access purposes, on page ix).

National Regional State (NRS)	**AMHARA**	**TIGRAY**
URBAN (Town name)	Weldiya Kone	Wukro Atsbi
RURAL (*PA*/*Kebele* name)	Ahuntegegne	Habes

Table 1. Showing the rural/urban location of the different field sites.

Along the road linking Atsbi and Wukro, about midway between the two and on the

high plateau, is a small settlement in the *Kebele* of Habes. The climate of the area is characterised by a single (*Kiremt*) rainfall season on which most production is reliant. The *kebele* also has two (largely) perennial rivers flowing through it, which are organised into private parcels of land from which people can harvest feed for their cattle. Some households with fields nearby the river also use the river, or dig wells, providing them with near perennial access to water.

About 300 km south of Wukro, on the Addis Ababa-Asmara, highway is the town of Weldiya. As well as being on the major north-south highway of Ethiopia, Weldiya forms a junction with Bahir Dar in the west, is the major gateway to the religious centre of Lalibela to the north west and has a secondary road joining it with Afar and Djibouti in the east. The town has thus long been established as a trading and junction point[24]. Weldiya is currently the administrative capital of North Wollo Zone. Until recently Weldiya remained a reasonably small urban centre as a result of its political insignificance and the poor roads in the area. Recent road resurfacing and the town's increasing importance as an administrative centre (a product of the redrawing of the country's administrative boundaries) have resulted in its rapid growth. Currently Weldiya has a population of around 46 000 inhabitants (Prime Consultants 2009).

To the west of Weldiya lies a highland plateau, reached by climbing a steep escarpment. Located on the western plateau, about 120 km from Weldiya is the town of Kone. It is the administrative centre of of the Wadla *wereda* and has a population of about 6700, based on the last informal count (Pers. Comms. Anonymous Interview 2009b).

Between Weldiya and Kone, on the high escarpment, lies the small settlement of Ahuntegegne, around which interviews were conducted with rural farmers. Lying between 3000m and 3500m, in altitude, this area is in in the alpine zone (Dejene 1990) and is heavily

24 One theory suggests that the origins of the towns name come from the Oromiffa (the language of the Oromo people of Ethiopia) word for 'meeting place'.(Prime Consultants 2009)

impacted by frost during the dry season. The area is characterised by two rainfall seasons, the short *Belg* rains which fall between February/March and May, and the longer *Kiremt* rains which generally fall between June/July-October. Local authorities revealed the last informal headcount to show a population of about 7500 people.

Biophysical Elements

As an analogous approach to understanding the impacts future climate change might have on patterns of human mobility these field sites present as particularly useful. In order to understand why this is the case, however, first requires a description of the forms of stress thought likely to accompany climate change, and then a description of the biophysical environment in northern Ethiopia.

Climate change impacts

Climate change impacts in sub-Saharan Africa are thought to include: increases in soil erosion, decreases in the availability of (agriculturally) unconstrained, prime land, decreases in cereal production (Fischer et al. 2005, Boko et al. 2007) and increases in rainfall variability, (Fischer et al. 2005, Boko et al. 2007, Stern 2007). With these general, regional impacts in mind, the specific implications of climate change in Ethiopia are harder to model. This is not only because of problems relating to the accuracy of climate models and of translating average changes in climate into weather phenomena, but also because the study site lies in a transitional region for climate change prediction.

Predictions from the HadCM2 model and its successor, the HadCM3[25] (UK Met Office 2008) vary with the most notable trend being an increase in annual precipitation and

25 Used in the IPCC 2007 assessment report

moisture availability in in tropical belt of Africa with a general experience of drying in the Sahel. Notable in the case of northern Ethiopia is that it is located somewhere between wetter predictions for the tropics and the drier predictions for the Sahel (UK Met Office 2008). In addition, models tend to predict general increases in average temperatures throughout the horn (UK Met Office 2008). Given the average nature of these forecasts it may be most accurate to forecast a likely increase in the levels of inter-annual variability of rainfall. In addition increased temperatures are thought likely to both reduce available moisture for the region (through increased rates of evapotranspiration) and alter the distribution of disease vectors, particularly malaria (IPCC 2007, Stern 2007).

Ethiopia as an analogy

As an analogy, north eastern Ethiopia presents as a useful case for a number of reasons. Firstly, while there is substantial debate about the cause, rate and extent of soil erosion (Hurni 1983, Nyssen et al. 2004a, Keeley & Scoones 2000, Holden & Yohannes 2002), there can be little doubt that there are serious problems of extensive soil erosion in the country (Nyssen et al. 2004b, Hoben 1995, Elias & Fentaye 2000). Such issues of soil erosion are not only themselves analogously relevant to climate change predictions, they also have analogous impacts such as decreasing cereal production and diminishing the availability of arable land. Similarly, the shrinking of individual land holdings, a result of increasing demographic pressure and the governments particular policy of land redistribution (Admassie 2001) (see Chapter 5), mimic the experience of reducing arable land.

Secondly, keeping in mind the distinction between *change* and *variability* provided above, potential changes and/or variations in Ethiopia's climate provide a direct analogy by which to explore the potential impacts of climate-related stress on mobility decisions.

Problematically however, the literature exploring rainfall trends in Ethiopia describe contradictory findings. As such, and as a means for motivating for the use of farmers accounts of rainfall change in this study, the literature on rainfall change in Ethiopia is described below.

Rainfall trends in Ethiopia

Hulme (1992), exploring changes in rainfall across Africa for the period 1960-1990, found increased levels of variability, and decreased aggregate rainfall (excluding December to February), for the area covering north-eastern Ethiopia. Similarly Osman and Sauerborn (2002) exploring 100 years of rainfall data across Ethiopia, found an aggregately negative trend in summer (*Kiremt*) rainfall, which, notably, was accounted for by decreases in the latter half of the 20th century.

Contradicting these findings are studies by Sileshi and Zanke (2004) and Sileshi and Camberlin (2006) which, for the latter part of the 20th century, were unable to discern any trend in in extreme dry or wet spells (Seleshi & Camberlin 2006) or in the annual rainfall total, seasonal rainfall total or rainy days over central, northern and northwestern Ethiopia (Seleshi & Zanke 2004). Similarly, Bewket and Conway (2007) and Cheung, Senay and Singh (208) found no consistent emergent pattern or trend in daily rainfall characteristics in the Amhara NRS (Bewket & Conway 2007) and in the watershed covering north-eastern Ethiopia for a similar period (Cheung, Senay & Singh 2008), during the latter part of the 20th century.

Differences in findings from these works are generally thought to be irreconcilable and best explained as being a result of the differences in the spatial (Seleshi & Zanke 2004, Bewket & Conway 2007, Cheung, Senay & Singh 2008) and temporal (Seleshi & Zanke

2004, Bewket & Conway 2007, Rosell & Holmer 2007) scales at which the studies were conducted. In addition, authors have commented on the problems of bad data sets (missing values) having an impact on trend analysis (Cheung, Senay & Singh 2008, Meze-Hausken 2004).

Accounting for problems of method and data however, the balance of evidence from these studies points towards there being no clear trend in climate in northern Ethiopia. That said it is worth bearing in mind the aims with which such studies were undertaken. Because of the linkages between rainfall and agricultural production in Ethiopia, concerns over the impact of anthropogenic climate change have generated an interest in identifying emergent, cross-country trends in rainfall which may be attributable to climate change. As such work has been focussed on documenting potential large scale, generalisable trends in climate, so as to be able to speak about general characteristics of food production. Such studies, required a focus on aggregate data over both long time-scales and large areas. With this in mind, it can be noted that these self-same studies make explicit mention of the high levels of rainfall variability (in both time and space) which are apparent in Ethiopia – especially in the northern highlands (Bewket & Conway 2007, Cheung, Senay & Singh 2008, Verdin et al. 2005) – and warn against making blanket statements about rainfall changes based on their findings (Seleshi & Camberlin 2006).

With data on aggregate trends proving inconclusive, studies documenting more localised trends appear relevant. For example, Rosell and Homer (2007), comparing rainfall data from 1963 to 1982 with that from 1984 to 2003, for Hayk (a town in South Wollo, located about 95km south of Weldiya) observed decreases in both the total, and spring (*belg*) rains, increases in the variability of the *belg* rains, increases in the intensity of rainfall and changes in dry and wet spells. Notably, decreases in annual rainfall were attributed to large decreases in the *belg* rains which more than accounted for small increases in the main,

summer (*kiremt*) rains. In addition a decrease in rainfall over the early part of the dry season (November and December) was observed (Rosell & Holmer 2007). As such the authors conclude that both the *belg* and the *kiremt* rains have shortened, starting up later and drying up earlier, leaving them less conducive to crop production. In addition they find that increased average temperatures in the area had resulted in decreased moisture availability due to higher rates of evapotranspiration (Rosell & Holmer 2007).

Supporting these findings on inter-annual variability are those of Verdin et al. (2005) who, using station data, satellite precipitation estimates, reanalysis fields and lake levels, concludes that all of Eastern Africa has undergone a recent drying, particularly during the *belg* season. In the specific case of Ethiopia, Verdin et al. (2005) observes relative stability among the *Kiremt* rains since 1960, but consistent decreases in the *Belg* rains since 1996, with this drying thought to be particularly concerning in the north east of the country. Similarly Rosell (2011), in a study of the regional differences across the central highlands of Ethiopia observes an annual increase in rainfall, with *kiremt* rains becoming both more variable and more intense, while *belg* rains are observed to have decreased for the 30 year period: 1987-2007.

From the above studies then it seems like the northern highlands of Ethiopia could be a good place to look for environmental stresses analogous to those thought likely to accompany climate change. That said, it must be acknowledged that high levels of geographic and temporal variability in rainfall make it impossible to conclude anything concrete about the state of rainfall in the field sites from the above studies. With this in mind, it should also be noted that high levels of variability in rainfall do, in themselves, present as a powerful means for exploring impacts of climate-related stress on mobility strategies. For the stresses generated by temporary drought, dry spells or delayed rains, although imperfect, do provide a meaningful analogy for understanding how future changes in climate – such as

change in the timing, intensity and quantity of rainfall – might stress household production, and how such stress might interact with decisions about mobility. In this regard high levels of background variability are observed in all studies of northern and central highland rainfall (Seleshi & Camberlin 2006, Seleshi & Zanke 2004, Bewket & Conway 2007, Rosell & Holmer 2007, Meze-Hausken 2004, Verdin et al. 2005, Rosell 2011).

With both field sites being prone to drought (Dejene 1990, Kidane 1989) and with drought conditions being observed in both field sites during the study (the details of this will be discussed below and in Chapter 6). Habes and Ahunegegne appear to present as useful field sites for exploring environmental stresses analogous to those thought likely to accompany climate change. In summary such stresses include increased water stress, reductions in soil fertility and decreases in the availability of arable land. Having justified the choice of field site and the use of an analogous study, this chapter now turns to describe some of the limitations of the study.

Limitations

As with any work, particular research methods in particular contexts bring with them certain limitations regarding what conclusions can be drawn from the findings. This next section of the chapter is aimed at detailing such limitation and ensuring that the findings from the work are not overstated. Before discussing the more traditional limitations surrounding the study and its methods however, allow me to first address a potential limitation with my theoretical framework, political ecology.

Walker (2005) critiques political ecology for the manner in which he sees the post-structural turn in the field (see Chapter 2) as generating a question begging research agenda, wherein researchers approach their subject matter assuming that socio-political and

economic factors lie at the heart of 'problems' defined in terms of 'environmental change'. Walker's (2005) point here is that political ecology needs to take seriously the potential for biophysical variables to change and impact on social systems. As such Walker (2005) argues that political ecologists need to ensure that there are not real changes taking place in the environment, before dismissing the cause of these changes as lying in socio-political and economic structures (Walker 2005). As such Walker calls for a refocussing of political ecology on actual ecological processes.

With such a critique in mind it should be made clear that despite this work's limited focus on ecological analysis, it does take Walker's (2005) critique very much to heart. For the point made by Walker (2005) is not so much that political ecologists should do ecology for the sake of retaining the relevance of the term 'political ecology' (although he does mention this). Rather it is that biophysical processes need to be brought back into political ecology so that the role of the biophysical environment might actually be accounted for in shaping human behaviour. In this regard, this work, is thought to be doing precisely that: placing biophysical processes centre stage (Robbins 2004, Forsyth 2003, Robbins 2007) through an attempt to explore the role played by changes in the environment in mobility decisions.

While justifying a focus on the role of the physical environment in nature-society interactions, it has already been mentioned that this study relied on accounts of farmers as a means for identifying changes, or variations, in rainfall in the study sites. Such an approach was necessitated by the fact that the National Meteorological Association of Ethiopia's records for the nearest station data (which was already some distance from the field site) were incomplete. With such practical difficulties in mind, it does need to be acknowledged – despite the complimentary, secondary literature cited above – that the use of farmers accounts of rainfall is not without its problems.

In this regard the most concerning study comes from Meze-Hauksen (2004) which

documents the discrepancy between farmers accounts of long term declines in rainfall leading up to the 2003-2004 Ethiopian drought, and monthly station data which showed no decline. Such findings might seem to put a damper on my methodology however there are both reasons to be cautious when stating the implications of Meze-Hauksen's (2004) work and to still pursue such a methodology, even if Meze-Hauksen's (2004) findings hold.

In terms of problems with Meze-Hauksen's (2004) study, she acknowledges the potential limitations of her own work. These include temporal and spatial problems with the data set which was only resolved to the monthly time-scale (meaning it provides only crude onset times and ignores dynamics around dry spells and rainfall intensity) and which was geographically separated from the exact site in which she undertook her interviews. She also notes that the reliability of the station data should not be overstated. Here it is noted that one of the stations used in the study had no data from 1980 - 2001, while there were also numerous other holes in the data set.

Meze-Hauksen (2004) acknowledges all these limitations, noting that the problems of the 2003-2004 drought were caused by issues of rainfall distribution, rather than absolute quantity. In addition she acknowledges the highly variable nature of rainfall in the highlands, reciting an old Afar saying that it may “rain on one horn of the ox while remaining dry on the other.' (Meze-Hausken 2004: 23). As such she caveats her findings with the statement that it is not the intention of her paper "to give the impression that local people's perception of rainfall behaviour is invalid, or not useful, but to emphasise the fact that it is a subjective manifestation of their experience [of drought]" (Meze-Hausken 2004: 20).

With such a critique in mind it seems that while we should be wary of using farmer's accounts of rainfall change, such an approach is not entirely without validity. In this regard it is worth noting that Ovuka & Lindqvist (2000), working in northern Kenya, found that station data, measuring daily variations in rainfall, confirmed farmers' accounts of changing

rainfall conditions, despite the monthly station data showing no distinct change (Ovuka & Lindqvist 2000). Additionally the accounts of changes in rainfall provided by framers in this study were in agreement with findings by Verdin et al. (2005), Rossel and Homer (2007), and Rossel (2011) (mentioned above) which showed decreasing *belg* rains, increasing rainfall variability and intensity, delayed start times and more clearly defined rainfall periods (see Chapter 6 for more detail). In addition, trends in rainfall change were identified which lend further legitimacy to the accounts of farmers from the field sites. These include findings that the *belg* rains are generally more variable than *kiremt* rains and the identification of positive rates of change (with time) for rainfall intensity, as one moves from west to east in the highlands (Bewket & Conway 2007), and a similar positive rate of change (with time) showing a decreasing trend in *belg* rainfall, as ones moves north, through the highlands (Rosell 2011).

As such, while this study's use of farmers' accounts does not provide definitive evidence of environmental change or variability, a comparison of those accounts with studies of station data from the area, leaves us with no reason to disbelieve them. In fact, trends from studies with suitable resolution (temporally and spatially) support the accounts of farmers. Such an approach also fits with general sentiment from authors working on rainfall change in Ethiopia, who see no reason to disregard the accounts of farmers in their descriptions of changes in rainfall (Bewket & Conway 2007, Meze-Hausken 2004).

Finally, in defence of the method used in this study, even if one disregards farmer's accounts of the changing environment, there can be no doubt that during the study period farmers were experiencing significant levels of climate-related, environmental stress, in the form of drought – which had lasted for the last three to five years. This case can safely be made as the conditions were observed by the researcher, documented by news agencies (British Broadcasting Corporation 2009) and confirmed by government (Pers. Comms.:

Fissha 2009) and aid officials (Pers. Comms.: Zouterwelle & Alemu 2009). As an analogy such stress (whether caused by patterns of longer term change or shorter term variability) serve as a powerful analogy for understanding the potential future impacts of anthropogenic climate change. This is the case both because many climate change impacts (such as increasingly severe and intense droughts) are mimicked by variability and because increased variability is thought to be an important impact of future climate change (Fischer et al. 2005, Boko et al. 2007, Stern 2007).

As such I argue that there are three reasons for using the accounts of farmers in this study. The first is that their accounts accord with the findings of secondary studies which, when conducted at an appropriate scale, suggest that the last fifteen to twenty-five years has seen an increasingly adverse rainfall regime for the types of agricultural production which dominate northern Ethiopia. The second is that, even if such accounts are incorrect (which is possible given the highly variable rainfall of the highlands) during the study period the author was able to witness a contemporary drought which aid agencies and government officials reported had been in operation for the last three to five years. Both this short term variability and the longer term patterns of change resemble the types of environmental stress thought likely to accompany anthropogenic climate change and are therefore informative of the likely relationship between mobility and anthropogenic climate change. Finally, even if the changes in livelihoods are attributable solely to non-environmental factors, the fact that farmers attribute such changes to environmental change, that such changes mimic those expected as a result of anthropogenic climate change and that it is farmers who migrate, means that the dynamics described in migrant accounts of their mobility are applicable to understanding how mobility might present as a response to the environmental stresses thought likely to result from anthropogenic climate change.

With the above in mind (given that there was no other data available for this study)

one should be wary of trying to do to much with the findings of this thesis. Such caution would include expecting too much predictive power from this work. Given the complexities of distinguishing variability from change, if this work has documented the impacts of environmental variability as a means for understanding the impacts of change (as might be the case due to the use of farmers accounts of change) then we should be wary of assuming a linear relationship between human mobility and environmental change (Morrissey 2009). Additionally it would certainly not be possible, given the methodologies employed here, to quantify the findings from this work, placing them in a econometric-type model to understand the relative role of environmental vs. other variables[26].

Notably these problems are not thought to be too severe. This is because the findings of this work suggest that the nature of the relationship between environmental and non-environmental variables in mobility decisions means that it will likely prove impossible to model the relationship in any detailed fashion (see Chapter 10). Secondly, given that human-environment systems represent highly complex systems, the critique that we should not focus on the predictive power of the study holds in all studies of complex systems, where it becomes incredibly problematic to try and forecast future events, based on passed ones, particularly in a context of change.

The final major limitation of this work pertains to the sampling methods that were used. Potential biases in convenience sampling and snowballing cannot be fully accounted for by efforts at purposive sampling. The potential for bias was likely largest in the urban areas where looking in certain parts of the towns and snowballing might have resulted in over-representation of certain groups.

Such sampling problems raise two issues. The first is that the sample is not strictly representative and thus one should not read statistical significance into the work. In practice

26 Notably this work suggests that due to the nature of the relationship between different variable such an econometric type approach would probably be of only limited use, even if one had good quality quantifiable data (see Chapter 7).

this means that findings of some portion of respondents, citing some form of environmental connection with their decision to move should in no way be thought of as constituting a representation of the overall relevance of environmental factors in people's mobility decisions. The second issue is that in reading this work one should be wary of assuming that all the details of how environmental change affects mobility decisions in northern Ethiopia are covered by this thesis. This is the case both due to space limitations in the thesis and due to the fact that selective sampling might have left out particular groups altogether.

With the above in mind it should be said that this work makes no attempt to speak on the statistical significance of different environmental factors in people's mobility decisions. Regarding the relevance of the study to predictions and extrapolations, the sorts of limitations described above mean that only the most tentative of claims are ever made. Instead the focus of the study remains on characterising the interactions between environmental and non-environmental factors shaping migration. The most controversial point of the study may be the occasional use of some quantitative accounts, based on a poor sampling method. In this regard, the study occasionally makes reference to 'common' accounts, or narratives, from farmers and/or migrants. In such cases the notion of a 'common account' is not meant to suggest that these interactions are in some way more important than others. Rather it is simply to point out that they are not isolated. In the vast majority of cases however the focus has been on finding accounts of interactions between environmental and non-environmental factors which are illustrative of more generalisable characteristics.

Having described the limitations of the study I turn now to the final section of the chapter which details the practical considerations and ethical concerns involved in doing field work of this sort.

Considerations and Ethical Concerns

As with any observation of the world bias, both in terms of what we choose to explore (Weber 1994, Taylor 1994) and what we uncover through our explorations (Weisstein 1994, Stanley & Wise 1983), is a problem inherent in the undertaking. While, in certain exploratory enterprises this bias might be minimised through efforts at double-blind assessment, such an approach is simply not possible in an exploratory, qualitative study of this nature. As such, in the interest of transparency, and as a means to better situate the findings of this research it is necessary to undertake some discussion of the context in which this research was undertaken. This a process is thought useful not only for the reader, in that she may more effectively contextualise the work (Stanley & Wise 1983), but also for the researcher who is better able to interrogate their findings through reflections on their positionality in the fieldwork, which enables space for an apprehension of the tacit values which influence both what they explore, and what they find in those explorations (Nagel 1994).

In a qualitative study, reliant on interview methodologies and participant observation, the positionality of the researcher is central in determining the information to which she is afforded access. In this regard the researcher should not be understood as some external observer of the research subject, but rather as a social actor with their own identity and personality which shapes both the information they are able to access and the manner in which they understand it (Wilson 1993, Rubin & Rubin 2005). In this study there can be no doubt that the researcher occupied a particular position in the context of fieldwork. As a young, white male undertaking fieldwork in a deeply patriarchal society, where the political system is (for the most part) organised along ethnic and linguistic lines (see chapter 5), my status varied between clear outsider and visitor. Such a stark difference between me and the

people whose lives I was hoping to understand no doubt impacted on both what information I was afforded access to, and how that access was afforded.

Overt problems in this regard pertained to rural respondents possibly believing that I was an international donor undertaking some assessment on which I would base some form of social safety-net programme. Such a dynamic was illustrated by some respondents who, having fully consented to the interview, would be unwilling to engage with my interview questions, instead answering every question with an expression of their position of material impoverishment. Similarly, in urban interviews it was clear that I was frequently mistaken for some contractor with an offer of work. In this regard some respondents, again after consenting to the interview, would answer questions with the hope of increasing their chances for attaining work.

While such instances represent clear cases in which my access to important information might have been compromised, the expression of such information also formed an important context in which I might better understand the local situation. With the above in mind, it should be acknowledged that in a fashion similar to that described by Katz (1994), in her reflections on fieldwork in the Sudan, that while the dynamics described above impacted on my project in multiple ways (both subtle and obvious), which were too complex to fully appreciate, they did not appear to impede my project in a way which could be understood as leaving the project impossible (Katz 1994).

In reflecting on my positionality, two further points are worth mentioning. The first is that while it would be impossible for me to achieve the position of insider, I did go to some lengths to make my social differences less conspicuous (Apentiik & Parpart 2006). Such activities included dressing in a materially conservative manner (Apentiik & Parpart 2006, Momsen 2006, Scheyvens, Nowak & Scheyvens 2003), travelling on local transport, eating in local eateries (Apentiik & Parpart 2006, Scheyvens, Nowak & Scheyvens 2003), learning

enough of the local languages (Tigrinya and Amharic) to allow me to engage in local pleasantries and even follow the general tenor of my interviews (Apentiik & Parpart 2006, Hoddinott 1993), distancing myself as much as possible from government (Momsen 2006, Scheyvens, Nowak & Scheyvens 2003) and aid projects and being generally considerate – helping where I could (tending children, fetching farming implements etc.) – and creating 'comfort zones' (Apentiik & Parpart 2006). While such activities did not undermine the degree to which my position in the community was socially distinct it was clear that such actions did undermine some of the social barriers. Evidence of this tended to come from being included in the communities collective prayers for rainfall and through comments farmers would make as I passed them repeatedly on the paths crossing the field site. Such comments included statements like:

> *"He is learning this place well.",*
> *"He is becoming one of us."* and
> *"It is like he is from here*."

The second point worth mentioning is that while in some cases such positionality clearly limited the information to which I was afforded access, in other cases it appeared to afford me particular access (Scheyvens &Leslie 2000). One such case was that of an elderly man decrying the degree of corruption in local-level politics, which he claimed was dominated by opportunist incentives, operating through patronage networks. At some point during the interview his son, who was also sitting with him, covered his father's mouth with his hands, warning him of the potential recriminations of his words. The old man then pushed away his son's hands expressing that the things he was saying needed to be communicated and that people should know about such things. In such a case it is clear that my particular position as outsider, capable of broadcasting the situation in the community to a broader audience, resulted in my access to particular accounts of the political system.

While perceptions of me in the field had clear implications for the fieldwork, it is also true that my translator and field assistant's social identity also had impacts on the character, form and content of the fieldwork and interviews (Leslie & Storey 2003, Twyman, Morrison & Sporton 1999). If it was difficult to account for the importance of my own position in the field it is impossible to fully account for the manner in which my choice of translator and field assistant affected the work. As such it is worth describing the different assistants that I had. Three different field assistants were used. Two were teachers and one was a graduate student. All had a backgrounds in one of geography, economics and agriculture. As such they were able to grapple with the research projects' question in insightful ways. All were relatively local and while they too were certainly outside of the rural and small urban communities that were being researched, there was often social overlap so that some people that were interviewed had previously been students of the teachers or had attended school with my graduate research assistant. Thus, while my choices of translators from outside some of the field sites (local translators were not available in many of the field sites) no doubt curtailed some of the information I was afforded access to, their position as teachers and graduates conferred upon them an element of respect in societies where education is highly valued. Similarly, particularly in the case of the teachers, their teaching skills meant that they were able to engage with the interview respondents in ways which allowed complex concepts to be simply explained.

While reflecting on the positionality of translators in the fieldwork it is also worth briefly discussing the implications of translation for the research project. Post-modern writing on translation suggests that the choice of verb 'translate' is misleading in the research context. In this regard Burja (2006) points out that translators, instead of being passive conveyors of knowledge, actually constitute active participants in the research process and make important judgements about what information is conveyed. As a result what is

commonly thought of as passive translation might actually constitute an active transformation of the messages that are being conveyed (Burja 2006). Twyman et al (1999), making an even bolder critique of the constructed translator-as-passive-conveyor-of-information, makes the argument that instead of providing a copy of what was said by the respondent, the translator ends up creating a new conversation (Twyman, Morrison & Sporton 1999).

In this regard, my employment of field assistants was openly embracing of their roles as interpreters more than as translators. It was common for me to explain to my field assistant the piece of information that I was enquiring about and then rely on them to try and ask a suitably worded question that would make my enquiry intelligible to the respondent. In such cases not only was my field assistant amending my enquiry so that it became a meaningful question, he was also interpreting more subtle cues about whether sensitive questions might be appropriate, whether some unresolved issue in the interview was worth persisting with and a host of other issues. In fact on many occasions I would ask for my field assistants point of view on such delicate social matters and while I was recruiting them for the job would include questions about their ability to perform this task. Notably, given the context of my limited integration into the community and my limited ability in the local languages, I don't feel that any of this compromised the research that I was undertaking. In fact, in many ways it enhanced it. One might argue that such an approach distances the researcher from the interview respondents. This, I would say, is correct. However I don't think, in the findings that I claim in this work, that such distance invalidates the research process.

Mention, above, of the need for translators to highlight discomfort amongst respondents, and earlier mention of respondents potentially misconstruing the purpose of my research, raises the issue of informed consent among the respondents (Wilson 1993). During

the work, written consent was not sought from interview respondents. This was the result of concern both about the relevance of such a form of consent in the research context (particularly in the rural areas where literacy rates are alarmingly low), and about the manner in which such a form of consent might suggest formal affiliations which, in the current political climate in Ethiopia, could undermine respondents willingness to speak openly about both the state of their livelihoods and experiences of mobility. Instead, verbal consent was sought, with my translators being intensively briefed on the importance of explaining to respondents what the research was about, ensuring their agreement to be interviewed and explaining that respondents could, without consequence, refuse either the entire interview or to answer any individual questions. Additionally it was laboured that respondents should be made aware of the fact that once the interview had begun they could leave it at any point, again without consequence, should they wish to do so.

In addition to ensuring that respondents were consenting to the interview, because of occasions where it seemed that respondents might not seem clear about my purpose for requesting an interview, I made sure that my field assistants knew to tell me if they thought the respondent appeared in any way uncomfortable with the questions being asked or with the interview altogether. Similarly in the interview, if I noticed what I thought was discomfort, I would enquire with my field assistant for their view on the matter. In such cases where discomfort was evident, I would get my assistant to reiterate that there was no consequence to respondents terminating the interview. In cases where it appeared obvious that distress levels were high and that respondents would not believe that they could stop the interview, between myself and my field assistant we would seek to terminate the interview while letting the respondent think that the process had simply run its course.

The final element pertaining to ethical considerations about the field work relates to its potentially extractive elements. Massive power imbalances, both material and social,

between myself and the people I was observing makes acute the potential problems of differential rewards from the process of the research. In this regard, the thesis will afford me the qualification of D.Phil, a qualification of value for which there is unlikely to be an equivalent amongst interview respondents (Scheyvens, Nowak & Scheyvens 2003).

This is not to say however that there are no benefits to being part of such a study. The questions contained in the semi-structured interviews forced respondents to consider the structures shaping their lives and governing access to the resources upon which their livelihoods were founded. This was thought to be an important process for its potentially conscientisizing and self-actualising effects. Such sentiment was occasionally shared in interviews – particularly on questions pertaining to root causes of poverty and inequality – causing respondents to pause and think about a question. In some instances respondents would, with apparent relish, acknowledge that this was a 'good question' prior to proffering an explanation.

Related to issues of self-actualisation and concientisisation, is the degree to which participation in the study allowed respondents to give voice to their marginalised world view and express many of their problems. On numerous occasions respondents would insist, at the end of an interview, that I make sure that people in government hear about their concerns or that I go and tell people about life in their town or community.

Regardless of these potential benefits of participation in the study, negotiating the issues of inequality and potential exploitation are not easy. The approach taken in this work was to try and account for levels of material impoverishment by ensuring that the work make its focus the improvement of livelihood security among both rural farmers, impoverished urban inhabitants and rural-urban migrants. From here it is hoped that the work will make its way into the public domain, making the case for vulnerability reduction in a context of potential future climate change. To some extent this process has already begun as I have

presented my work at numerous conferences and seminars, as well as producing a book chapter summarising the findings of the thesis. I have also found employment in which the findings of my thesis will be taken forward into a MacArthur Foundation-funded study on the relationships between environmental change and human mobility. Beyond this I intend to follow the advise of Wilson (1993) and make a copy of my thesis available in the local libraries, in the towns in which I conducted research, while also sending copies to all the individuals at institutions where the research was conducted.

Finally as regards lending voice to interview respondents world view, I have already taken accounts of the unique fashion in which environmental stress, in particular socio-economic contexts, is generating vulnerability to staff at both governmental and non-governmental organisations, operating in Ethiopia. Officials expressed surprise at my findings and described that they would act to alleviate the conditions of acute food insecurity which were present, particularly in Ahuntegegne.

Conclusion

This chapter focussed on motivating for the use of an analogous study as a means for understanding the impacts of climate on patterns of human mobility. Having done so, it sought to enrich the context provided by the previous chapter's description of the literature on environmental refugees by detailing a host of studies which have provided analogies to the experience of environmental stress/change and the manner in which mobility was pursued as a response. From such a context it was argued that an explicit area of concern for this study should be on characterising the interactions between environmental and non-environmental factors and the manner in which these shape mobility decisions.

Having provided the rationale for the study, this chapter set about describing both the

methods and analytical tools that would be employed in the study. Having done so the work focussed on introducing the field sites as particularly useful analogies. To do so the chapter described the impacts thought likely to affect sub-Saharan Africa, before describing the analogous conditions in the field sites as water stress, reduced soil productivity and reduced access to arable land.

The chapter closed by looking at the limitations of the work and by a discussion of the ethical considerations in the research context. Notable limitations included a limited ability to feed the findings into quantitative models or make statistical inferences based on the data. Ethical considerations pertained to the degree to which the research from the field site might be presented as 'truth', and how to negotiate the power imbalances between the researcher and the study participants, in a context of a D.Phil project focussed on materially impoverished farmers, migrants and urban inhabitants.

At numerous points in this chapter, particularly when introducing the field sites, reference has been made to historical processes in Ethiopia which have both shaped decisions about where to conduct the research and how to interpret the study findings. As such the following chapter seeks to describe the history of modern Ethiopia, documenting processes of socio-political and economic change from the late 19th century up to the present.

5

ETHIOPIA: A CONTEXT AND INTRODUCTION

The purpose of this chapter is to briefly introduce the research site by providing an account of the relevant political history necessary to contextualise the socio-political and economic features which will be discussed later in this work. Most notably the chapter is aimed at providing a context in which to understand the contemporary organisation of power in Ethiopia and what this means for access to resources, livelihood security, livelihood strategies and mobility decisions in the study sites. In addition the chapter will detail the changing land law in the country, a feature which has been crucial in shaping issues of access, livelihood security and thus mobility decisions in a context of environmental stress.

The chapter begins with a description of Ethiopia's modern history, going back as far as Italian involvement in the Horn in the late 19th century. In so doing the chapter details the colonial experience in Eritrea, the Italian occupation of Ethiopia, the fall of the Imperial regime and subsequent rise and fall of the military, socialist *Derg*. The chapter then goes on to describe Ethiopia's post-1991 political context focussing on electoral conduct in the country and the degree to which a liberal façade has concealed what remains a centralised authoritarian form of government. The chapter closes with an account of how the contemporary political climate in Ethiopia manifests at the local level, before going on to detail the changing land law in the country.

Changing Regimes in Modern Ethiopia

Unlike the large majority of African nations, Ethiopia had only a brief experience of colonial

occupation under fascist-Italy. Both preceding and following occupation, Ethiopia's modern history has been characterised by the rule of the Solomonistic Dynasty. Notable in the period after Italian occupation however, was the fall of this dynasty as well as the rise and fall of Soviet-style socialism. Despite the brief role played by the Italians in all this, their presence in, what is today, Eritrea was important in shaping the relations between Eritrea and Ethiopia which, to this day, have important impacts on the internal politics of Ethiopia – particularly in the north of the country. As such this account of relevant features of Ethiopia's modern history begins with a description of the Italian involvement in the Horn.

Italian presence in the Horn reaches as far back as the late 19th century when Italian expansion into Eritrea lead to the territory being granted as a colony in 1889. Further expansion into Ethiopian territory was halted by defeat at the hands of Russian-backed Ethiopian forces at the battle of Adwa in 1896. In the same year, however, Italy's right to the colony of Eritrea was recognised by the signing of the Addis Ababa treaty, which abrogated a previous contentious treaty, and guaranteed Italian recognition of Ethiopian independence. Notable in the Addis Ababa treaty was that the delineation of the exact boundary between Ethiopia and Eritrea was deferred to some point in the future (Zewde 2001).

Under Mussolini, renewed Italian expansionism breached the Addis Ababa treaty leading to Italian encroachment, beginning in 1934. With the global powers, Britain and France, fearful of pushing Italy to align with Germany in the run-up to the Second World War, the global community ignored Italy's expansion and occupation of Ethiopia (by this time a member of the League of Nations). Emboldened by the lack of a response, Italy crossed into Ethiopia in 1935 and, following persistent lethargy from the British and the French, took Addis Ababa in 1936. In response the Ethiopian Emperor, Hailie Selassie, fled the country, seeking exile in Britain, while popular resistance movements sprung up in Ethiopia.

When Italy sided with Germany and entered World War II, Britain came to see Italy's presence in Africa as a threat to its own North African interests. As a result, the British launched attacks from the Sudan and Kenya, expelling the Italians from Eritrea and Somaliland, eventually capturing Addis Ababa in April 1941. By May of the same year the Emperor Haile Selassie had returned to Addis Ababa where he regained the Ethiopian throne (Zewde 2001). During The War Britain nominally recognised the free and independent status of Ethiopia but maintained a presence as an interim-type of government until 1944, when it returned most of Ethiopia's sovereign powers. In 1948 the issue of what to do with the Italian colonies after The War was turned over to the UN, where a federal solution saw Eritrea unified with Ethiopia.

By 1961 Ethiopian annexationist aspirations, combined with Eritrea's own flawed democratic institutions and particular socio-economic structure, had undermined the autonomous mechanisms set up in Eritrea by the Federal Act of 1952 (Zewde 2001, Hiwet 1975). In such a context the perceived social and economic marginalisation of Eritrea in the name of Ethiopian interests spawned the first resistance movements in Eritrea, notably organised in opposition to rule from Addis Ababa.

Resistance in Eritrea was buttressed by growing discontent in the rest of Ethiopia, with Hailie Selassie's increasing levels of autocracy. A failed *coup d'etat* in 1960 sparked more popular opposition, fermented over issues of: excessive appropriation, high land tax and economic and cultural marginalisation. As such the imperial regime came under pressure from students, peasants and separatist movements around the country (Zewde 2001, Hiwet 1975).

Lead by a Marxist-inspired student movement which called for the redistribution of 'land to the tiller' and the right of peoples to self determination, a combination of drought, famine, (OPEC-oil-crisis-driven) inflation and dissatisfaction with wealth inequalities

resulted in a groundswell of popular unrest, directed at the downfall of the Imperial regime. Alliances between civil servants and the public compromised the Ethiopian states' historic ability to stifle opposition. Eventually, organisation among the military lead to the setting up of the *Derg* (Amharic for 'committee'), who, through a portrayal of the Emperor as callous to the needs of the impoverished rural and urban poor, deposed the Emperor in September 1974 (Zewde 2001).

As a means to win popular support and enhance its legitimacy the military *Derg* located itself in the rhetoric of the Left, espousing an ideology of home grown socialism, founded on the popular support generated by the student-lead protests. While the iconic element of this policy was the radical reforms to land ownership that took place in 1975 (see below for more detail), the policy also resulted in the nationalisation of financial institutions as well as private commercial and industrial enterprise. While such reforms were lauded by the *Derg* as proof of their revolutionary credentials, much of their effect was to centralise power, which ironically presented strong parallels with the previous Imperial regime, against which its claims to 'revolution' were situated. (Clapham 1988).

In addition to internal changes, Ethiopia's move to the Left also generated an international response. Most notably, it lead to the withdrawal of the U.S. support which had been cultivated by Hailie Selassie as a means to counter the British influence in the post-War period. This waning of U.S. support culminated in the U.S. abandoning Ethiopia in 1977 when Somalia's Siad Barre initiated an irredentist war in the Ogaden. The response from the Soviets was to similarly switch allegiances, dumping the Somalis for the Ethiopians whom they saw as a more genuine approximation of a Marxist-Leninist ideal (Zewde 2001).

By 1978 the separatist intentions in the Somali Ogaden had been effectively crushed by the Ethiopian State. Notably, however, separatist movements in the rest of the country were not so easily quelled. The Eritrean People's Liberation Front (EPLF), formed in

response to the Hailie Selassie's attempts at incorporating Eritrea into Ethiopia, found its desires for independence bolstered by the *Derg's* heavy handed, repressive tactics. Similarly, the Tigray People's Liberation Front (TPLF) was born in 1975 in resistance to the centralising tactics of the *Derg* ,which were seen as the continuation of a long-standing process of economic, social and cultural marginalisation of the Tigrayan people (Zewde 2001). Notable in the rise of the TPLF was their connection to the radical student movement of the revolution. As such their organisational structure was deeply infused with ideological content purporting a Leninist rhetoric of self-determination, including the right to secession (Zewde 2001).

Towards the end of the Cold War, the impending collapse of the Soviet Union meant the withdrawal of Soviet funding to the *Derg* regime. Such problems were compounded by the effective guerilla movements of the TPLF and EPLF, in the north of the country, and by the drought of 1984-85 which had undermined the credibility of the *Derg* regime. As the economic situation worsened the EPLF and TPLF scored a number of important victories. Military hardware fell into their hands and they took important urban centres. As the TPLF successfully took towns and moved south it found itself embroiled in the liberation of the entire country and not simply the region of Tigray. From this position was born the coalition group, the Ethiopian People's Revolutionary Democratic Front (EPRDF) which, although composed of numerous groups from around the country, was dominated by the TPLF (Zewde 2001).

When the EPLF took Asmara and the coast, with the TPLF controlling the interior, Mengistu found his supply lines cut off. He eventually fled Addis (via Nairobi) to Harare on the 21st of May 1991. By the 24th of May the EPLF had entered Asmara, and on the 28th the EPRDF took Addis Ababa. In the same year the Transitional Government of Ethiopia was put in place, ruling via the Transition Period Charter of Ethiopia. In 1993, U.S. negotiated

talks lead to a UN-observed referendum which granted independence to Eritrea with Isaias Afwerki (the founder of the EPLF) being elected President. Ethiopia adopted a new constitution in 1994, paving the way for elections in which Meles Zenawi (the former chairman of the TPLF) won the Prime Ministerial race in 1994.

Post-1991: Democratic Reform or Persistent Authoritarianism?

From the above account it should be noted that, in 1991, the EPRDF inherited a state apparatus organised around a centralised and authoritarian distribution of power, founded on the ruins of a command economy (Vaughan & Tronvoll 2003). With the EPRDF running on a platform of development (material and economic, as well as political 'progress') and peace, the immediate response was to undertake major reforms aimed at ensuring human rights and decentralising power. To this end constitutional amendments were made which afforded explicit rights to individuals and institutionalised a democratic and federal model of government. Such actions have been described by commentators as heralding a new paradigm of multi-party democracy, constitutionalism and human rights protection in Ethiopia (Henze 1998, Tronvoll 2000). Notably, however such ostensible changes have not clearly and simply manifest in concrete changes in the lived experience of people in Ethiopia (Vaughan & Tronvoll 2003, Tronvoll 2009).

In this regard, while constitutional amendments have been made to ensure the rights of women and minorities, and while the EPRDF, in its fight against the Derg, endorsed the separate organisation of women; both women and other minority groups remain on the margins of Ethiopian society (Vaughan & Tronvoll 2003). As such women have seen little advancement into positions of political influence and men continue to dominate Ethiopian public life in Ethiopia. With this in mind Vaughan and Tronvoll (2003) have concluded that

the EPRDF's focus on women has been a by-product of attempts at enhancing the class struggle with women's empowerment and emancipation having never been viewed as legitimate goals in their own right (Vaughan & Tronvoll 2003).

Similarly while minority groups are likely less marginalised today than they have ever been before, a number of occupational, or clan, minorities (within ethnic groups) continue to be marginalised, despised, and disadvantaged, with their political representation subsumed within the wider ethnic group. In this regard Vaughan and Tronvoll (2003) note that "such stigmatised groups...are unlikely to secure representation in a 'first past the post' (or 'plurality-majority') electoral system, and remain largely excluded from the local socio-political arenae" (Vaughan & Tronvoll 2003: 21).

Similar limitations in the realisation of constitutional amendments have been echoed in commentaries on Ethiopia's reconstruction as a federal state. The origins of Ethiopia's federal state model, lie both in the ideological views of the EPRDF and in Ethiopia's political reality of strong centrifugal forces, particularly in 1991 (Habtu 2003). As a result Ethiopia's federal model emphasises ethnic equality and autonomy, drawing the boundaries of the federal territories along broad ethnic (linguistic) lines – generating the notion of 'ethnic federalism' as a means to describe Ethiopia's political formation. In this process, nine territories[27] and two city[28] regions have been created with each territory being endowed with constitutionally-enshrined rights to autonomy and secession (Devereux, Sharp & Amare ND).

In practice however such a highly autonomous model is compromised with "most commentators ... now agree[ing] that the attainment of secession has been constitutionally circumscribed in ways as to render its achievement exceptionally difficult" (Vaughan & Tronvoll 2003: 83). This has lead to parallels being drawn with the Marxist-Leninist regimes

27 The nine regions are: Afar, Amhara, Benishangul-Gumuz, Gambela, Harari, Oromia, Somali, Southern Nations, Nationalities, and People's (SNNP), Tigray (See map pg. ix)
28 The two cities were: Addis Ababa and Dire Dawa (See map pg. ix)

of Russia and Eastern Europe where rights to autonomy were offered as a means to gain support for the revolution after which effective measures would be taken to ensure those rights could not be exercised (Vaughan & Tronvoll 2003, Habtu 2003, Alemayehu 2004).

While the lived experience in Ethiopia suggests that individual rights and regional autonomy have not been fully realised, despite constitutional provisions, the clearest (and best studied) indictment of Ethiopia's attempted transition from centralised autocracy to participatory democracy comes from an exploration of the elections which took place in the country in 1992, 1995, 2000, 2005 and 2010.

In pursuit of a democratic transition after 1991, Ethiopia's new constitution institutionalised "multi-party competitive election to representative office, the formal separation of the powers of legislature, executive, and judiciary, and ... a raft of international legal instruments related to human, economic, civil, and political rights" (Vaughan & Tronvoll 2003: 27). Reflecting on this, while it seems, from the discomfort such measures caused among party cadres, that such efforts were genuine (Vaughan & Tronvoll 2003), an examination of the electoral conduct of the EPRDF is revealing of how centralised, authoritarian power has been maintained in Ethiopia.

The local elections in 1992 took place in a context of fear and uncertainty after the Oromo Liberation Front (OLF), citing increasing EPRDF domination and the curtailment of political space in the lead up to the elections, withdrew from the TGE, sparking a mini-civil war in the south-east of the country. The result was the outlawing of the OLF and the detention of 19 000 Oromo. As clashes took place across the country, election observers were removed and the election process was described as marred by irregularities, with the post-election period being marked by political crackdowns (Tronvoll 2009)

In such a climate the main opposition persisted with their boycott during the 1995 federal elections (Lyons 1996) and it is generally appreciated that the political space

remained closed with EPRDF rule seen as falling short of democratic standards, despite cosmetic changes to its codes of conduct (Harbeson 1998).

During the 2000 federal elections the opposition ended its strategy of non-engagement, providing voters, for the first time, with concrete alternatives to the incumbent EPRDF and its affiliated parties. However, in the shadow of the Ethio-Eritrean conflict (see below) and due to poor organisational capacities and voter harassment and intimidation, the opposition, across the majority of the country, did not pose a real electoral threat to the EPRDF party structure (Tronvoll 2009, Aalen 2002).

Despite the problematic political atmosphere of the elections in 2000, the process did show some positive signs including an increased amount of openness in Addis Ababa and victories for opposition parties in rural parts of the south of the country (Tronvoll 2001). That said, it was not until the 2005 election that a radical change in democratic conduct could really be observed (Tronvoll 2009, Abbink 2006). In this regard, "the electorate witnessed an unprecedented context of openness and plurality of political opinions through campaigning and ... [the] public media" (Tronvoll 2009: 454-455). Such a context presented a sharp contrast to the brutality of the *Derg* and, most remarkably, provided the first true challenge to the incumbent party, through organised opposition and actions at the ballot box. The result was that opposition parties, the United Ethiopian Democratic Front (UEDF) and the Coalition for Unity and Democracy (CUD), ended up pushing the EPRDF at the polls. Such a result was achieved from a platform of popular disillusionment with the development achievements and economic progress in the country, since 1991, as well as around the fall-out of the Ethio-Eritrean war of 1998-2000. The effects of this latter conflict were particularly important in shaping the outcome of the election, and thus the response of the government and the subsequent political climate in Ethiopia (Vaughan & Tronvoll 2003, Tronvoll 2009). As such some effort is dedicated here to its description.

The Ethio-Eritrean conflict

The start of the conflict between Ethiopia and, newly independent, Eritrea is usually identified as being as early as 1996, when disagreement over economic development priorities and the correct valuation of the new Eritrean currency (the *Nakfa*), exacerbated old (liberation struggle) rifts between the EPLF and TPLF (Zewde 2001, Abbay 2004, Gilkes & Plaut 1999, Negash 2000). By 2008 the dispute had resulted in the closure of the border which, in turn, sparked conflict over the border's exact location (an artefact of the Addis Ababa Treaty, described above) and the expulsion of both ethnic Ethiopians and Eritreans from countries in which they were not deemed nationals.

Conflict between the two countries revolved around control of the symbolic town of Badme which was marched upon, and taken, by Eritrean troops in May 1998. Fighting escalated rapidly between the two countries with air raids on civilian populations garnering the rapid attention of the international mediators (International Crisis Group 2003). After Ethiopia took Badme in 1999, a ceasefire was signed in 2000, with a Border Commission having been set up to delineate the exact location of the border. In 2002 the Commission ruled in favour of Eritrea, finding Badme to lie within its sovereign territory. Ethiopia's response was to reject the findings of the Commission and continue to occupy Eritrean territory in defiance of the ceasefire agreement it signed in 2000. At the time of writing, Ethiopia remained in occupation of Eritrean territory and the border between the two countries remained closed.

Although Ethiopia has managed to maintain control of the town of Badme, the impact of the conflict on Ethiopian politics has been significant. At the highest levels, Meles Zenawi came under pressure from factions in his own party regarding the manner in which

he dealt with the Eritrean situation. Despite the violence in the course of the conflict and Ethiopia's breaking of agreed moratoria on air strikes, there was pressure from hard-line TPLF members that he drop his relatively diplomatic approach and adopt a more aggressive military strategy (Tronvoll 2009, Tronvoll 2001). This disagreement lead to a power-struggle within the EPRDF culminating in the expulsion of dissenting individuals. In addition, members who had supported the dissenters were also expelled from the party. Notably these individuals included rank and file party members, leaders of coalition parties and war heroes.

The impact of the conflict with Eritrea and subsequent power battle within the EPRDF was two-fold. Firstly it compromised the legacy credentials of the TPLF leadership. By expelling TPLF hard-liners and war heroes, with close connections and significant levels of legitimacy in Tigray, the EPRDF ended up alienating what had previously been a taken-for-granted constituency (Tronvoll 2009, Aalen 2002). Additionally, the split in the EPRDF lead to a reorganising of the relations between the state and the party. To this end Meles sought to modify the role of party functionaries to make them accountable to the state apparatus and thereby preclude the future emergence of party factions operating outside the purview of the council of ministers (Vaughan & Tronvoll 2003). Such a tactic strengthened the powers of the political leadership under the government, but left the party with limited capacity to coerce or cajole support on the ground (Tronvoll 2009); an issue which was exacerbated by the alienation of voters in Tigray.

Secondly, as a necessary outcome of generating popular support for a hugely expensive war (in terms of both economic and human costs), in an impoverished country, the EPRDF was forced to play on a sense of Ethiopian nationalism. The outcome was to generate of a deep sense of pan-Ethiopianism, the popularity of which was evidenced by the manner in which Ethiopia's recapture of Badme, in 1999, was met with spontaneous celebrations in Addis Ababa (International Crisis Group 2003).

Ethiopia in the aftermath: Real opposition and a return to authoritarianism

In the run-up to the 2005 elections this pan-Ethiopain sentiment was capitalised upon, forming the basis for the CUD-UEDF[29], opposition-coalition, whose platform was a simultaneous rejection of ethnic federalism and the restoration of a proud Ethiopianness (Tronvoll 2009). In addition opposition groups pointed to the Eritrean conflict as evidence of the EPRDF government's failure to meet its own goals of ensuring peace and stability. Issues pertaining to the Eritrean conflict were also fused with popular discontent over a sense of lost Ethiopian unity and discontent at slow economic progress (Tronvoll 2009, Abbink 2006), in which the loss of Red Sea access was presented as a major developmental stumbling block. As such the CUD and EUDF opposition parties were able to effectively challenge the EPRDF at the polls[30], resulting in an about turn on the opening of political space that was apparent in the run-up to the elections.

Following the release of provisional results for the 2005 election, which showed that the opposition had only won 135 of the available 547 seats, there were immediate calls, from the opposition, for an investigation, claims of massive electoral fraud and anti-government protests in the capital. Despite the generally peaceful nature of these protests the government's response was to treat them as 'law and order problems' (Abbink 2006: 176), shutting down the press, expelling international journalists and arresting the top leadership of the CUD and charging them with treason and genocide (Tronvoll 2009, Abbink 2006, Ishiyama 2010). In the duration of the protests (June - November 2005) the extensive use of

29 Coalition for Unity and Democracy (CUD) and United Ethiopian Democratic Front (EUDF)

30 Initial results from the National Election Board of Ethiopia (NEBE) gave the EPRDF over 300 seats, although the opposition party was found to have won all 23 seats in Addis Ababa. The CUD and EUDF then cited massive fraud and demanded an investigation into nearly 300 district elections. Official results from NEBE for 307 of the 547 national parliamentary seats awarded 139 to the EPRDF, while the CUD and the UEDF won 93 and 42 respectively. Smaller parties and independent candidates (mostly EPRDF-affiliated) were awarded the remaining thirty-three seats (Ishiyama 2010).

the security forces meant that close to 200 protesters were killed (Tronvoll 2009) and 20 000 to 30 000 opposition supporters were arrested and detained for varying periods of time (Abbink 2006).

As such the openness of the 2005 election was shown to be hollow in the face of an actual challenge to the ruling party. Further evidence of this came from the fact that following a compromised investigation (Abbink 2006) into the election results, the government invited opposition parties to take up their seats in parliament, but only after changing the parliamentary procedures so that quorum for bringing new agenda items in The House now required a 51% majority (previously it had been 20%) (Abbink 2006). The result was the breaking of the opposition into three groups: those willing to take up their seats, those who continued to boycott parliament and those who were detained in prison (Ishiyama 2010).

In the context of formal provisions for democratic conduct this shift back to authoritarianism along with the existence of legislation which undermines effective democratic and constitutional processes, has resulted in claims that power in Ethiopia is founded in a dual system whereby formal democratic provisions are relatively meaningless, with vital political decisions being made in the informal sphere, impervious to what institutions like the parliament or the high court might say (Abbink 2006). Such claims have resulted in the Ethiopia's political system being described as a continuation of the centralised authoritarianism, which characterised both the imperial and *Derg* regimes (Vaughan & Tronvoll 2003, Tronvoll 2009, Abbink 2006). Understanding the reasons for Ethiopia's persistence in this authoritarian trend is vital if we are to understand where power is really located in the research context and why it is that access to basic goods, necessary for livelihood security, is structured in the way that it is. With this in mind the next section of this chapter goes about detailing ideas as to why such an authoritarian structure has persisted

in Ethiopia, despite formal democratic provisions aimed at countering it.

Explaining the persistence of authoritarianism

Explanations for Ethiopia's persistent authoritarianism lie in references to the (i) political culture, (ii) economic conditions in the country and (iii) the historical ideology among the EPRDF (Vaughan & Tronvoll 2003, Tronvoll 2009, Abbink 2006). In terms of (i) political culture, Abbink (2006) has been heavily criticised by Hagmann (2006) for using 'political culture' as a catch-all phrase for explaining the persistence of centralised authoritarianism in Ethiopia. In so doing Hagmann (2006) asks a pertinent question: can Ethiopia, with all its geographic, cultural and linguistic diversity, be accurately described as having a single political culture?

While acknowledging the relevance of such a critique it should be noted that reflections on political culture might not be totally irrelevant in Ethiopia. To this end Vaughan and Tronvoll (2003) provide a more nuanced account of 'political culture' which, while acknowledging that political cultures vary markedly across different ethnic groups, note that within Amhara and Tigrayan culture – the groups with the longest-standing association with power in the formal nation state – there is a well established tradition of socialisation which "emphasises a strict hierarchical understanding of society, where each member's socio-political position and status is clearly defined and understood " (Vaughan & Tronvoll 2003: 32). As such "social and political interaction and behaviour are guided by an elaborate set of norms and rules, which establish socio-political order on the basis of a rigid system of deference and sanction" (Vaughan & Tronvoll 2003: 32). On a similar note Tronvoll (1999) argues that cultural factors may play a role in undermining attempts at separating the powers of the party and the state. In this regard Tronvoll (1999) makes the

observation that in the Amharic language the state and the government are not separately defined, with both being captured by the single notion of *mengist*.

Arguing for the relevance of 'political culture' as an explanatory variable, Vaughan and Tronvoll (2003) claim that since the Ethiopian state has historically been associated with the Amhara/Tigrayan socio-political tradition, it is reasonable that such a culture provides the context for the formation of the dominant trends in the 'political culture' of contemporary Ethiopia. In the context of such an historic form of socialisation, it is argued that ascribing the failure to effectively democratise the relations of society to government policy alone, might be to overstate the role of government. For such historical understandings of power relations have generated a normalised tradition of top-down, centralised control. Regardless, such accounts certainly do have relevance for this study, where fieldwork was conducted in the Tigray and Amhara National Regional States.

Regarding (ii) economic conditions in Ethiopia, two important features have been identified in undermining a more substantive turn towards democratic practice. The first is the state's maintenance of all of the country's land (see below for a detailed account of the country's land law). This is hypothesised to have hamstrung the formation of an economically independent middle-class and active civil society, which could act as a countervailing force to the incumbent government's hegemony (Abbink 2006). The second is the related phenomenon of large discrepancies in private and public sector remuneration. This is hypothesised to have generated a clientelist politics of self-preservation in which power is clung to as a means for economic survival, with access to that power being highly centralised (Abbink 2006).

Finally, in terms of (iii) the historical ideology of the EPRDF, the ruling parties conception of 'revolutionary' as opposed to 'liberal', democracy, has been identified as important in undermining what the West might consider genuine democratic conduct

(Vaughan & Tronvoll 2003, Tronvoll 2009, Abbink 2006). According to Vaughan and Tronvoll (2003) 'revolutionary democracy' "is based on communal collective participation, and representation based on consensus" (Vaughan & Tronvoll 2003: 117). This take on the idealised form of political conduct explains the EPRDF's decision to maintain state ownership of all the country's land (see below) as it allows for the conceptualisation of the peasantry as equal in wealth, therefore homogeneous in viewpoint and thus in consensus about common needs, interests, and political outlook. As Vaughan and Tronvoll (2003) explain:

> "Political participation in these 'mass' terms presumes such commonality, which makes pluralism irrelevant. It does not rule out debate for the purpose of arriving at the information, clarification and persuasion required to reach consensus. Once consensus is achieved, however, the community speaks with one voice, and dissent is ruled out – or rather does not 'objectively' emerge since decisions are not made until consensus is achieved." (Vaughan & Tronvoll 2003: 117).

Notably, acknowledgement of this form of 'revolutionary democracy' and its implications vis-à-vis liberal democracy, also explain why the EPRDF government maintained the *Kebele* system implemented by the Derg as a means to undertake the land redistribution. For such administrators are the very representation of consensus.

Following the 2005 elections, this shift back to centralised authoritarianism has been evident in the conduct of the 2010 elections which, although not violent and indicating a victory for the EPRDF, were criticised on the grounds of voter intimidation, the abuse of the State press and a shrinking of the political space in their run-up. As a likely result, Ethiopia has also experienced ongoing tension in its federal states where there have been reports of torture and imprisonment in the Oromo regions (Human Rights Watch 2007). Similarly the government has been engaged in suppressing military activity in the Ogaden since 2007, with information on the conditions under which such suppression is taking place being hard

to come by.

With a better sense of the political sociology in Ethiopia, we have a context from which to explore the contemporary politics of the country. In this regard it is useful to describe both how such conditions play out in the international politics and, most importantly, what this all means for local level politics in terms of power, access and livelihood security.

Contemporary Politics: International and Local Contexts

Before describing the local political context in Ethiopia, it is necessary to briefly outline the contemporary international politics in which Ethiopia finds itself embroiled. This is especially important given the degree to which Ethiopia's economy is structured around international aid, particularly in the rural areas.

From an international perspective Ethiopia, with its large Christian population, is seen as an ally of the West in the 'War on Terror'. Such an alliance is particularly valued in the Horn where both Somalia and Eritrea have come to be seen as rogue states supporting Islamic fundamentalism, and where piracy is seen as an increasing problem in the Gulf of Aden. As such Ethiopia continues to receive large quantities of aid in spite of its poor democratic record, repressive governmental practices and failure to abide by the findings of the 2002 Border Commission (Hagmann 2006). The extent of Ethiopia's geopolitical importance to the West is highlighted by the recent WikiLeaks exposure of US diplomatic cables confirming that Ethiopia's invasion of Somalia in 2006 was backed by the U.S.A.

Relations between Eritrea and Ethiopia remain tense, and the border is still closed. This situation does not seem likely to resolve itself as Ethiopia's conduct towards Eritrea continues to be an important part of EPRDF and Ethiopian politics. At the same time,

Eritrea, having alienated itself from the formal international community by expelling the UN mission (due to their unwillingness to enforce the Border Commission (International Crisis Group 2005, International Crisis Group 2007)) appears to be moving away from formal diplomatic relations. Evidence of this is found in U.S. claims that Eritrea it supporting Islamic militants in Somalia, and the imposition of a UN- and AU-backed arms embargo on the country.

At a local level, in the post-2005 period the EPRDF has sought to make-up some of the ground which it lost in the wake of the 2001 rupture. The main approach has been to aggressively expand party membership (for example by tying any public sector work to party membership) resulting in an increase in party membership from 760,000 in 2005 to 4.5 million in 2008 (Tronvoll 2009). Additionally, obstacles to the formation of a vibrant civil society, as a means for checking government authority, have been generated by new legislation[31] (Tronvoll 2009).

While the details of exactly how power operates in the field sites will be discussed in Chapter 8, it is worth noting that the state presents as pervasive and powerful in contemporary northern Ethiopia. This is the product of both the state's retention of ownership of all lands and the maintenance of *kebele*/*werede* system. Ownership of, and the control of access to, land and its importance in agricultural livelihoods, enables the state to exert an enormous amount of power in the rural areas. Most of this power is mediated through the *kebele*/*wereda* system which remains responsible for all of the administrative functions of the state.

Regarding impacts at the local level, Vaughan and Tronvoll (2003) observe that Ethiopians are well aware of the extensive authority contained in the *kebele* political structure and thus in the state. In this regard farmers are well aware of the fact that they need to go through the *kebele* in order to attain the goods necessary for their basic survival. These

31 Such legislation pertains to Ethiopian NGOs not being allowed to receive international funding.

include, but are not limited to: jobs, health services, land rights, water rights, food aid, credit and rental property (Vaughan & Tronvoll 2003). Additionally, rural Ethiopians understand quite well the hierarchical and clientalist nature of party politics in the *kebele* system (Aalen 2002) and are well aware of the fact that individuals controlling these offices have been nominated for this position on the basis of their party membership. As such the power and pervasive nature of the state – in the form of the EPRDF – is remarkable, particularly in the north of the country.

In addition to the undemocratic nature of sudo-formal politics at the local level, informal power structures governing gender relations also appear to have resisted constitutional reform. In this regard gender roles in Ethiopia remain bound by established social and cultural norms, and while there is variation across ethnic and socio-economic groups, marriage and motherhood, to a large degree, tend to determine Ethiopian women's relationships to work, property, and public space, and define their status as political actors (Vaughan & Tronvoll 2003). Keeping this in mind school enrolment, which was focussed on under the *Derg*, has been expanded to include female students allowing for an important increase in the focus on schooling amongst women and girls (Vaughan & Tronvoll 2003).

The above account is thought to provide the reader with a suitable context from which to make sense of the findings that will be detailed in the subsequent chapter. That said, there remains, one aspect of the changing political and legislative landscape in Ethiopia which requires further detailing: changes to the land law.

The Changing Land Law in Ethiopia

Among agricultural livelihoods access to land is one of the defining features of livelihood security. Without access to one's own land, farmers are either forced to rent land, or be

entirely dependent on off-farm labour. Given the importance of land in agricultural livelihoods as well as the important role played by radical amendments to the land law in the country, the next section of this chapter goes about detailing changes in that law and describing the form of the law today.

Under imperial rule land ownership in Ethiopia was administered in a largely feudal manner (Brietzke 1976, Hoben 1973, Prouty & Rosenfeld 1994). Under the feudal system the relationship between tenants, heirs and owners took multiple forms (Hoben 1973) however the defining features of this relationship were high levels of inequality and significant taxation of tenants by owners. By the end of Italian occupation inequalities in land ownership had lead to mounting unrest in which attempts at palliative redistribution had proved reasonably ineffective until the overthrow of the Emperor in 1974 (see above) (Hoben 1973).

Radical reforms by the *Derg* confiscated all land that had previously been held by the monarchy and, under proclamation 31 of 1975, "Public ownership of Rural Lands", prohibited the private ownership of land as well as its transfer by sale, lease or mortgage (Holden & Yohannes 2002). It also outlawed the hiring of labour and acknowledged only usufruct rights (Holden & Yohannes 2002). A limit of 10 ha. was placed on farm sizes and landlords were only allowed to keep land if they were capable of its cultivation (Holden & Yohannes 2002).

The *Derg* set up *Peasant Associations* (PA) to carry out the administration of lands described under proclamation 31 of 1975 as well as the subsequent redistribution of land as would be necessary (Zewde 2001). Land holding was determined by household size which, to some extent, incentivised population growth. Periodic redistribution remained the case until the late 1980's when the instability of the Derg Regime and the increasing fractionalisation of land lead to a moratorium on all land redistributions in 1989 (Holden &

Yohannes 2002).

With the coming to power of the EPRDF the decision was taken to maintain the State's ownership of land, as well as the *PA*/*Kebele* as the means for its administration (Constitution of Ethiopia 1994). In 1991 the government broke the 1989 moratorium of the *Derg* with another wide ranging redistribution of land in Tigray and Amhara (Admassie 2001). Following this the government undertook redistributions of land in 1993 and 1994, to provide land to soldiers returning to their communities, as well as a one off redistribution in Amhara, in 1997 (Holden & Yohannes 2002). The government now says that there will be no further major redistributions of land in the country.

Changes to the land law accompanying the fall of the Derg, include a right amongst the peasantry for anyone to attain land without payment, and for peasants to be entitled to compensation for investments they have made in the land, should it be appropriated for any reason (Constitution of Ethiopia 1994). Notably the former of these constitutional rights is not, and could not, be implemented as demographic pressures and previous land policies have left land holdings too small to allow for a further redistribution (Elias & Fentaye 2000, Admassie 2001). The most notable changes under the new constitution however include (i) the right for women and men to own land, regardless of their martial status and (ii) for peasants to maintain access to their usufruct rights while leasing their land to other individuals (essentially re-establishing traditional share cropping practices) (Admassie 2001). The government also maintains the right to grant land to private investors (Constitution of Ethiopia 1994).

With the above legislation in mind it should be appreciated that land is now accessed in five principal ways in northern Ethiopia. The first, and most obvious, pertains to those individuals who received land at the final partition in 1991, 1993 and 1994. The second is via rental agreements in which people work the land of someone else in return for a share of

the crop. Given the problems of ensuring contracts it is should be noted that the rental agreements do not represent a free functioning land-rent market. Instead, land is primarily rented between good friends/neighbours and/or family members. A third means for accessing land is as a dependent (although likely a working one), living in the household of some extended family member. This is usually only a temporary agreement reliant on the household having access to sufficiently productive land, with dependants expected to become financially independent after the age of about eighteen. The fourth means of acquiring land is by living on the land of a sibling who is old enough to have received land at the partition. This is also usually only a temporary strategy as this landlord-sibling will very likely wish to start their own household at some point which will require the eviction of the dependent-tenant-sibling. The fifth means for accessing land is through inheritance. Since rural households tend to have high fertility rates the decision about which of the next of kin will receive the land is complex. It would appear that inter-familial relations are important as are considerations of who is likely to remain in the rural areas and who would more likely migrate to the urban ones. A final means of accessing land is through the act of marriage. This is usually undertaken by women who marry men with access to land, however there were accounts of the relationship working the other way round.

Conclusion

This chapter has sought to provide a suitable historical context from which the reader will be able to understand the features referenced in the empirical chapters of the work. To do so the chapter has focussed on the late modern history of the country, describing the system of dynastic rule, its interruption by Italian occupation and colonialism, and the rise and fall of the socialist *Derg* regime. The chapter has also described the deterioration of relations

between Ethiopia and Eritrea, and the impacts of this conflict on the internal politics of Ethiopia.

Notably the chapter has focussed on the disconnect, in Ethiopia, between the formal provisions for constitutional democracy and the actual practices of the EPRDF government. In this regard the chapter has detailed a regression in what looked like a movement towards a more open democracy following the defeat of the *Derg*. Catalytic in this process appeared to be the occurrence of opposition parties presenting a legitimate challenge EPRDF rule.

Most importantly this chapter has provided the context for understanding how power, access and livelihood security – all of which will be shown to be important to decisions about mobility – are experienced at the local level in the north of the country. In this regard it has been noted that the EPRDF has exerted its control of important resources and deep party structure to foster a form of clientelist politics which has allowed it to rally from the scare it experienced in 2005.

Having now provided a rationale for the research focus, a description of the study methods and limitations as well as a overview of the relevant historical context, this study turns to exploring the empirical data gathered in this study.

6

ENVIRONMENTAL STRESS AND MOBILITY: A TRADITIONAL STARTING POINT

The first of the empirical chapters of this thesis is aimed at highlighting the role played by environmental stress in mobility decisions in the field-sites. As such, much of its focus falls on describing the human ecology of the field sites as a means for understanding how environmental stress impacts on livelihoods, and what such stress means for mobility strategies.

To achieve this the chapter firstly describes the local human ecology, focussing on the material underpinning of agricultural livelihoods in the two study sites. Following this the chapter focusses on providing accounts of environmental stress and change, as detailed by farmers, before describing the impacts the resultant stresses have on livelihood security. Having made the connection between livelihood security and environmental stresses, the chapter goes on to highlight linkages with mobility decisions, focussing on the extent to which rural-urban migrants recounted features of environmental stress in their decision to move.

Having established the case for a general link between environmental stress and human mobility, the chapter goes on to explore the characteristics of that mobility which have traditionally been important to debates on the relationship between environmental change and migration. These include: who moves, where people go, for how long they remain and the degree of duress under which their movement is undertaken. Notably this section of the thesis describes how uniform characteristics are not discernible based on the fact that environmental stress played a role in the mobility decision. As such the chapter closes with a conclusion that little of what is considered interesting in the relationship

between environmental stress and mobility can be determined by an analytical framework which is focussed solely on the changes in, or stresses emanating from, the physical environment.

Human Ecology and Agricultural Livelihoods

Livelihoods in the study areas principally consist of subsistence, rain-fed, mixed, farming practices. In Habes cultivation is focussed on wheat, barley and pulses. In Ahuntagen, the high altitude and low temperatures, mean that crop production is focussed on barley (which is better able to withstand the colder temperatures) with some pulses being planted as well. In Ahuntagen farmers also planted wild grasses which were needed for roof thatching and which could be used as animal feed. In Habes eucalyptus trees were more common and roof thatching was done using the eucalyptus foliage. During the wet summer months households cultivate small vegetable gardens. Some households, with year round access to water (through irrigation, wells or the proximity of their land to a river) engage in vegetable cultivation throughout the year. Livelihoods in both study areas have historically relied on one harvest per year from the summer (*Kiremt*) rains. Farming is undertaken using rudimentary ploughing techniques where farmers plough their land using animals for traction. Ideally male cattle are used as traction animals, but in times of scarcity female cattle and horses can be used.

Livestock herds in both areas principally consist of large ungulates, small ruminants and poultry. As large ungulates, horses, donkeys and cattle are all kept. Donkeys serve as beasts of burden and are used mainly to transport water (from standpipes to homesteads) and goods (principally to and from marketplaces). Small-ruminant herds in Habes consist of both sheep and goats while the cold temperatures in Ahuntagen mean that farmers there are

limited to farming sheep only. Horses are much more common in Ahuntagen where they are used principally as a means of transport, however the softer ground in Ahuntegegne means that they can also be used for traction. In Habes, the more clearly defined rainfall season means that only oxen can be used for such purposes. In addition to specific uses, all animals are used as a store of wealth and as a means for generating profit, either through rearing or breeding. Finally animals are important for the role they play in domestic energy production (where the dung of large ungulates is used as fuel for cooking) and in nutrient cycling (with their dung being used in the production of compost).

	Habes	**Ahuntegegne**
Cropping seasons:	One cropping season (*kiremt*)	Previously one cropping season (*kiremt*), now two (*belg* and *kiremt*) – since 1975
Altitude:	Median altitude (2000-2500m)	High altitude (3000-3500m)
Crops:	Wheat, barley and pulses Mix of vegetables (rainy season)	Barley and pulses Mix of vegetables (rainy season)
Wild crops:	Eucalyptus – for thatching, timber and cooking-fuel	Wild grass – for thatching and animal feed Some eucalyptus – for timber and cooking-fuel Nettles
Traction:	Cattle	Cattle and horses
Additional animals:	Sheep, goats, donkeys, poultry and horses (rare)	Sheep, poultry and donkeys
Production focus:	Mixed with agricultural focus	Mixed with pastoral focus
Stresses:	Water stress, soil erosion, wind, hail, pests and animal disease	Water stress, frost, soil erosion, wind, hail pests and animal disease

Table 2. Comparing human ecologies in Habes and Ahuntegegne

The harvest from individual farms is used for both consumption and sale. Livestock is occasionally consumed as part of ceremonial practices – on certain occasions this is mandatory – but it is generally used as a means for generating revenue and facilitating farming. Since horses, cattle and donkeys can all be used for productive purposes they also form a source of revenue because they can be made available for rental. The rearing and selling of all forms of livestock, as well as the trading of them between rural and urban areas,

all form important sources of household income. Shallower soils in Ahuntagen mean that cultivation is relatively less important than it is in Habes and as a result greater emphasis falls on livestock rearing.

Trends in Environmental Change

Farmer's accounts from the two study areas cited worsening rains, soil erosion, hail wind, frost, pests, and crop and livestock diseases as being important environmentally-triggered stresses in their households. With no good data on environmental variables in the area the study was forced to rely on secondary literature (see Chapter 4) and the accounts of farmers and officials to describe changes in the environment – see Chapter 4 for a justification of this approach.

The accounts of farmers generally described a worsening of the rains beginning either in the mid-1980s or the early 1990s. In this regard numerous farmers in both field sites described the drought, that has been affecting northern Ethiopia for the last three to five years, as the culmination of this trend of worsening rainfall. Detailed accounts, from farmers, of the changes that had generated the worsening rainfall conditions described an increasingly short rainfall season caused by both a delayed onset time and earlier date of secession as well as a reduced quantity of rainfall in the rainy period. In addition, farmers described that the rainfall season was increasingly well defined. Farmers and migrants in Tigray also described that temperatures in the area were notably higher now than they used to be. Notably these accounts mirror the findings of Verdin et al. (2005), Rosell and Homer (2007) and Rosell (2011). Further, given the location of the field site, such accounts accord with the trends in rainfall change across Ethiopia, as descried by Bewket and Conway (2007) and Rosell (2011) (see Chapter 4).

For farmers in Habes, where there is only one growing season (during the summer (*kiremt*)), this increasingly well defined season was compared to a previous period when rains used to fall in small amounts throughout the winter and spring. In Ahuntagen, where the farming system has become reliant on two harvests (see chapters 7 & 9), farmers described the combined impacts of a later onset date and more clearly defined rainy season so that the spring (*belg)* harvest receives progressively less and less rainfall. This was narrated as culminating in the complete failure of the *belg* rains for the last three or four years.

While farmers in both field sites described the rainfall period as being increasingly well defined they also described how the shift in the start date of the rains had made the exact date of onset impossible to predict. Finally, there were reports of the rainfall becoming increasingly intense. In this regard farmers described how the rains used to fall gently throughout the night, but that they now fell in hard, short bursts. Here, accounts from two farmers are revealing:

> "The production on my land is reliant on the rain … the rain is not so good now … it used be better, falling over five or six months. Now the rains falls over a shorter time and it is much harder." (Zenou[32] 2009).

> "The environment has changed … We used to get rain, even in the winter but now it is hot and sunny all the time … When I was young the rain would fall through the night, now it all falls in a few hours". (Mechenet[33] 2009).

From farmers' accounts the general impact of the changes in the rainfall have been to reduce the size of the harvest each year, and in some cases reduce the productivity of the land as well. In this regard farmers described how they used to be able to plough their land many times before planting their seed. They said that this was possible because the less well defined rainy season meant that the land would be soft (even before the main rains arrived)

32 Pseudonym
33 Pseudonym

allowing people to pull their ploughs across the land without difficulty. To this end an interview with Tiananis, a farmer from Habes, proceeded as follows:

> Interviewer: What was it like when you were growing up here?
> Respondent: When I was young it was very different, then there was lots of food and milk.
> Interviewer: What do you think has caused the difference?
> Respondent: The difference is caused by the change in the rainfall.
> Interviewer: What is different about the rainfall?
> Respondent: The weather is different now: It is hotter and there is less rain.
> Interviewer: How is the rain different? What did it used to be like and what is it like now?
> Respondent: There is no more rain in the winter and the summer rains are shorter. This change is important because the winter rain was important for keeping the soil soft so that we could plough it before the summer rains start.
> – (Tiananis[34] 2009)

In this regard, farmers described how multiple ploughing (usually about three or four times, at monthly intervals) is important because the more times the land is ploughed the better 'mixed' the soil, which improves its fertility. In addition farmers described how ploughing the soil is important for breaking up the hard crust of the topsoil (which forms over the dry season) and which reduces run-off and facilitates rainfall penetration, thus enhancing water retention.

At the time of fieldwork, with the increasingly well defined rainy period, farmer's described how the land was too hard to till in advance of the rains. In addition farmers described how they could not plough the land multiple times after the rains started falling as the shortened rainfall period meant that they had to sow their crops as soon as the rain began so that the seed might reach maturity before the rains stopped. As a result a large number of farmers described how they had been able to only plough the land once, at the onset of the rains, before planting their seeds. This was described as having a significant impact on the size of their harvest. In Ahuntegegne (where farmer's state of food security is now reliant on two harvests per year – see chapter 7) this shift in the distribution of the rainfall has had

34 Pseudonym

particularly dramatic effects. For here the increasingly well defined rainy season has manifest in a decrease in the spring (*belg*) rains culminating in their total cessation in the last four years. This means that instead of just affecting farmer's ability to plough the soil, the impact of an increasingly well defined rainy season has been to destroy the spring harvest entirely. This has had dramatic impacts on the annual production of households in Ahuntegegne.

In addition to its impacts on cereal production the decreased amount of rainfall, and its more clearly defined occurrence, has had major implications for livestock production. Farmers in both study areas described how these two changes in the rainfall have resulted in less grazing being available for their animals. This affects herds as animals become malnourished and thus more susceptible to disease. Under such conditions farmers described how their animals fetch a lower price at the market, are less able to work and provide traction (compounding problems of hardened soils), bear less off-spring, and are more likely to die while still part of the household herd.

Farmers also described how the increased intensity of the rainfall in Habes has reduced the harvest through the physical damage it could do to the crop (particularly if hard rains fell during the stages just following germination). Additionally farmers, particularly in Habes with its single rainfall season, described how an increasingly well defined rainy season combined with shorter and harder bursts of rain to exacerbate erosion rates from particular plots. Farmers experiencing such problems described how the increased erosion left their soils 'poor', 'thin' or 'rocky'/'stony' and how these processes reduced their harvest and impoverished their grazing land as a result of the soil's diminished ability to retain moisture – a problem which exacerbated the impacts of reduced rainfall.

In addition to soil erosion some farmers – far less than the number who described rainfall problems – described the impacts of nutrient depletion as affecting their farms. They

framed such descriptions in terms of the age of the soils and their ability to work. In this regard one farmer described how his soil had aged in the same way that he had:

> "The soil is like me, it has gotten older and weaker. I was powerful when I was younger, but now I am weak. The land is the same."
> – Haile[35] (2009)

Farmers described how the ageing process of the soil was exacerbated by the fact that decreases in land size (as a result of the land redistributions (see Chapter 5)) have, in many instances, precluded the possibility of fallowing the soil for a season. They note however that the use of compost and fertiliser has addressed this problem to some extent (see chapter 7). Farmers also describe how the increased construction of terraces through the food for work programmes (see chapter 7) has decreased the rates of soil loss in the area. Illustrative of such accounts are the following excerpts from interviews:

> "I used to have many plots of land under Haile Selassie, so I could leave some land open … under the *Derg* the size of the land was decreased so I have to plant all my land." (Mola[36] 2009).

> "We used to leave some of the land open but we have not been able to do this since the land got smaller [in the redistribution] in 1983[37] … This causes the production to go down. We [also] used to just put animal dung on the land but now we use compost and fertiliser … This helps but it does not make up for having to farm the land all the time." (Kalamok[38] 2009).

In both study sites farmers described how windy conditions and hail were a problem. In neither field sites were there accounts of a shift in either the frequency of severity of hail but in Habes a limited number of farmers claimed that conditions were now windier than they used to be. Farmers described hail as a problem for the physical damage it did to their crops, particularly if it fell while the plants were in their early stages of growth. Wind was a

35 Pseudonym
36 Pseudonym
37 1983 here refers to the Ethiopian Calendar, by the Gregorian Calendar this would be around 1990.
38 Pseudonym

problem because it would flatten crops or cause the seeds to be blown off the plant.

Pests were a problem and included porcupines, which damaged vegetable gardens, as well as rodents which impacted on grain stores. Diseases affected legume production in Habes and a type of worm was reported to be affecting barley harvests in Ahuntegegne. Caterpillars were also a major problem in Ahuntegegne where farmers frequently complained of the damage that they did to their crops and wild foods (see chapter 7).

The impact of frost is limited to Ahuntegegne where higher altitudes make it a common occurrence on clear winter nights. Depending on the intensity of the frost it can kill the barley crop, making it unusable for human consumption – leaving it useful only as animal feed. In Ahuntegegne farmers described how the shift of the *Kiremt* (summer) rains, so that they fall later in the year, has combined with the occurrence of frost and resulted in dramatic impacts on household productivity. They say that with the rains now falling later in the year their crops are exposed to the frosts as the plants are not mature enough to be harvested by the time the frosts arrive. Previously, when the rains fell earlier in the year, the crops would have been harvested by the time the frosts began, or at least have been at a suitable stage of maturity so that the impact of the frost would not have destroyed the plants ability to produce seed. Now they describe how all of their crop is destroyed by the frost with the only exception being a small number of plants which are protected by their chance location on a slope or in the lee of a garden wall. Adunga, a farmer from Ahuntegegne, describes the impacts of frost in the following account:

> Interviewer: What crops do you plant here?
> Respondent: We plant barley, potatoes and grasses. But we have not been able to get any harvest from here for the last four years because of the rains.
> Interviewer: What has happened to the rains?
> Respondent: The rain is later now, so we have to plant later which means that the crops are all destroyed by the frost which comes after the rains.
> Interviewer: When will the frosts come?

> Respondent: The frosts will come in September or October. These crops will only be ready for harvest in December.
> – (Adunga 2009)

The above example of frost in Ahuntegegne shows how the impact of one environmental stress can be exaggerated by acting in concert with other stresses. Other accounts of concomitant stresses described how the worsening rains (a term used to describe the mix of changes in rainfall detailed above) included the way in which cattle (weakened by limited access to grazing) are less able to effectively plough the land, hardened by the more clearly defined rainy season. In this regard, there were a number of instances in which farmers were observed trying to plough their land in anticipation of the rain. The exercise was largely futile and one could observe the animals struggling and stumbling under the yoke. The plough would bounce off the hardened crust leaving only small indentations in the top-soil. Farmers struggling with their animals during these times would dejectedly describe how they used to be able to plough at this time of year but now 'the land is too hard' and/or 'the animals are too weak'.

Finally, farmers described how the availability of wood for cooking fuel had decreased throughout both of the rural field sites. In Habes, oral histories revealed that there used to be many more trees in the area, before these were largely cut down and then replaced with community woodlots of eucalyptus. In Ahuntegegne, oral histories, revealed that there had never been much tree cover on the very high plateau and farmers described either walking to edge of the escarpment to collect wood from forests or purchasing wood from traders. They report now that there are in fact more trees on the plateau itself in the form of small woodlots of eucalyptus. Notably however in both field sites, elderly farmers describe wood as being less *available*[39] today than it was previously.

39 The increased demand for wood in urban areas (see chapter 7) likely plays as much, if not more, of a role in decreasing availability of wood in rural areas as does the impacts of changed management of woodlots and decreases in forest cover.

Thus the general picture, in both the study sites, is one in which households have seen a progressive reduction in the productivity of their individual farms. According to farmers this has principally been caused by a worsening pattern of rainfall which farmers described having affected them for the last ten to fifteen years. Within this period farmers acknowledged that there had been good and bad years, however the overall trend had been one of a rainfall regime which is less conducive to the form of rain-fed agriculture which is dominant in the areas. On top of this there appeared to be a real process of soil erosion and soil nutrient depletion. Farmers seemed unable to describe a start date for this process. With these two long term stresses running in the background other environmental stresses appear not to have altered in their frequency, but their impacts have been exacerbated by the general trend of declining farm productivity in the area.

Having described the material livelihoods of the study site as well as the manner in which environmental stress has impacted upon livelihood strategies to limit production, undermine household wealth and compromise livelihood security, I turn now to explore the narratives of migrants moving from the rural areas to the towns studied in this work. The intention here is to examine the narratives of rural-urban migrants in an attempt to identify how the impacts of environmental stress on livelihood security (described above) might, in turn, be impacting on mobility strategies in the field sites.

The Role of Environmental Stress in Mobility

Among the towns of Wukro, Atsbi, Weldiya and Kone migrants could be found in all who, to varying degrees and in multiple ways, described forms of environmentally-related stresses in their decision to move. Similarly numerous non-migrants described how they were contemplating mobility strategies as a means to alleviate the livelihood insecurity they were

experiencing as a result of what they perceived to be stresses, located in the bio-physcial environment.

The most general form of the link between environmental stress and mobility is apparent in the accounts of migrants who described leaving the rural areas in the 1970s and 1980s as a result of the 'drought' at the time. Although oral, historical accounts left the details of the interaction between the hydro-meteorological changes and the social components of drought difficult to distinguish (principally due to their historical nature), it was clear that mobility decisions under conditions of drought appeared to manifest as a response both to what might be considered drought-specific events (such as the death of a family member due to the impoverishing conditions of the drought) as well as more generalisable experiences of long term degradation, such as growing poverty in the rural areas and the curtailment of life options. Regardless, these accounts of mobility in response to the major droughts do provide a useful general model from which to further interrogate the link between environmental stress and human mobility.

Outside the major droughts of the 1970s and 1980s, migrant narratives commonly ascribed the decision to move directly to changes in farm productivity with migrants citing the 'low productivity of the soil' or the 'poor productivity of the land' as reasons they had left the rural areas. Interviews with migrants revealed that 'reduced productivity' referred both to the loss of crops and to the impoverishment of livestock herds. When asked, migrants and farmers alike, despite citing 'land', 'soil' and 'productivity' in their original narratives usually ascribed such reductions to changes in rainfall.

Compelling evidence of the links between rainfall and human mobility came from the number of migrants who described that they would return to the rural areas if they heard reliable news that the rainfall had improved. A few migrants also made explicit references to water availability and its connection to rainfall in their accounts of why they had left the

rural areas. Such accounts focussed on access to water – the distance they had to travel to get it, the time they had to queue for it and the quality of that water. Other migrant narratives which linked environmental stress, livelihood security and their decision to move, were those ascribing reductions in farm productivity to soil erosion. Examples of such accounts include:

> "The poor rains have damaged my crops … now I have to walk an hour and a half to get water ... When the rain is good I can get water from just next to my house." (Mahari[40] 2009).

> Interviewer: Why did you come to Atsbi?
> Respondent: I came here to make money.
> Interviewer: Why did you need the money, did you not have land?
> Respondent: I had land but the drought and the soil erosion mean that the production is too small.
> – (Thebehet[41] 2009)

As well as impacts on cultivation, migrants also referenced the loss of their animals as important in their decision to move. The loss of cattle was generally attributed to worsening rains and explained in terms of people either having to sell their animals in order to reduce the pressures on grazing land or in order to purchase food to make up for failed, or insufficient, cereal harvests. In addition to this was the direct impact of rainfall-induced damage to grazing land which resulted in the death of animals through the combination of malnourishment and disease.

Notable among the major migrant narratives described above, is that, with the exception of references to rainfall, soil productivity and water, the majority of accounts made few direct references to environmental variables. Rather, migrant narratives, explaining their decision to move, usually focussed on the generally impoverished state of their livelihoods and as such it was more common to hear migrants describe their decision to move so as to 'avoid starvation', or to 'escape hunger' or 'poverty'. Even in the case of migrants citing 'drought' such a term was usually used to refer to the broader social conditions caused by

40 Pseudonym
41 Pseudonym

reduced rainfall more than it was to the actual rainfall itself. This is not to say that migrants failed to make the connection between the physical environment and their material well-being – as the example above showed. Rather it is that the decision to move was structured by the resultant impacts these environmental changes had on livelihood security, more than it was in terms of the physical environmental parameters themselves.

In terms of farm productivity migrants cited both more linear, long term decreases in productivity and short term, non-linear, shocks as important in their decision to move. Regarding long term trends, migrant accounts generally highlighted food (in)security as the factor on which they based their decision. Food security would diminish as a host of environmental stresses[42] reduced farm productivity. In these circumstances migrants narrated their decision to move in terms of what could be described as a reactive manner. Such narratives included migrants describing how they had only moved once there was clear knowledge that either (i) the amount of food available from the harvest and through the potential sale of animals was so small as to make survival in the rural areas impossible or (ii) when the actual food to which people had access ran out.

In the case of non-linear production shocks, mobility was usually enacted following the loss of the last productive head of cattle (usually an oxen, but sometimes horses). This was considered an important moment because such a loss would leave people with no choice but to share-crop their land in the future, which, in many cases, would effectively halve the produce they could take from it (see chapter 7).

One example of such an account comes from Bosana[43], in Weldiya, who arrived, via another town located about two hours bus ride from the rural area in which she grew up. Bosana describes leaving the rural areas at the age of 15 after the drought in the 1980s killed

42 Environmental stresses are highlighted here as this is the major focus of this chapter. The role of other non-environmental factors, and their interaction with environmental factors, will be dealt with in subsequent chapters.

43 Pseudonym

her family's last head of cattle. She says that she had to leave then, because without cattle her parents could no longer plough their land, meaning that they had to give away half of the produce as part of a share-cropping arrangement. In such circumstance Bosana describes how the land no longer produced enough food and her family became reliant on support from their relatives. Under such conditions Bosana spoke to a friend who suggested she leave the rural areas to make her life in a nearby town (Bosana 2009).

From other account describing non-linear impacts on production, it appeared that people would often move pre-emptively knowing that they will not be able to make ends meet in the following year. In addition to the loss of the last head of livestock the other frequently mentioned, non-linear shock was the complete failure of a harvest. Such an event would usually be caused by some unlucky combination of events (such as localised hail, poor rainfall, a bad frost and an infestation of pests). With this in mind it was common to hear accounts in which the slow decline in farm productivity had been punctuated by some non-linear production shock which had precipitated the decision to move.

In addition to decreases in productivity generating reactive mobility strategies, migrants also cited environmental stress as generating decreases in what might be best described as the 'liveability' or 'desirability' of the rural areas. One such example comes from the level of risk generated by environmental variability that farmers were willing to endure, in the rural areas, before deciding to leave. Here a number of young migrants arriving in the towns ascribed their decision to move to the fact that they had watched their parents lose a lifetime's worth of accumulated wealth in a relatively short period of poor rainfall. They described the fact that a life with such a high level of risk was simply not one that they were willing to pursue and thus they had come to the urban areas in search of a more stable income stream.

In terms of liveability, there are also more generic links between environmental stress

and productivity. In this regard many respondents described their decision to leave the rural areas not only in terms of unacceptably high levels of risk but also in terms the generally poor quality of life and limited life opportunities available in the rural areas. To this end common migrant responses to the question of why they had left the rural areas included:

> "I left [rural area] because the life there is too hard." (Murt 2009).
>
> "Weldiya is better than [rural area] ... there it is the same food everyday and old clothes." (Filike[44] 2009).
>
> "I had to leave [rural area] because of the poverty that is always there." (Bosana[45] 2009).

Notable in such accounts is the perceived permanence and scale of impoverishment identified in the rural areas. For these migrants movement does not appear to be about escaping the experience of a shock but rather the interminable nature of poverty in the rural areas. Here, migrants are leaving because the general state of impoverishment in the rural areas (which is affected by environmental stress) has made a life there simply not worth pursuing. In this regard young men, in focus group discussions, would express how they thought that it would now be impossible to get back to the big herds of animals people used to have before the droughts.

Still other migrants ascribed their decision to move in terms of traumatic events in the rural areas which had been triggered by extreme degrees of environmental stress. Such events might include the loss of a parent to an illness perceived to be the result of drought-induced food insecurity. Similarly migrants described leaving the rural areas after fighting with their parents over access to household resources which had been made scarce by environmental stresses. In this regard a migrant from Weldiya described how she left the rural areas after the death of her father had impoverished the family meaning that her mother

44 Pseudonym
45 Pseudonym

no longer had the money to send her to school. Wanting to continue her education the young woman left the rural areas to try and work and study part time in Weldiya[46]. In the case of fighting with their parents or other family members, migrants would describe how the animosity between them and their parents as a result of the fight – which was reported in some cases to degenerate to physical violence taking the form of extreme domestic corporal punishment – had made it impossible for them to remain in the rural areas and so they had left.

From such accounts, regarding the general liveability of the rural areas, we perceive a more generic link between the generally impoverishing effects caused by reductions in individual farm productivity and people's desire to move. Since it has already been shown that changes in the physical environment affect productivity and livelihood security, and similarly that mobility has been enacted in response to changes in productivity and livelihood security, then it seems fair to claim that environmental stress has marked effects on mobility decisions in the rural areas.

With this link established what remains important to the study of the relationship between environmental stress and human mobility is the character of that mobility enacted in response to the impoverishing effects of biophysical environmental stresses. By 'mobility characteristics' here I mean the temporal, and geographical extent of people's movements, the demographics of those groups who move and the conditions of duress under which such moves are taken. Such a characterisation is thought to be important for the implications it has for demographic change, development and human security/vulnerability (see Chapters 2 & 4).

46 See chapter 7 for more on the important role played by schooling in mobility strategies employed in a context of environmental stress.

Characteristics of Migration

The importance of the character of mobility, undertaken in response to changes in the physical environment, for the debate on 'environmental refugees' has already been discussed in Chapter 2. With this in mind, and without intending to get into the substance of this debate again here, it is worth mentioning that there exist numerous general claims about migration in response to environmental change. On the one hand there are authors which cite that environmental change will generate movements on a scale which will cross international borders (Westing 1994, Westing 1992, Myers & Kent 1995, Myers 2005) while a counter to this has been the argument that, particularly in drylands, the general character of migration in response to environmental degradation will be undertaken over short distances and on a temporary basis (Gill 2010, Raleigh, Jordan & Salehyan 2008, Massey, Axinn & Ghimire 2007, Tacoli 2009).

Counter to these claims, this fieldwork revealed a highly complex set of possibilities regarding the character of the mobility strategies employed by dryland farmers as a response to biophysical environmental stress. In the case of migrants whose motivation for leaving the rural areas could be understood as a concern regarding the liveability of the rural areas, the decision to move was generally taken as a permanent one. These migrants, either too badly scarred or too thoroughly disenchanted by the state of subsistence farming in a context of low-input, rain-fed cultivation, had generally given up on the idea of pursuing a life in the rural areas. As such their move to the urban areas was generally articulated by them to be a permanent move, aimed at improving their life.

On the other hand, migrants citing reductions in productivity as their reason for leaving the rural areas generally expressed less clarity regarding the temporal extent of their migration. A large number either expressed a willingness to return if productivity improved

(generally this was thought possible if the reductions in productivity were thought attributable to poor rainfall, and the rainfall improved) or currently travelled back to their land to till it in the rainy season, using the harvest to supplement their predominantly urban livelihoods.

While the above is true for certain migrants, migrant accounts also revealed how some individuals who had initially left the rural areas with the intention of returning once the rains had improved, ended up remaining in the urban areas after discovering (either through travelling back themselves or hearing news from friends and family that had returned) that the soil remained unproductive and/or the rains remained poor. Such narratives often married the impacts of soil quality and rainfall when describing their decision to remain in the urban areas and it was common to hear accounts such as the following:

> "When I first left the [rural area] I didn't expect to stay away for a long time ... I just wanted to make some money and go back ... After I left, I heard from my parents that the harvest was still going down because of the bad soil. Then I decided to stay here." (Habtam[47] 2009).
>
> "I would go back if the rains improved. You can make more money as a farmer, with good rain, than as a trader." (Kiros[48] 2009).
>
> "At the moment my land is being looked after by my extended family ... I will only go back when I hear that the rain is good again." (Mahari[49] 2009).

It generally turned out that the longer individuals stayed in the urban areas the less likely it was that they would leave, with the possible exception of returning in their very old age so that they might die in their birthplace.

Having discussed the variety apparent in migrant accounts of the temporal extent of their move, it is worth discussing the geographical extent of mobility strategies. The conceptual implications surrounding the migrant's choice of destination, when responding to

47 Pseudonym
48 Pseudonym
49 Pseudonym

environmental change has already been mentioned in Chapter 3 and although it is not worth discussing in full again here it is worth pointing out that proponents of the 'environmental refugee' have focussed on the potential for cross border migration while critics of the term have highlighted selective evidence which shows, particularly in the case of drylands (Findley 1994) (see Chapter 4), that migration in response to environmental stress occurs over short distances. The research from Northern Ethiopia revealed that a variety of strategies had been employed by migrants for whom changes in the physical environment had been cited as important in their decision to move.

While contemporary migrants generally fit the description provided by critics, above – migrating to the nearest town – the degree to which this could be considered an inevitable trait of the migrants experiencing environmental stress as a major driver of their move, and not just a temporary phenomenon dictated by current conditions in the study area, is challenged by the narratives of migrants which describe their historical strategies in response to the droughts of the 1970s and 1980s. For many of these migrants (both from North Wollo and Tigray) the preferred destination was Eritrea. Migrants from North Wollo generally headed to the coastal town of Asseb, while those from Tigray generally headed for the regional capital, Asmara. Notable in this regard is that such a move to Eritrea would take around six days on foot, from Tigray, and likely involve motorised transport from Weldiya. Of further note is that previous migrants (now farmers) from Habes, as well as migrants in Atsbi and Wukro, who had previously migrated to Eritrea actually described undertaking the 6 day journey in a reactionary manner, once the food had run out and all their cattle stocks had been sold or died. These individuals described themselves as leaving with all their worldly possessions strapped to their backs. One woman who migrated to Eritrea during the drought of the 1980s described the point at which her family decided to migrate by pointing at the hard, bare mud floor of her dwelling and said, with reference to the land and their

household wealth at the time: “[we left] when it was like this” (Habes Interview). In fact historical accounts of the migrations in response to the droughts of the 1980s revealed that wealth acted in unexpected ways to limit migration. For it was found that it was generally those migrants whose cattle had died (who were poor) who not only had to migrate for a lack of food, but also who could migrate as those with cattle stocks (those relatively wealthy groups) could not move with their animals due the long distances involved.

Such mobility characteristics are not only confined to the drought of the 1980s. Migrants ascribing their decision to leave the rural areas during the contemporary period of rainfall stress also described walking hundreds of kilometres, over three days, to find urban work. Such migrants described that they were leaving when the food stores in their households had run out. Their means for surviving the journey was to beg for food from strangers along the way. What is most notable in these accounts is that such migrants were walking past towns that were nearer by, thereby refuting the general statement that migrants, responding to environmental stress, will choose the destination closest to them.

Contradicting this however, were accounts of migrants, in all the towns in this study, who chose them as destinations because they were the closest. For these migrants the main reasons for choosing such places were given as: the cost of transport, the ease of returning to their farms during the rainy season or a desire to remain near their families. As such, there appears to be great variety in the distances people or groups, citing environmental stress as important in their decision, will move as a means for securing their livelihood.

Within the debate on 'environmental refugees' an important characteristic of migrant responses to environmental change has been the degree to which it might be suitable to characterise the migration as a 'voluntary' or 'forced' move. This is both due to the importance of 'forced' migration in the conception of the 'environmental refugee' and because of the importance of such factors in shaping the likely welfare of the migrant in the receiving

area (Chiswick 2000). As such the 'forced' or 'voluntary' character of the movements described by respondents in this study are worthy of reflection.

Using the frameworks for conceptualising 'forced' versus 'voluntary' migration discussed in Chapter 4, this fieldwork clearly encountered narratives which, while describing migration as a strategy aimed at countering the livelihood insecurity generated by environmental stress, also described a variety of conditions of duress which could be interpreted as constituting both 'forced' and 'voluntary' movements. In this regard it was clear that for some migrants it was the pursuit of a better life, elsewhere, that constituted their imperative to move, while in others it was clear that the scale of agricultural decline left them with few options other than to migrate, facing death, or a life of gross material impoverishment, if they didn't. For migrants in the former category, mobility narratives gave cursory attention to worsening conditions of farm productivity, describing it more of a context in which their decision was taken rather than a determining factor. Such narratives would describe their decision to move, rather than try and farm, in terms of a 'fashion' of migration. These migrants would describe how everyone had been migrating and it was simply something that they had wanted to do. For these migrants it is clear that the motivating factors was the relative increase in the pull-factors of a life in the towns (Gibney 2004) generated by a worsening of conditions in the rural areas. On the other hand migrants in the latter category described the limited choices available to them in their decision to migrate. Such narratives would focus on the hardships they experienced in the rural areas describing something like the following:

> "I left [rural area] after the rains got worse and my parents land would not produce enough harvest for me to survive." (Fenta[50] 2009).

> "I had to leave the [rural area] after the drought in the 1990s … My parents

50 Pseudonym

> did not want me to go because I had not been anywhere before and they thought I would be exploited in the urban areas … I was scared when I left but I had to leave because I was the oldest child and the poverty was so bad that I had no choice" (Yeshwork[51] 2009).

Regarding the ability of migrants to plan their move (Richmond 1994) migrant narratives revealed some interesting accounts. First it should be pointed out that many migrants, described doing very little planning before deciding to move, despite enduring fairly long periods of time before the decision to move was thrust upon them. Migrants who, for example, waited 'until the food ran out' certainly had time to plan their move, however many described not doing so. This is not to say that no migrants planned their move, rather it is simply the case that such accounts were less common. In this regard it was interesting to compare these accounts with those of non-migrants, who described wanting to leave the rural areas in the near future. These farmers described knowing that they wanted to leave the rural areas for some time however when asked if they had made any plans to do so they would reply with an account such as: 'what can I do? I can't save any money here'. In this regard planning was usually limited to where people thought it might be best to go.

Clear in the above accounts then is the fact that some migrants, responding to environmental stress, could be conceived of as 'voluntary' while others, for all intents and purposes, could easily be understood as being 'forced'. Amongst voluntary migrants it was the relative pull of the urban areas (Gibney 2004) and the ability to effectively plan their movement which characterised their decision. On the other hand the accounts of forced migrants described how 'push factors' dominated their decision to move (Gibney 2004), how they were left with no choice (beyond a life of gross poverty in the rural areas) other than to move (Van Hear 1998) and for whom, although there was time to plan their decision, conditions were so poor that very little real planning could take place (Richmond 1994).

In addition to these clearly 'forced' and 'voluntary' migrants there also appeared to be

51 Pseudonym

migrants for whom simple distinctions did not make sense. Such groups generally pertained to those citing, what I have previously described as, general reasons of 'liveability' in their mobility narrative. For many of these migrants it was clear that levels of livelihood insecurity had reached such extremes in the rural areas that they would have to leave or else face a life of gross poverty, or one reliant on the charity of others, as a means to survive. At the same time however such migrants generally narrated their decision to move in terms of looking for a better life in the urban areas. As such, these cases suggest that it is some complicated mix of relative pull factors operating in conditions of extreme deprivation that provide a hybrid-form of 'forced' and 'voluntary' migrants.

With the above in mind, one should be wary of overstating the degree to which strategies of mobility represent a planned action, based on careful considerations of time and space. In numerous interviews migrants described having done little or no planning in their decision to move and for these migrants a move to the urban areas was simply a continuation of a livelihood based on a variety of strategies aimed at securing their livelihood. To this end some migrants did not appear to see urban and rural livelihoods as distinct elements and instead saw the mix of these rural and urban livelihoods as a means for making ends meet. That this study has chosen to focus on migration between urban and rural areas represents the values of the researcher and these values should not be assumed to map simply on to the groups or individuals who decide to move in space. An account from Alem[52] (2009) who moved to Kone after taking work on a road building project is exemplary of this.

Alem initially took temporary work on the road building project near his land as a means to address the poor productivity of his farm. For Alem, there initially appeared to be little thought of moving. Rather his focus fell on simply making ends meet by subsidising rural household income with available work on the road project. When it later occurred that the road construction company would move on, so Alem, who by then had been put on a

52 Pseudonym

permanent contract, simply moved with the project. After moving around for some time Alem's interest in returning to the rural areas waned and as a result he settled in Kone where he now makes a living doing casual labour in the market place (Alem 2009).

From the above discussion then it appears that the character of migrations enacted as a response to changes in the physical environment comprise a multitude of mobility strategies. The above work has shown that a host of contexts appear to exist in which some migrants can effectively be considered as 'forced' while in others they appear to be 'voluntary'. In some cases migrants cover long distances while in other they only move short distances. Some moves appear to be permanent while in others they appear temporary, with the only guiding light in this instance being the degree to which they are migrating to find a better life, in general, as opposed to migrating in order to alleviate a temporary production shock (notably there appears to be no structural explanation for why different migrants might seek different ends). Notable is that in still more complex cases it appears that some migrants don't even consider the decision to be geographically mobile as one that is of particular significance.

What then does this tell us about the relationship between environmental stress and human mobility? Most notably it makes the case that environmental stress, through its potential to affect livelihood security, is clearly capable of playing an important role in shaping mobility decisions. Also notable however is the great diversity of mobility strategies that appear to have been enacted as a response to environmental stress. Importantly then it appears that a focus on the relationship between environmental stress and mobility, although able to make clear that a link between the two exists, can tell us very little about the character of those mobility strategies. Such findings also undermine the claims from both proponents and critics of the 'environmental refugee' that one can simply make generalisable statements about the character of mobility likely to be enacted in response to particular sorts

of environmental stress.

Conclusions

This chapter has focussed on highlighting the relationship between environmental stress and human mobility. In doing so it has adopted an approach akin to that used in proponent accounts of 'environmental refugees'. This has included understanding rural livelihoods' vulnerability to environmental stress, documenting such stress and then exploring the accounts of migrants citing livelihood insecurity. Although the overall argument of this thesis is that such an approach is insufficient, this is not to say that is without importance. Capturing narrative accounts which explicitly describe drought and access to water as the motivations driving movement makes clear that changes in the physical environment could play an important role in the mobility decisions taken by rural-urban migrants.

Further to the above, such an analysis is useful for the manner in which it provides new insights about the character of mobility decisions taken in response to environmental stress. By highlighting the degree to which environmental stress manifests as production decreases and how these in turn are the conditions upon which migrants base their decision to move, the analysis confirms the findings of Meze-Hauksen (2000) on climate change as a 'second order' driver of migration (see Chapter 4). It also provides rich material on the complexity hidden in the dichotomous characterisation of 'forced' and 'voluntary' migrants in a context of environmental stress. Further to this, such findings upset simple ideas about the wealthiest or poorest groups migrating by suggesting that wealthy individuals (with cattle) are unable to move. Similarly, findings on the varied temporal and geographic characteristics of mobility in response to environmental stress suggest that literature to date has overly simplified migrant decision making regarding both the choice of destination and the manner

in which such moves represent temporary or permanent changes in demographic structure.

While keeping such interesting and important findings in mind it should also be pointed out that from migrant narratives, rural observations and farmer's accounts it was clear that an approach focussed on the physical environment is insufficient for describing the complexity of the relationship between environmental stress and human mobility. Particularly notable in this regard was the inability of the approach to explain the forces underlying the complex and varied character of the mobility strategies described in the last section of the chapter. For it appears that such an approach is unable to distinguish: who will move, where they will go, for how long they will stay and under what conditions of duress these strategies will be pursued. In fact, all it has been able to do is show that there appears to be a great deal of complexity in the relationship between environmental and other factors in shaping these features.

The next three chapters of this work then focus on understanding such dynamics. Specifically they attempt to distinguish who moves from who does not, what determines where people go and for how long they stay. To do so this study takes its cue from the theoretical focus described in Chapter 2 and the empirical findings detailed Chapter 4, and seeks to contextualise these mobility decisions in a social and historical context.

7

CONTEXTUALISING MOBILITY AND ENVIRONMENTAL STRESS

The previous chapter sought to establish whether environmental stress could be understood as playing an important role in decisions about human mobility. To do so it focussed on describing livelihoods in terms of their material base as well as changes in the physical environment, showing how those changes affected livelihood security. Having done this the chapter explored the narratives of rural-urban migrants in order to determine the role played by environmental stress in mobility decisions. From such a perspective it became easy to see how environmental stresses compromised livelihood security which in turn played a role in decisions about where people lived.

From the previous chapter it was clear that migrants and farmers alike had linked their state of poverty and experience of reduced productivity with what they perceived to be changes in the physical environment. At the same time, numerous migrants had located their decision to move in the degree of livelihood insecurity which had been generated by the livelihood stresses induced by what they perceived to be environmental change. With this is mind it is worth pointing out three issues. The first, which is mentioned at the end of the last chapter, is that a simple focus on the role played by the biophysical environment seems unable to provide useful information on the character of mobility strategies enacted in response to such stress. The second is that we should be wary of believing that the causes of poverty and livelihood insecurity in Ethiopia lie solely in the experience of a highly variable physical environment. The third is that other factors, affecting both livelihood (in)security and the manner in which it is compromised by environmental stress, are also changing. Such factors are, themselves structured by forces which do not necessarily lie in the physical environment, and yet they clearly have an impact on livelihood security.

These three points are worth raising as they suggest that if we are to understand,

more fully, the potential relationship between climate change an human migration, then this account of environmental stress and mobility will require an exploration of the manner in which other factors shape both livelihood (in)security and poverty in the rural areas. Further, a more complete account of the relationship will require an exploration of how such factors might impact on the relationship between environmental stress and livelihood (in)security and/or how they might impact the manner in which mobility serves as a more or less effective means for generating livelihood security in such a context.

With this in mind, this chapter seeks to build on the account provided in the previous chapter. To do so it moves beyond the narrow exploration of the relationship between environmental stress and human mobility by contextualising that relationship in terms of other factors driving agricultural decline in Northern Ethiopia. To effectively achieve this the chapter first overhauls the conception of livelihoods as static, pre-modern and apolitical modes of production, focussing instead on the dynamic and changing nature of livelihoods which drives both the production and reproduction of poverty in rural Ethiopia. From there the chapter goes on to document examples of important non-environmental factors which affect livelihood security and therefore mediate the imperative to move.

Before doing this however the chapter begins with a description of how the socio-political and economic changes in the country, which were described in Chapter 5, have impacted livelihood strategies in the field sites. Following this the chapter explores the dynamic nature of livelihoods, describing how they respond to environmental variability. In this regard the chapter goes on to explore how issues of access to land and a desire to attend school interact with environmental stress to shape how mobility is enacted as a particular strategy for dealing with the resultant livelihood insecurity. Land and schooling were chosen as the former is central to rural livelihoods and particular to Ethiopia's historical and contemporary politics, while the latter is a central part of Ethiopia's manifestation as a

developmental state. In this regard, in the analysis of the interviews (see Chapter 4) it was also found that these two features repeated in both migrant and non-migrant accounts of their mobility decisions.

Having used the examples of land and schooling to highlight the complexity of the relationship between environmental change and other contextual factors shaping livelihoods, the chapter finally addresses the fact that despite all these compulsions to move out of the rural areas they remain populated. This begs the questions: what factors retard the process by which environmental stress manifests as mobility and, in turn, who moves?

Major Changes in Livelihoods

To this point I have only provided a very broad overview of the material basis of livelihoods in northern Ethiopia. Notable in the Ethiopian context however is the degree to which livelihoods have been changed by the dramatic social and economic changes that accompanied the demise of the monarchy, the rise and fall of the Socialist *Derg* and the establishment of the current government. From the conception of livelihoods provided by Chambers and Conway (1991), described in Chapter 4, and with a description of the processes shaping change provided in Chapter 5, it becomes relevant to discuss, briefly, the manner in which changes in land tenure manifest as changes in livelihood strategies in the study area.

Of the multitude of changes that were wrought in Ethiopia as a result of the coming to power of the *Derg* there are two with which we need concern ourselves at the moment. The first is that the country experienced a major drought and famine, and the second is that the *Derg* embarked upon its programme of land redistribution under the mantra ‘land to the tiller’. The redistribution of land (and the concomitant reduction in farm sizes) as well as the

legacy of the famine (and the interpretation that a major cause of it was a lack of production (Hoben 1995)) lead to efforts by the *Derg* government to increase farm productivity. In Ahuntegegne this manifested as an increase in the number of growing seasons (referenced in the previous chapter) from one to two so that farmers started to take advantage of both the spring (*belg*) rains, where previously they had only cultivated during the summer (*kiremt*) rainy season. In Habes, although land redistribution was undertaken, the impact of the *Derg* government was less pronounced. This is both because rainfall patterns did not allow for the option of implementing two growing seasons and because the reach of the Derg government into Tigray was limited by the military operations of the TPLF which sprung up in the area opposing the centralising tendencies of the *Derg* (see Chapter 5).

In addition to reducing land sizes through the redistribution of land, the Derg's mantra of 'land to the tiller' changed livelihoods by ending any practices of renting land and any form of absentee landlordism (see Chapter 5 for details). The former acted to lock people to their land as it became impossible to work elsewhere and receive payment from tenants. Any practice of longer term absenteeism – even if the land was not rented out – was also undermined by fears that the land would be redistributed to other members of the community who had remained resident in the area where the land was located.

Laws prohibiting absentee landlordism also ended an historic livelihood strategy for dealing with drought. This was evidenced by farmers who described that one means for dealing with the highly variable rainfall (both temporally and geographically) in the areas was to have multiple plots of land in different areas. When asked about this, farmers described how, prior to the Derg, it was common for those who had land to own plots in more than one area. This practice was the result of inheritance structures which meant that an individual would receive land from both their mother and their father. Since marriages were often undertaken across communities, farmers could own land in multiple locations which

decreased the likelihood of having all of their land impacted by rainfall failures. A life history from Askwal, a farmer in Habes, captures the importance of such changes:

> "The decrease in food is caused by reduction in the land people can own ... The problem is not the size of your land. Its because all your land is in one place … Before, you would get land from your mother and your father which was in different areas … if drought affected one piece of land then you could get crops from your other land. Now all the land is in one place, so the impact of the drought is bad." (Askwal[53] 2009).

The other major change that occurred during the *Derg* regime, was the global attention paid to the Ethiopian famine. I acknowledge that it is simplistic to attribute the growing amount of food aid supplied to Ethiopia simply to the occurrence of the famine, and thus do not intend to do so. For the sake of this chapter however it is worth noting that in the years since the famines the role of food aid has increased in importance in the livelihoods of northern Ethiopians[54].

With the demise of the *Derg* regime the EPRDF government has, like the *Derg* before it had to deal with increasingly fractionalised land tenure in northern Ethiopia. Thus, as the *Derg* did before it, the EPRDF has focussed its energies on improving farm yields and thus expanded on the *Derg's* weeding and multiple planting programmes. Additionally, EPRDF measures have included: encouraging the planting of eucalyptus trees on individual homesteads, increasing the pace of terrace construction on uncultivated slopes and making widespread the practice of water harvesting in an attempt to raise the water table in the area. The EPRDF have also focussed on getting farmers to mix animal dung with used cooking fuel to generate a more potent form of compost. Finally, the government has encouraged farmers to purchase and use genetically modified seed and industrially produced fertiliser.

Notably the EPRDF has lifted the *Derg* restrictions on people being able to rent out their land to others through sharecropping agreements (Admassie 2001). This has increased

53 Pseudonym

54 See Hoben (1995) for more on the policy responses to the drought of the 1980s and how they were dictated by particular political imperatives.

the mobility of a number of people who are now able to live away from their land, taking half the produce from the harvest collected on their land.

According to the government, future measures for dealing with issues of land availability include planting perennial crops (mainly orchards) on slopes currently deemed too steep for cereal cultivation and the provision of irrigation (Pers. Comms. Anonymous Interview 2009c, Tesfay 2009 & Feleke 2009). Land of this sort, it is claimed, will be provided to rural inhabitants looking for land on which to start their own household.

Having described the major socio-political changes that occurred in the rural areas we are in a position to describe the evolution of livelihood practices to the form they take today. This will prove illustrative for the manner in which it will combine with the above information to illustrate how rural poverty and reduced productivity are produced by multiple factors. This in turn will provide a better context for understanding how further environmental stress manifests itself as mobility within individual livelihoods.

Livelihoods as Dynamic

An examination of the changes in livelihoods undertaken in response to the changing socio-economic context of Ethiopia, described above, highlights the degree to which it is overly simplistic to view livelihoods solely in terms of their material underpinning with the assumption that such practices are either age-old or static. However, in addition to the changes in livelihood strategies wrought by structural changes in the socio-political and economic context, one also needs to appreciate the dynamic nature of livelihoods over smaller time scales – see discussion of livelihoods (Chambers & Conway 1991) and entitlements (Leach, Mearns & Scoones 1999) in Chapter 4. In this regard, in order to understand the impact of environmental stress on mobility decisions, we require an

understanding of how livelihoods manage the highly variable levels of production, which are apparent in northern Ethiopia.

In both of the field sites it was revealed to be a rare event that household incomes balance expenditures. Far more common was a situation in which households found themselves either unable to meet their needs through their productive activities, or generating a surplus. In times of surplus, income is usually invested in productive assets. Most common in such circumstances is the purchase of livestock from which a profit will be drawn, either from the rental of the animal or from the sale of the matured animal or its offspring. With this in mind there are substantial barriers to purchasing livestock. These include the large initial outlay for cattle and some reserve of money needed to purchase feed if the rains are poor in the following year. These two factors mean that the purchase of livestock requires a substantial production surplus in any given year. Additionally, the fact that livestock prices fluctuate with better or worse rainfall, thereby potentially undermining the profitability of such a purchase, adds further disincentive to purchasing livestock when the household surplus is only marginal.

Other investments during times of surplus thus include purchasing modified seed and fertiliser in the hope that they will improve the subsequent years' harvest. Some households described purchasing luxuries during times of surplus. These included milk, butter and honey. Honey was often accessed through the purchase of basic bee keeping equipment. Certain farmers expressed a preference for honey as a household luxury – note that it was not found to be used for sale – as they believed that it was good for staving off degenerative visual and cognitive conditions.

During times when household expenses exceed incomes, households generally pursue a combination of strategies seeking both to reduce expenses and sell assets. Strategies for limiting consumption included reducing household expenditure on goods such as non-

essential foods (honey, milk, butter) and clothing, and eventually reducing the amount of food eaten altogether – changing from three to two meals a day – and foraging for wild foods. Accounts of such behaviour appear in the following interview excerpts:

> Interviewer: How does the drought affect the way you live?
> Respondent: We eat less food and have no milk or honey.
> – (Letush[55] 2009)

> Interviewer: How do you survive without any harvest for the last four years (see previous chapter)?
> Respondent: We survive by eating nettles and a type of wild cabbage.
> – (Belinesh[56] 2009)

Farmers described the impacts of a lack of food as leaving them feeling weak and unable to work. In the case of their children they described how caloric restrictions had left them without energy, unable to pay attention at school and, in some cases, too weak to attend school. Farmers also described how caloric restrictions were making people, particularly elderly people, fall ill which placed greater burdens of care on the household's active members. An illustrative account comes from Ahuntegegne where Baye, a farmer, responds to a question on the implications of the drought's continuation:

> "My children will have to stop attending school. If the drought continues and there is no food aid. Then the children will be too weak to attend school." (Baye[57] 2009).

The sale of assets usually focussed on livestock with non-working livestock (sheep and goats) being sold first. Livestock sales are undertaken with the intent of either (or both) supplementing incomes to make up for production shortfalls (caused by whatever reason) or reducing pressure on depleted grazing (usually caused by poor rainfall). As such some households reported selling animals in order of decreasing feed requirements however there

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was not good agreement on which animals required the most feed.

The order in which different mixes of strategies are pursued varied by household depending on their store of wealth and other micro-scale factors that will be discussed in the following chapter. As such the exact wealth trajectories of different households was difficult to trace during the fieldwork. Keeping this in mind, it is notable that within these different mixes of strategies, there is a clear general approach by which households seek to maintain at least one draft animal and enough seed for planting their land the following year. A draft animal is necessary for a household to effectively till their land without having to either seek charity from a friend or family member with cattle, or worse, have to pay another member of the community for the use of their animal, and thereby incur a further household expense. Having access to seed is crucially important to household income as without it farmers are forced to rent their land, leaving them with only half of the potential harvest – essentially a share-cropping agreement. Thus in prioritising responses to income shortfalls, households, generally, seek to maintain seed stores and a single draft animal.

When selling animals, farmers described how they would sell their animals pre-emptively of community-wide production shocks (such as drought). This was done in an attempt take advantage of the higher market prices for larger, healthy cattle and to beat the glut in the cattle market which accompanied community-wide sales. This proved to be a major gamble for farmers who tried to juggle between maintaining their cattle herds until the next year's rains (when cattle prices would rise) or selling their animals pre-emptively of the drought. Many farmers described getting this wrong and either had to sell their animals when prices were already depressed, or when their animals had started to suffer the effects of reduced grazing, and thus fetched even lower prices. Still other farmers got things catastrophically wrong and in their gamble not to lose out on too much money described ending up with their animals dying while still part of their herd.

While the market price for the most readily sellable household assets falls during times of community-wide production shocks, both farmer's and merchants described how the price of food in the markets tended to increase during periods of localised food stress as a result of increased demand. With assets being worth less and households having to spend more on food, strategies aimed at limiting household consumption are the dominant means for dealing with production shocks.

With such livelihood responses in mind, it is worth describing the contemporary state of livelihoods in the field sites. Due to the protracted drought in the area, and what the farmers have described as even longer term trends in worsening rainfall (see Chapter 6), farmers' livelihoods, although still reliant on agricultural production, have changed somewhat from that described in the previous chapter. In Habes, where food aid is relatively comprehensive (see Chapter 9 for an account of why), livelihoods have become reliant on food aid as a means for maintaining their assets and basic levels of subsistence. The extent of this reliance, and its links to land tenure arrangements, is captured by the accounts of the vast majority of respondent farmers in Habes who claimed that even if the rains were theoretically perfect they would be unable to produce a harvest of sufficient quantity to sustain their households for an entire year. Thus for these farmers their livelihoods would currently be unsustainable without access to food aid every year.

In Ahuntegegne, where food aid appeared to be less comprehensive (covering a smaller percentage of households), the impact of the worsening rainfall has been to severely deplete the asset base of most households, who have had to sell assets to make up for production shortfalls. At the time of fieldwork, the state of material impoverishment, in Ahuntegegne, was so severe that virtually all households were reliant on rainy-season wild foods (which are limited to wild-growing weeds and nettles) as a means to meet basic levels of subsistence. Notably in Ahuntegegne, even with the consumption of wild foods, the

ongoing drought means that the assets base of virtually all households continues to be undermined. The degree to which food aid has become an integral part of livelihoods for households with access to it is made evident by the finding that virtually every farmer[58] worked every hour available to them in food for work programmes.

In addition to the changing role of food aid farmers in Habes described placing an increasing focus on the planting and sale of eucalyptus trees and the planting of succulents. Eucalyptus trees are sold as timber, principally for use in the urban construction, while the planting of succulents has focussed on aloes and cactus which are drought resistant and can be used as a supplement for cattle feed.

In Ahuntegegne, where failed *belg* rains, later *kiremt* rains and frost dynamically interact to stress households, farmers continued to plant barley, grass and potato. When questioned about why they had done this in spite of the late rains which meant the crops would be hit by the frosts, farmers generally responded by saying that they simply hoped that this year the frosts would hold off until the crops were mature. Farmers in Ahuntegegne also knew that while the frost-affected barley might be useless for human consumption it still had some use as animal feed and for thatching their houses. The impacts of frost on certain grasses were also relatively less and as such some farmers described focussing their attention more on grass and barley and less on potato and onion. Eucalyptus planting was compromised in Ahuntegegne as a result of the frosts which farmers described as killing the saplings.

In both areas farmer's had taken to planting their seeds in response to the rainfall rather than in anticipation of it, as they had done previously. They had also been forced, by the more clearly defined rainy period, to plough their land less times than they had previously (see previous chapter). Finally the research clearly showed that farmers were now highly risk averse regarding their consumption patterns. In numerous interviews farmers

58 Only one farmer was found to be an exception to this

described either limiting their consumption to the minimum, even when there was a year of relative abundance, as they were unsure what the following year might hold regarding production. An extreme example of this comes Yeraga, a household head living in Ahuntegegne, who continues to eat weeds and nettles in spite of having livestock that he could sell:

> "I still eat nettles even though I have animals … I would rather eat the nettles now and not sell my animals … things might get worse … it will be good to sell my animal then." (Yeraga[59] 2009).

In addition to food aid and changes in farming practices, contemporary livelihood security in both study areas is now intimately tied to the availability of micro-credit. The means by which credit is accessed will be described in the following chapter but for now it is sufficient to describe the manner in which credit has ingrained itself as a fundamental element of livelihood security. While credit is used for a variety of ends in the study sites, its most important feature was that it allowed families to maintain their draft animals – oxen and occasionally horses – and in a number of cases kept family members alive. In cases where production deficits had been both so severe and longevid as to erode all of a household's assets, credit was being used to purchase assets for consumption – principally food. In such cases households would take a loan, and spend some portion on food while the rest would be spent on productive assets – usually livestock which could be reared and sold or which could be used for breeding.

Households engaging in such strategies would consume the market-bought-food to survive the production shortfall. When the loans came due they would sell the productive assets they had bought. Ideally this would constitute some form of profit either through the growth of an animal or the production of off-spring. The shortfall on the loan repayment which was created by the purchase of non-productive assets was made up for by taking

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another loan, this time from the informal credit market – usually from a friend or family living in a town or living in an area where the environmental stress had not been so severe. This informal loan would then be used to pay back the government loan. Once paid back another government loan would immediately be taken and some portion of this would be used to pay back the informal loan. Once again, after paying back the informal loan, the government loan would be used to purchase both consumptive assets (food) and productive assets (sheep/oxen/horses).

Finally, a major change in livelihood priorities includes the increasingly important role played by education in household budgets. In this regard numerous parents in households described how when they were young they had not gone to school because their 'parents did not know the value of an education'. Today these parents insist on sending their children to school, with many choosing to sell household assets rather than see the reductions in household expenditure that could be achieved by saving on school-related expenses. Biserat, a woman farmer in Habes, highlights the growing importance of education in a description of how, despite experiencing a significant drop in household wealth as a result of the drought, getting her children to school remains a priority:

> "Schooling is the biggest expense for us … but I keep my children in school because education is important … I don't want my children to be illiterate like me and I hope that they can support me when I am old." (Biserat[60] 2009).

Many parents attributed the increasing priority given to schooling to an increased awareness generated by local political leadership and from local schoolmasters. Others ascribed this imperative to get an education directly to the impacts of rural decline, describing how children now needed an education if they wanted to have a life, as life in the rural areas was now so poor. Finally some impetus to achieve an education came from

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potential schoolgoers themselves. These children echoed the sentiments of parents citing rural decline, and would often, if their parents could not support them, try and support themselves through school.

Thus livelihoods in the field sites now represent areas of extreme poverty. Recent rainfall stress means that assets have been depleted in both areas as people sell their animals to make up food shortfalls. Asset depletion has been less of a problem in Habes where access to food aid has been both more comprehensive and more timely (see Chapter 9). Current diets in the areas are also extremely poor. In Habes food intake has been drastically reduced so that meals now generally consist of little more than Injera[61] topped with a paste of ground chilli. In Ahuntegegne where households have enough food to make Injera, that Injera is topped with boiled nettles and weeds which are collected from the surrounding countryside. In many cases households, in Ahuntegegne, without money to purchase grain, have been reduced to simply eating the boiled weeds and nettles, with nothing else.

With a good sense of both the contemporary livelihoods employed in the study area and the manner in which environmental stress impacts on households, we find ourselves in a position to reflect more critically on the approach used in the previous chapter. With only brief reflection, in light of the descriptions of livelihoods provided above, one can already see hints of how non-environmental factors might interact with stresses, located in the physical environment, to shape mobility strategies.

The next section of the chapter is aimed at describing four ways in which contextual, non-environmental factors impact on the manner in which environmental stress interacts with patterns of human mobility. The four interactions have been grouped into the following: (i) *additive effects*, (ii) *vulnerability effects* (iii) *enabling effects* and (iv) *barrier effects*. Here, *additive effects* refer to the effects of factors which are not constituted by the physical

61 Injera is a yeast-risen flatbread. Traditionally made from Teff-flour, it is served with most meals in Ethiopia and is the form in which the staple (barley, wheat etc.) is most usually consumed.

environment but which create an additional imperative to move. Notably *additive effects* can take two forms, *direct* and *indirect*. *Direct additive effects* refer to non-environmental factors which generate livelihood stresses that are the same as those generated by environmental stress. As such they add, in a direct fashion, to the imperative to move generated by environmental stress. *Indirect additive effects* refer to non-environmental factors that increase the imperative to move by affecting mobility imperatives not related to those effects generated by the environmental stress. In this regard *indirect additive effects* act to reduce the opportunity cost of moving and thereby increase the likelihood that mobility will be enacted in a context of environmental stress.

Vulnerability effects refer to non-environmental factors which exacerbate the negative impacts of changes in the physical environment on livelihood security. They represent the non-environmental factors driving household vulnerability to changes in the physical environment. *Vulnerability effects* mediate the impact(s) environmental stresses have on livelihood security and thereby shape the imperative to move. In this regard *vulnerability effects* refer to a vulnerability to environmental stress, so that exposure to such stresses has an impact on livelihood security.

'*Enabling effects*', refer to non-environmental factors which make mobility a particularly suitable response to the livelihood insecurity generated by environmental stress.

Finally '*barrier effects*' refer to non-environmental factors which retard the imperative to move. These operate either by diminishing the impacts of environmental stress on livelihood security, or by limiting the livelihood options available to people in potential destination areas, thereby reducing the opportunity cost of not moving. Notably it could be observed that certain types of *barrier effects* present a conceptual overlap with *additive* and *vulnerability effects*. In this regard certain *barrier effects* could be conceived as *additive effects,* operating in the opposite direction. Thus one could refer to some *barrier effects* as

'*subtractive effects'*, which, like additive effects, could operate either directly or indirectly. Similarly one could point out that *barrier effects* are those features acting to undermine exposure to environmental stress and are thus the opposite of *vulnerability effect.*

While noting that such a categorisation would be conceptually accurate, and potentially useful – providing greater clarity on the mechanisms shaping mobility – this work has chosen to lump such *effects* together with other *barrier effects* as the latter encompass more than simply *subtractive effects* and the opposite of *vulnerability effects,* and it is together that they become a feature of interest for the claims of this thesis about the relationship between environmental and non-environmental factors in shaping mobility strategies.

This next section of the chapter details the operation of non-environmental factors in the field sites. In so doing it focusses on highlighting how such factors operate to generate the different interactions just described. Such an approach is thought useful both for making clear what is meant by the different interactions and how such a form of analysis can provide a revealing lens for exploring the interaction between environmental and non-environmental factors in shaping mobility strategies.

Important Contexts: Tenure and Schooling

When exploring the narratives of migrants in the urban centres of northern Ethiopia, it is impossible to overlook the huge numbers citing a lack of access to land, or an insufficient amount of land, in their narrative of their decision to move. My argument below is that such non-environmental factors, determined by the specific system of land tenure in Ethiopia, amount to *additive effects.* Chapter 5 describes, in detail, the evolution of the Ethiopian land law up to the current point and with this in mind I refer, in the rest of this section, to the

general case in northern Ethiopia of small land holdings and intractable landlessness.

Ethiopia's particular mechanisms of land tenure along with high levels of demographic pressure, have resulted in a widespread phenomenon of intractable landlessness. This situation is the product of contemporary land holdings being so small that young rural inhabitants cannot access land through the traditional mechanism of inheritance as the land of their parents could not be further subdivided into plots large enough to support either an additional family, or all the additional families for all of the household's dependants. Further to this, since the private transfer of land by sale remains prohibited by law, young landless individuals are unable to purchase land for themselves in the rural areas. With no land currently available for cultivation, the only way in which currently landless individuals might get land in the rural areas is through a future state-lead redistribution of land (which the state says it will not undertake as land holdings are already too small) or through the current mechanism which involves the redistribution of land left vacant by deceased individuals for whom there is no locally resident next of kin. With fertility rates far higher than mortality rates in northern Ethiopia the number of people that can be accommodated by this last mechanism still leaves large numbers of young rural inhabitants without land and without any means of attaining it.

For migrants describing the small size of their land in their decision to move, accounts focussed on the inability of the land to provide a crop of sufficient size to support them and their family for an entire year. In such cases migrants frequently described how the impacts of environmental stress and small plot sizes combined to generate migratory pressures. Accounts of farmers corroborated those of migrants as they described how plot sizes interact dynamically with environmental stress to generate acute livelihood insecurity. For insomuch as worsening rainfall reduces crop yields and grazing land, so those diminished yields could (in large part) be accounted for if additional land was available for

grazing and/or planting. A clear example of this comes from a migrant in Weldiya:

> Interviewer: Why did you come to Weldiya?
> Respondent: I came to get another income?
> Interviewer: Why did you need another income?
> Respondent: Because of the bad rainfall … this is the third year that the *Belg* rains have failed and the *Kiremt* rains have also been getting worse …
> Interviewer: Have you had to move away from your land before this?
> Respondent: No. Before this my land [soil] was in better condition?
> Interviewer: What happened to the soil on your land?
> Respondent: My land has gotten smaller with my family getting bigger. This means that I can't leave the soil without crops and so the soil has gotten weaker.
> – (Yimam[62] 2009)

As such we see small landholdings act in a directly additive fashion. They contribute to the imperative to move by generating the same production-related, livelihood stresses as those generated by environmental stress. This case was best captured in the accounts of farmer's and migrant's which described that mobility was enacted to account for limited agricultural production, which was, in turn, a product of the scale of environmental change and the size of one's land relative to the size of the household one needed to support.

While the case of small landholdings is directly additive in that it compounds the same stresses as those generated by environmental change, other *additive effects* can operate by generating other imperatives to migrate which are not related to the stresses generated by environmental change. The effects, I have termed *indirect additive effects*. One such *indirect additive effect* is constituted by the other product of Ethiopia's particular regime of land tenure: intractable landlessness.

For migrants citing landlessness within their mobility narrative, landlessness, and its intractable nature, tended to combine with the existing context of widespread poverty when manifesting in the decision to move. The accounts of such migrants generally expressed how they had left the rural areas because of the lack of food, clothing and general poverty while

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adding: 'and besides I had no land'. In such accounts we can again see how the non-environmental factor of intractable landlessness is acting to generate a migratory imperative which is in addition to the poverty inducing effects of environmental stress. In this case, however, as opposed to that of small land holding, the *indirect additive effect* is constituted by the manner in which it creates another migratory imperative, thereby lowering the opportunity cost of moving and therefore contributing to the imperative to do so. Notably, this is distinct from the *direct additive effect* of small land holdings which contribute to the same livelihood stresses as those generated by environmental stress.

While an appreciation of the *additive* role played by non-environmental factors is powerful in getting to grips with the complex interplay of factors impacting on mobility in a context of environmental stress, evidence from Ethiopia suggests that it is not sufficient to conceptualise the impact of non-environmental factors solely in terms of *additive effects*. Cases where this is evident concern non-environmental, *developmental*, factors which mediate the exposure of livelihoods to environmental stresses. These factors are not additive in that they have no impact on the imperative to move. They do, however, provide a context in which environmental stress can produce a particularly strong imperative to move. As such I have referred to these effects as *vulnerability effects.* Such effects are essentially the product of the developmental inequalities which Lonegran (1998) and Black (2001) saw as lying at the heart of the illegitimacy of the notion of an 'environmental refugee' – see Chapter 3.

While the notion of *vulnerability effects* can prove useful in enhancing our understanding of the interactions between environmental and non-environmental factors shaping patterns of human mobility, their genesis can prove difficult to identify. This, it must be noted, should not be seen to undermine the fundamentally important role they play in mediating the relationship between environmental stress and human mobility. One clear

example of this pertains to the fact that much of northern Ethiopia's economy is reliant on rain-fed agriculture. There were some exceptions to this among households in the study sites who had land close enough to what were effectively perennial rivers making irrigation possible, however for most households seed germination was entirely reliant on rainfall. While the origin of such vulnerability lies in highly complex processes, there can be no doubt that such a non-environmental factor plays a huge role in shaping the strength of the migratory imperative generated by environmental stresses.

Having explained the role of both *additive* and *vulnerability effects* I turn now to the role of what I have termed *enabling effects.* Above I described these as factors which make mobility a particularly effective means for dealing with environmental stress. In order to describe what is meant by this I will draw on the case of migrants citing their desire to attend school as part of their narrative of the logic underpinning their decision to move.

Similar to the narrative of land size and availability, another common migrant narrative referenced the desire to 'attend school' or 'get an education' in their description of why they chose to move. When these migrants were further asked about their desire to attend school it quickly became evident that of fundamental importance in this logic was the perceived decline of the agricultural sector in particular, and of the rural areas more generally. As Wolde, a migrant to Wukro, explains:

> "I came to Wukro so that I could go to school and get a good job … I have to do this because the productivity of the land is going down in the rural areas." (Wolde[63] 2009).

Given the role of the current drought and, perceived, longer term decline in rainfall quality, such migrant narratives suggest a link between environmental stress and mobility strategies aimed at achieving an education.

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As was described earlier in the chapter education has come to be a household priority, so much so that households will often prefer to sell assets and send their children to school, rather than achieve the savings of not having to cover school-related expenses. In this context the fact that schools (particularly secondary schools) are located in the urban areas means that moving becomes necessary in order to achieve an education. As such the non-environmental factor of having schools located in the urban areas means that mobility becomes a particular strategy for dealing with the environmental change which is, in the first place, partly responsible for the imperative to attend school. In this regard non-environmental factors represent *enabling effects* in that they cause mobility to present as a strategy particularly suited to achieving a more secure livelihood.

While at first glance the above categorisation of *additive, vulnerability and enabling effects* might seem like a neat categorisation of how non-environmental factors interact with environmental stress in shaping mobility decisions, a closer examination of these effects shows the situation to be more complex. The first thing that should be noted in this regard is that multiple effects can operate at once. For example *vulnerability effects* exposing people to changes in rainfall can combine with *additive effects* such as a small land holdings to shape particular migratory imperatives. Secondly, and in a more complex fashion, accounts from the fieldwork make clear that not only do different effects combine, but that in certain instances they can actually be constitutive of one another. Such a case is highlighted by the phenomenon of migrating to attend school.

The reader might have noticed that in the accounts of migrants moving to the urban areas in order to attend school, migrants were mentioned to have frequently referenced the importance of agricultural decline in their decision to prioritise the pursuit of an education. Here, while it is important to acknowledge the role of environmental stress in this process, one also needs to acknowledge the role of non-environmental factors in rural decline. To get

a sense of this I highlight the general accounts from migrants who, when asked why they had chosen to migrate to get an education rather than stay in rural areas, stated something akin to: I left 'because there is no work in the rural areas'. When pressed on this migrants would explain that there is no money, no business and thus no work in the rural areas. Respondents would then go on to explain that since they had no land and no means for accessing land they had no choice but to move to the urban areas.

Looking at such accounts one can see how the *vulnerability effect* of households being reliant on rainfed agriculture, interact with changes in rainfall and combine with tenure arrangements to stress livelihoods and push people into off-farm labour. With the entire rural economy reliant on rainfed agriculture, such off farm work is impossible in the rural areas and thus has to be sought in the towns. The fact that such work requires basic educational qualifications – basic numeracy and literacy in the least – means that pursuing an education is a fundamental strategy in pursuit of a secure livelihood in the future. The location of schools in the urban areas finally means that mobility is a strategy particularly effective at dealing with the multiple stresses generated by the interaction of environmental stress and a host of *additive* and *vulnerability effects*. The following interview from a migrant currently resident in Weldiya highlights the relevance of these complex interactions in the operation of *enabling effects*.

> Interviewer: Why did you come to Weldiya?
> Respondent: So that I could attend school.
> Interviewer: Why did you want to come to school? Why couldn't you stay in the rural areas?
> Respondent: I could not farm because my parent's land is too small and too unproductive. There is also not enough work in the rural areas to survive. So I came to school so that I can get a good job.
> Interviewer: You said your parent's land is unproductive, what is wrong with the land? Why is unproductive?
> Respondent: The land is unproductive because of the bad rainfall.
> – (Mogus[64] 2009)

64 Pseudonym

As such we should not overstate the neatness of the categorisation of non-environmental factors important to mobility decisions in a context of environmental stress. For as the example of schooling shows, clearly *additive, developmental* and *enabling effects* can interact in complex ways. With this in mind the accounts of some migrants, again citing schooling, revealed that even greater levels of complexity might relate a host of non-environmental factors to environmental stress in mobility decisions. Evidence of this complexity comes from the aspirational tone that many migrants took when describing their decision to move to the urban areas and pursue a formal education. Such accounts highlight that the decision to become mobile and pursue an education is only partly determined by material survival and that in addition to this, migrants move to the urban areas to pursue a life that they consider to be worth living. To understand this process and thus the relationship between environmental stress and non-environmental *additive*, *developmental* and *enabling effects*, I turn to interviews with migrants which explored why they had chosen to leave the rural areas I order to attend school.

When asking migrants why they wanted to come to school the most common response was '[I want to] improve myself'. When pressed on what exactly the migrants meant by 'improve oneself' explanations included two general responses. The first was material and pertained to one day wanting 'to get a good job'. Such a job was usually described as one that was well remunerated and did not involve manual labour. It was usually envisaged as some form of office work. In addition to such material concerns, migrants frequently described that 'improving themselves' pertained to what might best be described as the elements of their own enlightenment. To this effect migrants accounts included statements such as:

> "I want to go to school to be modern and understand about the world."

(Mulu[65] 2009).

> "I came to Kone to go to school ... I wanted to attend school to get a good job and because both the PA Chairman and my teachers told me that school was important if you want to improve yourself." (Yefugash[66] 2009).

If we are to understand the role environmental stress might play in such a process then in accounts describing aspirational lifestyles, it becomes relevant to explore the role environmental stress might play in the construction of what people consider to be the good and desirable life. In this regard it is clear that migrants saw their aspiration to an urban, materially secure existence in opposition to their rejection of a rural, materially impoverished and backward existence. Such findings are buttressed by Cramfield and Tafere (2009) who find that perceptions of well-being, among young people in Ethiopia, are tied to their ability to access education and a secure physical environment and their fulfilment of their basic needs. Evidence of such perceptions, from this fieldwork, appeared in responses to questions about whether people desired to return to the rural areas when they finished with school. Such responses were overwhelmingly negative (there were a few exceptions), with migrants explaining their positions with repeated reference to the lack of 'jobs', 'facilities', 'food' and 'clothing' in the rural areas.

In contrast to descriptions of the rural areas as lacking in the things that young migrants desired, migrant accounts of their preference for remaining in the urban areas revealed a perception of such areas as the actual embodiment of modernity. When discussing with non-migrants where they would choose to move if they did so in the future, and similarly while discussing with existing migrants if they intended to move in the future, their heuristic for determining the importance of a town frequently made direct reference to its infrastructure. Respondents described towns as being 'more (or less) important' depending on the number of floors in the tallest building. Similarly migrants frequently described liking the

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urban areas for the fact that they were 'neat' and 'tidy'. Enquiries on this front revealed the migrants were referring to the straight lines and infrastructure in the urban areas.

In such accounts it is clear that in the construction of the good life, poverty and ignorance have been collapsed in descriptions of the rural areas as backward. This construction stands in opposition to the urban areas which are the domain of wealth, enlightenment and the future. Given the role of material poverty in the migrants rejection of the rural areas, it would seem highly unlikely that the impoverishing effects of environmental stress play no role in the construction of the rural areas as fundamentally undesirable places.

If we understand rural-urban mobility to be, in part, a response to the construction of rural and urban areas – with the role of environmental stress being to undermine the desirability of the rural areas – then, to understand the role of environmental stress in mobility decisions, also requires some understanding of the factors informing the construction of urban areas as desirable. For it is only through such a context that the impacts of environmental stress are rendered intelligible in terms of their role in mobility decisions.

In this regard the historical process by which Ethiopia transitioned through systems of government characterised by monarchy, socialism and constitutional democracy are detailed in Chapter 5. In order to avoid repetition similar descriptions will not be repeated here other than to suggest that Ethiopia's increasing international openness, post 1991, has had a major impact on how people conceive of the desirable life. For the institution of an (officially) democratic government, and exposure to international trade and media, has changed the operation of the labour market, increasing the value of schooling as crucial to the attainment of social mobility (Camfield & Tafere 2009) and thereby changing young Ethiopian's understanding of how the good life might be attained.

In this context it appears that environmental stress is interacting with other *additive* and *vulnerability effects* to make the rural areas less desirable. However since this notion of

desirability is constructed in opposition to the urban areas, then the role of environmental stress in mobility decisions is, as a result of *enabling effects* (such as the locations of schools) interacting with a host of other *enabling effects* (including particular developmental experience of Ethiopia) which actually serve to shape how the mix of environmental stress and non-environmental *additive* and *vulnerability effects* are interpreted in terms of what constitutes a life worth aspiring to.

With the above in mind we can begin to appreciate the futility of discussions focussed on understanding the relative weights of different factors in shaping people's decision to migrate in a context of environmental stress. For not only would it prove exceptionally difficult to ascribe weights to *additive effects* but in the case of *vulnerability effects* the notion of weighting does not even make a great deal of sense as such effects are not situated within the causal chain (see Chapter 10 for a more detailed discussion on this issue). The futility of an approach focussed on separating out different effects however is made most clearly by the case of *enabling effects* which in certain instances appear to be the factors shaping how environmental stress is interpreted and thus when, how and to what extent it will impact on mobility decisions.

To this point the discussion of non-environmental variables and the impact they have on migration in a context of environmental stress has been limited solely to descriptive accounts. The implications of these findings will be discussed in Chapter 10. For now however it is relevant to turn to the question exploring how non-environmental factors might impact on the character of mobility strategies enacted in a context of environmental stress.

Context and the Character of Migration

The previous chapter has already made mention of the complex character of mobility

strategies undertaken in the context of environmental stress. Notable in the previous chapter, however, was the apparent randomness which characterised the migrant's choice of destination and conditions of duress. With the above in mind, it becomes clear that with only a brief examination of changes in the socio-political features of Ethiopia, concurrent with reports of environmental stress, we are quickly able to understand a great deal more about the character of rural-urban migration in northern Ethiopia and thereby ascribe explanation to what previously seemed like random events. For example once we appreciate that migrants do not simply move to the nearest town as means to survive, it is clear that the reason for migrants no longer travelling to Eritrea is because of the changing economic conditions in Eritrea and the deterioration of relations between the two countries, notably the closing of the border – see Chapter 5.

Continuing to explore migrant's choice of destination, Ethiopia's policy of ethnic federalism (see Chapter 5) appeared to function as an important context, shaping where migrants went in their attempt at ameliorating the impoverishing impacts of environmental stress. In this regard migrants, citing some influence of environmental stress in their decision to move, described a preference for destinations within their own ethnic territory. When asked about this respondents expressed both pejorative attitudes toward other ethnic groups and a fear of ethnic-based violence in other states.

In addition to fear and pejorative attitudes, migrants also described a desire to migrate within their own ethnic region based on the existence of structural barriers which prevented social mobility in destinations outside of one's 'home' NRS. Such features included the use of different languages in both business and administration. As such migrants' propensity to move beyond the boundaries of their NRS was further retarded. An account which captures much of this sentiment comes from Desta[67] (2009), who had previously moved to the Oromia NRS, in the south of the country, but had to return due to

67 Pseudonym

what she described as ethnic-based conflict:

> "We had to leave Oromia[68] and come back to Weldiya because of the fighting between the Amhara and the Oromo ... The south of the country is better because there is more work there, but we won't go back ... It is not good there because of the discrimination and violence … we also cannot defend ourselves to the police." (Desta 2009).

From the above then we can start to make sense of what previously seemed to be random patterns of mobility as, by contextualising those acts of movement within the broader socio-poilitical context, we come to understand how major non-environmental, structural forces act to influence migrant's choice of destination.

Looking at the above accounts, which highlight the role played by ethnic federalism in shaping migrant's choice of destination, one might also note that such features act to undermine mobility options. While this work has yet to describe what sort of non-environmental factors might retard the imperative to move in the face of deleterious environmental stress, it has already made clear that while mobility is a strategy enacted by some people, others remain resident in the rural areas, in spite of such stress. As such, one might reasonably ask if environmental stress was described in virtually all interviews, and if all the areas are exposed to the same contextual factors of demographic pressure, specific forms of land tenure, and the imperative to get educated, then why has everyone not moved out of the rural areas? For it is not the case that we find the rural areas void of people. Rather we find that competition for land remains high. As such our model for understanding the relationship between mobility and environmental stress in northern Ethiopia requires further amendment. This next section of the chapter is aimed at achieving this by focussing on the non-environmental factors retarding mobility.

68 This is a reference to the Oromo NRS

Barriers to Migration

The manner in which non-environmental factors can create *additive effects* which interact with environmental stress in shaping mobility decisions was described earlier in the chapter. The initial discussion also cited the potential for the such additive effects to operate negatively, thereby reducing the imperative to migrate. In that section I made the case for terming such effects *barrier effects* as a means to account for the host of non-environmental factors which operate to retard the imperative to move.

Before describing the operation of such effects it is worth briefly pointing out that this section of the chapter is based on interviews with migrants but it also makes extensive use of the accounts of non-migrant, farmers. It is informed by the explanations migrants gave for having moved while other family and community members have remained in the rural areas. In the case of non-migrants this next section is based principally on responses to questions regarding what people would do if the environmental stresses they are experiencing now continue to get worse, why they would be (or have been) hesitant to move up to this point and whether they favour mobility at all.

One of the most prominent *barrier effects* encountered in the field-work pertained to the availability of food aid which operated as a direct effect, retarding the imperative to move by alleviating the livelihood insecurity generated by environmental stresses. Discussions of the role played by aid and other institutionalised relief activities is not novel in research on the relationship between environmental stress and human mobility. In this regard Paul (2005) posits that the limited migration enacted in response to tornadoe-induced damage in Bangladesh can be explicitly linked to the distribution of appropriate, and fairly administered, aid to the affected communities. Similarly Frey and Singer (2006), in their comparison of findings from the hurricane impacts of Katrina in New Orleans and other

parts of Mississippi, show that institutional responses in terms of aid play an absolutely fundamental role in dictating the nature of the migratory response. McLeman et. al. (2007) also note, that migratory responses to the U.S. dustbowl in the 1930s were shaped by the differing political responses of presidents Hoover and Roosevelt. Findings from this literature suggest that certain types of institutionalised relief responses shape mobility strategies in very particular ways (Frey & Singer 2006) and, more specifically, responses which provide relevant material support, in sufficient quantity and in a manner that is deemed both timely and fair (by the directly affected population) acts to undermine the rate of outmigration (Paul 2005).

In the case of northern Ethiopia there can be no doubt that the existence of food aid – principally through food for work projects – played an absolutely fundamental role in diminishing the imperative to move among both the households and individuals able to access it. The clearest evidence of this link comes from the accounts of farmers in Ahuntegegne who, in response to questions about when they would move, described how they would leave 'when the food ran out' in their households. In this regard farmers actually made explicit reference to the importance of food aid in their reflections on mobility by describing how they would take the decision to move based on the impacts of the rains, the frost and whether or not government support arrived. One clear example of the importance of food aid as a *barrier effect* came from a respondent, in Ahuntegegne, who described how he was planning on migrating in the coming days as food aid had not been forthcoming and his household's assets had been entirely depleted in order to purchase goods necessary for the household to survive and to keep the children in school. Similar accounts could be found amongst farmers responding to questions about the likelihood of mobility forming a response to further crop failures with no change in the availability of food aid. These farmers described the inevitability of leaving in a fashion akin to the logic of proponents of the

'environmental refugee' stating some rhetorical equivalent of: ‘what else can I do?’. Such groups also tended to describe how numerous other people had already left the rural areas 'due to starvation’ or 'because of hunger’

While the above *barrier effects* have significant implications for mobility strategies, it should be noted that it is not only through the alleviation of the livelihood stresses generated by environmental stress that non-environmental factors can operate to retard migratory imperatives. Other, non-environmental, factors also generate powerful *barrier effects*, through the manner in which they limit livelihood options outside the migrant's current place of residence. The principal result of such barriers is that rural-urban migration does not prove to be a panacea to the problems of livelihood insecurity experienced in the rural areas in a context of environmental stress.

Dominant in the descriptions of non-migrant respondents to questions on why they wouldn't move in the future were references to the high cost of living – particularly regarding food prices and accommodation – and the saturated labour market which meant that urban work was both irregular and poorly paid. An example of one such account comes from Ahuntegegne:

> Interviewer: What will you do if the drought gets worse?
> Respondent: We will take a loan and then we will sell our animals. After that there is nothing we can do ... My husband cannot migrate, he is sick. My children are too young to leave. We cannot migrate together as the costs of living will be too high … all we can do is pray.
> – (Taje[69] 2009)

In addition, to such accounts from non-migrants, migrants described how ongoing inflationary trends and the sudden loss of work meant that urban livelihoods were not without shocks and stresses of their own.

Migrant descriptions of their urban livelihoods and of their experiences settling into

69 Pseudonym

the urban areas also revealed that the relationship between livelihood stress and changes in the physical environment is not limited to the rural areas, and that the same environmental stresses that impoverished rural livelihoods were also found to impact upon livelihood security in the urban areas. In this regard migrants described how food prices increased in the urban markets as decreasing farm production (in part a product of environmental stress) increased food scarcity. These accounts were verified by food merchants who were operating in the markets of Wukro, Atsbi, Weldiya and Kone, and who also ascribed the higher prices to a lack of production caused by rainfall stress.

Similarly it was revealed that certain vocations had become untenable as environmental stresses combined with other factors to drive up the price of basic inputs needed for urban livelihoods. Most illustrative of these cases were migrants who described giving up their pursuit of livelihoods based on income from the sale of local alcohol, called *Tala,* (a job that used to be done by large numbers of newly arrived female migrants) and working as carpenters (a common vocation for newly arriving male migrants). In both cases the increased price of wood, caused by an increased demand for construction materials in the urban areas and decreased availability in communal woodlots, has driven down (or made highly variable) market demand to a point that fewer businesses can be supported. Female *Tala*-sellers described that in response they had mainly taken to selling tea where profits are much smaller, while carpenters had either increased the amount of low-skilled, low paid, work they did or tried to shift into metal work (an occupation with much greater barriers to entry) as a means to maintain their incomes.

Finally migrants described how changes in the sending areas were affecting life in the receiving areas as a result of historic mobility strategies. In such cases migrants described how the increasing number of people coming from the rural areas was making subsequent movement less attractive. This was because increased populations in the urban

areas placed an increasing strain on limited resources and jobs, thereby driving costs higher, increasing the variability of employment and lowering wages.

In addition to the insecurities of urban livelihoods there were other factors which retarded the imperative to move in response to changes in the physical environment. Although it has been mentioned in the previous chapter that some migrants were willing to walk long distances with little capital in order to reach their destinations, other non-migrants reported that it was precisely transport costs and the costs associated with settling into the towns that prevented them from moving at all.

What then can we make of the impacts of *barrier effects* on actual mobility strategies enacted in a context of environmental stress? Firstly, it is worth noting that interviews with non-migrants revealed that they were well aware of such effects and displayed an acute knowledge of the difficulties of urban life. In this regard farmers frequently described their decision to remain in the rural areas, despite desperately low levels of production, in terms of the high costs of living in the urban areas and the lack of available jobs. They also described a knowledge of the degree to which environmental stress was impacting urban livelihoods with one respondent (Haftu[70] 2009) explicitly stating that it would actually be a bad idea to move to the urban areas now as the poor rainfall for the last four years means that there are already many migrants in the urban areas. This, he said, meant that the cost of living was actually higher because of the recently poor rains which have reduced levels of local food production, and thus driven food prices up in the towns. Thus he described that he would only migrate in the future as a means for escaping the dwindling productivity of his farm, but that he would wait for environmental conditions to improve before he did so. This, he claimed, would be a better strategy than migrating now when work is so scarce and the cost of living so high (Haftu 2009) .

Beyond simply changing the time at which farmers might choose to move to the

70 Pseudonym

towns, the extent to which *barrier effects* can act to effectively undermine mobility is revealed by a comparison of Habes and Ahuntegegne. The comparative case of Habes and Ahuntetgegne is revealing because farmers in both areas reported how production, per farm, has dropped to below subsistence levels, however differences in the barrier effects between the two sites highlight the differences in their operation. In Habes farmers described that production levels, per farm, were now so low that even with theoretically perfect rains the vast majority of households would not produce a harvest from their land which was insufficient in quantity to sustain their household's basic dietary requirements for an entire year. As such livelihoods in Habes are largely reliant on the relatively comprehensive food aid that is available in the *tabia*. In such a situation it becomes difficult to imagine what the situation vis-à-vis mobility might look like without the food aid. In fact, this sort of hypothetical situation – of farms not being sufficiently productive to support their occupants – represents the imagined situation constructed by proponents of the concept of 'environmental refugees', where production is reduced to a level which is below subsistence levels. In such cases the question is posed in terms of: 'what else can people do but migrate?'

The case of Ahuntegegne is revealing in this regard. For reasons which will be dealt with explicitly in Chapter 9, access to food aid in Ahuntegegne is poorer than it is in Habes. Notably, however even in this case, where production levels had dropped well below the levels required for subsistence, and where food aid was not forthcoming, out migration did not appear to be the only response. It appears that due to significant *barrier effects* some farmers would far sooner deplete their asset base than they would migrate and even amongst those who had depleted their asset base migration was not an inevitability. In cases similar to the one described above – where asset stores had been depleted, planted crops were likely to fail (due to the frost) and households were reduced to subsisting off weeds and nettles – questions on the potential for migration generated a very different response. In these

responses farmers described how they would not leave the rural areas saying that they would rather die here than migrate anywhere else. Descriptions from such individuals were usually framed in a language of helplessness with people suggesting that moving was simply not an option for them as they would not be able to find work in the urban areas. They claimed that their moving to the towns would as likely result in their dying as remaining in the rural areas without food. As such they said that they thought that they would rather die on their own land than in the towns. Amongst these groups, refusing to move, descriptions of their motivations contained a mix of helplessness and entitlement and would involve statements like:

> "If the drought continues, the young people will leave and the old people will die ... The government must help us ... There is nothing left for me to do but pray to God." (Tadese[71] 2009).

It is thus clear that food aid plays an important role in mediating the impact of changes in the physical environment on migration. It also suggests at least two clear responses to the question, framed in terms of 'common sense models' (see Chapter 4), of 'what else can people do but migrate when the conditions of production fall below levels necessary for subsistence?'. The first is that conditions of production do not appear to be the only factors affecting rural livelihood security. Thus they are not necessarily the major determinants of mobility. The clearest evidence of this is food aid which is now clearly a fundamental part of contemporary livelihood strategies in northern Ethiopia and which highlights the simplistic assumptions contained in 'common sense models', wherein livelihoods are conceived of as both atomistic and apolitical. The second response to the question: 'what else can people do...?' clearly includes: stay and die; or stay and continue to attempt to mobilise other forms of external support which will ameliorate the impacts of

71 Pseudonym

environmental stress on livelihood security.

With food aid forming the most prominent direct *barrier effect*, I turn now to discuss some indirect *barrier effects* which were observed in the field sites. Such effects act to undermine the imperative to move created by environmental stress through the manner in which they increase the opportunity cost of moving. The clearest non-environmental factor of this sort was the strong attachment to the land which which was expressed by both migrants and non-migrants in all the field sites. In this regard, numerous non-migrants described that they did not want to leave the rural areas because they wanted to live in their birthplace – 'where their umbilical cord was buried'. They often described how their land 'was the land of their parents' and as a result they wanted to both 'live and die here'.

In a number of instances, particularly in the highlands, this attachment to land was expressed through references to the quality of the environment. Such references would cite things like the fresh air in which, it was claimed, people did not get sick. Some people went so far as to claim that even though they were starving they were still alive because of the healthy environment in which they could live. Many references to health – particularly in the Ahuntegegne site – also displayed a grave fear of contracting malaria in the towns at lower altitudes. Amongst migrants this attachment was expressed in their desire to return to their birthplaces so that they might die where they were born. This sentiment was expressed in term of a fear of dying in the city and being laid to rest by way of a poorly attended funeral in an unknown grave. Such circumstance was compared to dying in their birthplace where they described how their resting place would be known and respected.

What we can see from the above discussion is that there are clearly a host of factors which act to retard mobility even in a context of materially impoverishing environmental stress. The existence of these factors highlight the limitations of an approach focussed on understanding mobility decisions in a simple uni-directional fashion which conceives of the

'rural' and 'urban' in simple dichotomous terms. Such contextual accounts also undermine the relevance of models built on the assumption that livelihoods in the rural areas are the simple product of atomistic, apolitical subsistence farming practices. Finally, the fact that barriers to migration can act to prevent migration altogether suggests that the conception of mobility as a livelihood strategy invoked as an inevitability at the end point of livelihood insecurity are clearly not satisfactory.

With the above in mind we are afforded a greater understanding of how changes in the physical environment impact on patterns of human mobility. For there appear to be a host of significant forces acting to retard mobility which explain why the existence of environmental push factors have not lead to an emptying of the rural areas. That said, descriptions of the sort provided above still fall short of a meaningful understanding of the relationship between environmental stress and human mobility. For they beg the now obvious question: What differentiates those who move from those who do not? Or in other words: who moves? The next chapter of this thesis discusses precisely this question. For now though it is worth reflecting on the important empirical findings revealed by this chapter.

Conclusions

This chapter has sought to elaborate on the previous chapter. In this regard, whereas the previous chapter focussed on the mechanisms linking environmental stress with mobility, this chapter has sought to take lessons from the literature described in Chapter 4, and explore the manner in which environmental and non-environmental factors interact in shaping mobility decisions.

To achieve this, the chapter first had to look at some of the historical context which has shaped contemporary livelihoods, in this regard the chapter described how some of the

socio-political changes, described in Chapter 5, have shaped the livelihood strategies observable in the field-site today. Following this, the chapter sought to politicise the livelihood context, advancing the apolitical, subsistence account of livelihood offered in the previous chapter. To this end the manner in which households manage high levels of variability in production was used to show how livelihood security is reliant on more than simply agricultural production and the state of the biophysical environment. Important features in the field site, included access to both food aid and credit.

With a more accurate understanding of the contemporary livelihoods in the study site, the chapter went about contextualising the migrants' narratives, described in the previous chapter, in terms of other, non-environmental, factors which had also presented as important in the mobility decisions taken by respondents. In this regard the chapter presented a conceptual account of how environmental and non-environmental factors interact in shaping mobility strategies. In so doing the chapter presented four *effects* of non-environmental factors which mediate the mobility response in a context of environmental stress. These *effects* were categorised as: *additive effects, vulnerability effects, enabling effects* and *barrier effects.*

Regarding *additive, vulnerability and enabling effects*, prominent factors from the field site were issues of land tenure and schooling. Regarding *barrier effects* similarly important factors were food aid, the difficulties of getting work in the urban areas, and attachment to land in the rural areas. An important outcome of the focus on *barrier effects* was to highlight the degree to which migration does not present as a simple panacea to the problems of livelihood insecurity experienced in the rural areas. The other important revelation from this account was that while such a characterisation might be useful, in order to not be simplifying one needs to appreciate the degree to which these different effects can interact in complex ways to (i) compliment, (ii) undermine and (iii) be constitutive of one

another.

Finally the chapter focussed on describing how such a contextualisation of livelihoods allowed one to make greater sense of the seemingly contradictory mobility strategies described in the previous chapter. Here an appreciation of features such as Ethiopia's adoption of an ethnically federal model and the closure of the border with Eritrea allowed us to make greater sense of the destinations migrants were now choosing. Similarly an appreciation of the major barriers to mobility afforded an explanation as to why some people don't leave the rural areas. In so doing it also provided a major critique of the common sense models, for whom migration is conceived of as an inevitable outcome of livelihood insecurity.

With the above in mind, this last point raises an important question for this theses: what are the factors which determine for whom mobility presents as a viable livelihood strategy and for whom does it not? Answering this question requires a contextualisation of the relationship between environmental stress and mobility at more localised scales. The following chapter of this thesis is concerned with this question.

8

WHO MOVES?

Much of the previous chapter's insight into the relationship between environmental stress and human mobility stemmed from finding that *barrier effects* can leave rural-urban migration as a strategy unable to ameliorate the conditions of livelihood insecurity generated, in part, by environmental stress in the rural areas. While such an observation is important for enriching our understanding of the potential role climate change might play in shaping patterns of human mobility, it also presents a question that requires answering. For if non-environmental factors undermine the imperative to move and not everyone in a community impacted by environmental stress moves, then what are the interactions between environmental and non-environmental factors which dictate for whom mobility manifests as a livelihood strategy in a context of environmental stress?

This chapter seeks to answer this question and then explores the implications of the findings for our conceptualisation of the relationship between environmental stress and human mobility. To do so it opens with a discussion of the broad trends in migrant characteristics before going on to highlight exceptions to these trends. The chapter argues for a conception of mobility which views it as a decision taken in response to the micro-level features which determine individual livelihood strategies and which, while shaped by processes operating at a macro-scale, is not determined by them. From this perspective the chapter describes some of the micro politics important in mobility decisions as well as describing the important role of power and access, at the level of the community, as important features in determining mobility strategies. From this perspective it is argued one is better able to make sense to a host of mobility strategies if one accounts for such micro-scale features of power and access. To illustrate the usefulness of such a perspective the

chapter goes on to highlight some unexpected relationships between environmental stress and mobility before showing how such a perspective allows one to make sense of the different mobility strategies employed by migrants. The chapter closes with a re-assessment of the mobility characteristics, in light of this perspective focussed on micro-level livelihood strategies.

Who Moves?

In the previous chapter the focus fell on migrant narratives citing access to land and the pursuit of an education as important factors in mobility decisions. Since access to land and the pursuit of an education both correlate with age, it should not be too surprising to hear that both migrants and non-migrants, alike, described how young people were most likely to move to the towns under conditions of environmental stress – a phenomenon confirmed by the observations of the researcher. Middle-aged to elderly individuals, on the other hand, tended to be less mobile. They also tended to be landed, had little or no interest in attending school and had dependants – the last of these resulting in significant *barrier effects* pertaining to increased capital costs in moving and exaggerating the impacts of higher costs of living in the urban areas.

Elderly individuals were generally considered to be the least likely to move. Accounts of elderly individuals found non-migrants citing their age as the principal factor inhibiting their ability (and thus desire) to move. Such accounts were gathered from discussions with elderly, non-migrants, in which they described an absolute refusal to move, and included statements like the following:

> "If the drought gets worse I will just die here. I will not go anywhere as I am too old to move … I think my children will leave so that they can

survive ... I won't expect them to send any money back." (Takla[72] 2009).

In addition to their age, elderly farmers would cite their unsuitability to urban livelihoods when describing their unwillingness to move. Here they would point out how they had no skills and thus could not find employment outside of manual labour. In this regard they would describe how old men cannot get work in manual labour where contractors want 'young men who can work hard'. Finally, attachment to land, which was mentioned in the previous chapter, was expressed most strongly in interviews with elderly non-migrants.

Among younger, landless individuals it appeared that there was little differentiation among men and women regarding who moved[73]. That said, while social networks and a prior knowledge of their destination was generally found to be important, interviews with male migrants suggested that they were less reliant on such networks and experiences than were female migrants. Here male migrants would describe moving to towns where they had heard of the best work opportunities, regardless of whether they might know people there or whether they had any prior experience of the town. Female migrants, on the other hand, appeared to prioritise the use of social networks, with it appearing far more common to hear that in preparation for the move, women had managed to find some work before they left the rural areas.

Young male migrants also appeared to undertake work that was better paid but less secure. Structural explanations for this include social norms regarding what constitutes appropriate, unskilled, work for men and women. For example, male migrants principally found work doing manual labour: carrying goods in the market places, working on building

72 Pseudonym

73 It should be noted that since this was not an quantitative study there can be no way of confirming that men and women had an equal propensity to move. Since there is good evidence that men and women's experience of public and private life is distinct in Ethiopia (Vaughan & Tronvoll 2003) and that such differences are known to result in differential experiences of the environment (Robbins 2004), it may well be that differences did exist between men and women's propensity to move. In this regard, what is being noted above is that there was no evidence of a differential social sanction on either men's or women's mobility options.

sites, or working on one-off manual tasks. Female migrants, on the other hand, tended to work in hotels, bars and people's homes. In this regard 'women's work' tended to require greater amounts of trust between the employer and employee and so these sorts of 'women's jobs' tended to be more permanent – such a context might also explain the importance of social networks and planning in women's mobility strategies – but also tended to be paid less. Further contribution to the gendered separation of labour, was the existence of prevalent social norms which mean that women are perceived as less capable of manual labour which resulted in a lower hourly wage than that received by men. As such they tended to opt out of such work which carried the additional burden of being highly unstable.

Among middle-aged groups of migrants, although there was a general reluctance to move, mobility was still considered as a potential strategy and appeared to be employed to a greater extent than it was among elderly individuals. Notably it is this middle-aged demographic that would most likely fit the imagined category of vulnerable person[74] in the literature on 'environmental refugees'. Such middle-aged migrants tend to be landed and appeared to be more likely to acknowledge the diminishing productivity of their farms in their decision to move. Within this demographic it was found that mobility strategies most closely resembled the new economics of labour migration (see Chapter 2), with male heads of household most likely to migrate with the aims of spreading household risk by sending remittances to the rest of the household, which remained in the rural areas.

Notably while the new economics of labour migration seemed relevant among the mobility decisions of heads of households, they did not appear to have much of an impact on younger household members. Interviews with farmers revealed how they had few illusions of their children moving to the towns so that they might support the family through economic hardships – as the above account of Takla (2009) showed. Rather, when

74 This imagined person refers to the atomistic, apolitical and ahistorcial subsistence farmer for whom access to productive assets is constituted solely through ownership.

questioned on whether, if conditions continued to get worse, they would have one of their children move to the towns, respondents generally described that they knew it would be very difficult for their children to make enough money to send anything back to the rural areas.

It should be noted however that while most young, rural-urban migrants described being unable to send money back to their rural household, many of them expressed a desire to do so. Further, while parents did not expect their children to support them through difficult economic conditions they did seem to expect their children to care for them in their old age.

With the above in mind we have something of a clearer picture regarding who moves, and who does not, in a context of environmental stress. A brief examination of the demographic composition of both the rural areas and among rural-urban migrants, however, reveals that the question of 'who migrates' remains unanswered. For as much as there are different general characteristics among the different age demographics, there are also significant exceptions to these general trends: the rural areas are not without young people and, similarly, there are numerous migrants in the urban areas who could be classified as either elderly or middle-aged. Thus the question persists: who moves? The next section of this chapter explores this in more detail.

Who Moves? Exceptions to the Trend

While the above section of this chapter described the general trend in demographic preferences for engaging in mobility as a response to environmental stress, it should be noted that still greater complexity exists when looking at the field site. For as much as there were exceptions to the trends forecast by an approach focussed on the role played solely by environmental stress, similar exceptions exist to the trends that would be predicted by this more nuanced approach - which takes into account other factors such as age, land holding

and schooling. In this regard there existed young people who had not moved out of the rural areas and, similarly, there existed middle-aged to elderly individuals who had. A brief examination of some exceptional cases is revealing of the manner in which mobility becomes manifest as a response to environmental stress.

The first example comes from Kone in the Amhara Regional State and again involves the unusual case of a landed household migrating to the urban areas with all the members of their family. As was pointed out above, such a case is considered unusual as a result of the manner in which dependants present as a *barrier effect* – raising the capital costs involved in moving and exacerbating issues around costs of living in the urban areas.

> *Lem Lem is a 28 year old woman who was born, got married and had three children in an area about a 40 minute walk from Kone. She did not attend school due to her parent's wishes that she tend the cattle on their household farm instead of getting an education. Lem Lem came to Kone 3 years ago because of the deteriorating conditions on her farm caused by the combined impacts of hail, frost and drought. The impacts of these environmental stresses were made worse by the fact that Lem Lem's land was very small – a result of her being too young to legally qualify for land at partition meaning that the land that she got was at the discretion of the local chairperson at the time, and was only suitable for supporting one person. In this context the impacts of environmental stressors on Lem Lem's livelihood have been exaggerated by the increasing size of her family which, on her small amount of land, has resulted in the production of their farm being insufficient to sustain them. On top of cultivation problems Lem Lem watched large numbers of her cattle die as a result of rainfall stress reducing the quality of*

grazing to which she had access.

In this context Lem Lem says that she came to Kone after being visited by her sister-in-law who, having observed the slow degradation of their livelihood, encouraged Lem Lem and her husband to try pursuing a life in Kone. By Lem Lem's account the decision to move was made easier by the fact that they were well aware of the way their household wealth was being eroded in the rural areas. As such Lem Lem decided to sell the household's last head of cattle and, with encouragement from her sister-in-law, come to Kone with her husband and five children. Lem lem and her husband then opened a small tea-house using the money from the sale of their cattle as well as a loan from her sister-in-law as start-up capital. Lem Lem is currently living in a rented house and surviving off her tea-selling business as well as the income they take from her share-cropped land. She says that although she had hoped that the move to Kone would have gone more smoothly – she had hoped that she would be owning a house by now – she says that she is happy that she decided to move (Lem lem[75] 2009).

The second example comes from the National Regional State of Tigray and involves a land owning divorcee with two children who migrated from the rural areas to the town of Atsbi.

Zeru is a 45 year old woman, born about 2 hours walk from Atsbi, in Tigray. She first left the rural areas in 1984 with her husband when the impacts of the drought caused her to go and look for work in the rural areas surrounding Asmara, in Eritrea. While in Asmara she had two children (one of whom is mentally differently-abled) and subsequently separated from her

75 Pseudonym

husband. She remained in Eritrea until fighting between Derg and TPLF forces (in the dying days of the Derg regime) forced her to return to Tigray with her 2 children. Zeru says that she initially returned to the rural areas expecting to find the land that she had left there still available for her. Upon her arrival, however, she found that the land had been given to someone else. Thankfully she arrived back just in time for the redistribution in 1991 and so was awarded land on which she could farm.

Zeru stayed on the land that she was awarded for one year. She says that she left after a year because she thought that the land was not as productive as it had been prior to 1984 and that as a result the land was not able to sustain her as she was without cattle of her own with which to plough the land. She thus came to Atsbi with her two children to find a life here. Zeru says that she was worried about losing her land like she did last time because she would not be resident on it[76] *but she says that she got special dispensation from the PA, to leave her land, because of her differently-abled son who needed to be in the urban areas to receive support from an international charity. Zeru now survives off food for work schemes which operate in the rural areas. Again she says that she is allowed to do this, despite living in Atsbi because of her son. She says that in addition to this income she now also receives a grant from World Vision, to support her son, which is only available in the urban areas.* (Zeru[77] 2009)

Both of the above cases are notable in that they defy the general trends described earlier in this chapter. In both cases we see land owning, household heads moving, with their

76 See the next chapter for an explanation of this process
77 Pseudonym

dependants, to urban areas. Also of note is the message from Chapter 8: that mobility stems from a host of complex interactions between environmental and non-environmental factors. Having acknowledged the degree to which the above cases defy the general rule it should also be appreciated that at the level of the individual or household both of these mobility strategies are intelligible. Notable in this regard is the degree to which such intelligibility is located in an appreciation of the role of social capital – taking the form of family networks, international donors and the Ethiopian State – which links resources in the urban areas to those in the rural ones. For when we include the levels of complexity manifest in the stores of household social capital we begin to see that mobility decisions, which might otherwise seem counter intuitive, in fact make sense.

In terms of the above, the case of *Lem Lem* makes sense as *barrier effects* were undermined by extended family networks. Her sister-in-law facilitated her migratory decisions by not only conveying information about jobs in Kone, but also appraising the likely success the household might have in relation to the success (or lack thereof) they were experiencing in the rural areas. Additionally, and crucially, this extended family and migrant network also provided material capital to support the family when they opened their business. The importance of this social network in *Lem Lem's* decision to move is revealed by her claim that the family chose to come to Kone because her sister-in-law was here and that she did not think the household would move on to another town as undertaking such a move with her family would be impossible.

In the case of *Zeru* we again see the complexity of strategies by which people sustain a livelihood. For not only did her differently-abled son, mean that she would qualify for a grant in the urban areas, it was also because of this situation that Zeru received special dispensation from the local administrators which ensured that she would keep access to her land, and thereby the sharecropped produce that could be taken from it (for more on policies

governing absenteeism see Chapter 9) and allowed her to continue to access the food-for-work programmes (in the rural areas), from which she would have otherwise been excluded. Thus the *barrier effects* constituted by urban wage shocks were reduced through the *enabling effect* of having a grant available in the urban areas. Notably the features being described here, and determining mobility decisions, appear to lie well beyond the realm of any assessment which is focussed on the material underpinning of a household and largely beyond the detail of any generally describable social categories – such as age, gender etc.

What the above two cases suggest is that while large scale forces do play an important role in generating an imperative to move, they do not appear to be determinate of the mobility decision. Rather, it seems that micro-scale forces are the dominant features, determining when macro-scale-generated-imperatives will manifest in mobility strategies. Importantly, for the subject matter of this thesis, environmental stress (in the form of climate change and with which we are most concerned) operates at the macro scale, while micro-scale forces tend to be the result of non-environmental factors. As such, not only does it seem that environmental stress is not solely responsible for shaping mobility decisions (as was shown in the last chapter), but also that mobility decisions are not determined by such imperatives, rather they appear to merely be shaped by them.

Such an assessment may seem bold given the prevalent writing linking environmental change to forced migration, described in Chapter 3. However when we think of the situation described in the previous chapter, wherein non-environmental factors, also operating at the macro-level, result in migration not representing a panacea to the problems of rural livelihood insecurity, such an assessment seems more plausible. For if macro-scale factors generate similar levels of livelihood insecurity in both sending (rural) and receiving (urban) areas then it makes sense that it will be local level features (through their determination of relative inequality at the local level) that determine for whom mobility presents itself as a

viable livelihood strategy. Such a conception seems even more compelling when we acknowledge that barrier effects can prevent movement altogether. As such it is the micro-scale factors which (through the complex array of livelihood strategies) shape the experience of macro-structured *additive*, *developmental, enabling* and *barrier effects* and thus determine when, and among whom, environmental stress will be realised as mobility.

This conception of the relationship between environmental stress and mobility, which pays attention to the links with non-environmental factors and which focusses on the specifics of livelihood strategies and accounts for their complexity, proves valuable for the manner in which it allows us to explain other seemingly exceptional or contradictory cases. Notable as an example is the case of Dinkinesh[78] (2009), a twenty six year old whom I interviewed at her clothing stall in Wukro's market place. Dinkinesh described to me how, after getting married at the age of twelve and living independently of her parents for ten years, she had come to Wukro, four years ago, from a nearby area. She said, like many other young migrants, that she came to Wukro because she had no land in her birthplace. When asked about how she and her husband had managed to survive in the rural areas without land for the 10 years between their marriage and their coming to Wukro she described how she had been surviving by share-cropping the land of other farmers. She said that this was possible as many farmers in the area had lost their cattle in the drouhgt. Thus they could not plough their own land and did not have money to purchase their own seed. As such these farmers had rented their land out to Dinkinesh and her husband who had cattle (given to them on their wedding day) with which they could plough the land. When asked why she had to stop this sharecropping she described that it was because the rolling-out of micro-credit programmes in Tigray had meant that large numbers of landed farmers, who had previously been unable to acquire cattle, had now been able to buy their own cattle and thus the opportunity for sharecropping had disappeared. As such, she and her husband had sold

78 Pseudonym

their cattle, come to Wukro and used the capital to open their market stall.

What is remarkable in the case of Dinkinesh is that micro-credit, a project aimed at invigorating the rural areas by combating indigence induced through the sale of animals during drought, was in fact driving migration among certain individuals. In our general model of environmental stress, lowered production and outmigration, such accounts do not make a great deal of sense. For increased wealth in the rural areas should undermine mobility, not drive it. However by the conception described above, which appreciates that complex livelihood strategies differentiate households at the community-level and views migration as a particular strategy, one is able to make sense of the fact that macro-scale changes generate differential impacts at the household level, making mobility a suitable strategy only for particular households/individuals. As such this view is better able to make sense of what would otherwise be an intuitively contradictory relationship in the model focussed on environmental stress, livelihood security and mobility: that programmes aimed at combating rural indigence can drive mobility.

In an attempt to further highlight the relevance of micro-scale features in determining mobility decisions in what might otherwise seem like counter-intuitive cases I point to two further examples. The first comes from the rural area surrounding Habes in the Tigray NRS:

> *Abreham[79], age 44, was born in Habes Tabia. At the age of 23, and having completed grade four at school, he decided to join the army. Abreham served in the military for seven years before being retired from active service due to an injury which cost him his right leg. At this point the army sent him to Mekele where he resumed school, completing grade 7, and was trained as a carpenter to work in the military. Only a few weeks prior to our interview Abreham had returned to the land he had received in 1991 and*

79 Pseudonym

which his wife had been looking after in his absence. He says that his decision to leave the army was enforced by the military's decision to retire him as a result of having surplus numbers of carpenters available to them.

Abreham now makes his livelihood in Habes in a manner much like that of any other household in the area, principally planting barley and pulses and cultivating vegetables in the rainy season. He says that in a good year the harvest from his land lasts him nearly all year but in a bad year it only lasts about four months. Unlike other farmers he is fortunate enough to receive a pension from the military, but unlike many other farmers his injury means that he is unable to plough his own land and thus has to give up the chaff from his land in payment for the labour of a community member. He says that the principal impact of this is that he can only afford to pay someone to plough the land once – regardless of the rainfall – which shrinks his harvest. In this regard he describes that the productivity of his farm has gone down and, in addition to ploughing issues, he says that the worsening rainfall is also responsible for the lowered production on his farm. Abreham says that he knows the rainfall has gotten worse, despite having spent some years away from the area, because he grew up here and because his wife has been living on the land here since before he went to the army. As such he says that he thinks the worsening production on his land is due to the worsening rainfall. He says that when there is a food shortfall he gets by through the work his wife does on the food-for-work schemes and with the pension he receives from the military. Under such conditions Abreham says that he would rather be living in Atsbi, working as a carpenter, with his land being sharecropped in the rural

areas (Abreham 2009).

The second case describes *Yimam*[80], a middle-aged migrant now living in Weldiya, but returning periodically to help his family, who remain on his farm.

> *Yimam is 50 years old and came to Weldiya about 18 months ago. He was born in an area about an hour and a half's walk from Weldiya where his wife and children live today. He says that he left the rural areas after watching his farm's productivity dwindle as problems associated with the ever worsening Kiremt rains were compounded by the complete failure of the Belg rains. He says that although rains have been bad in the past this is the first time he has had to leave his land and seek work away from his farm. Yimam thinks that his current poverty is not just because of the rains, describing how the rains have been this bad previously. The problem is that previously his farm was in a better condition and his family was smaller. This, he says, allowed him to better absorb the rainfall related shocks.*
>
> *In this context Yimam came to Weldiya where he now works as a security guard on a construction site. He says that he currently goes back to his land in the rural areas during the rainy season so that he can help out on the farm. Yimam says that he has to do this because he is both a valuable source of labour on the farm and because he has knowledge about farming that his son simply does not have. He says that he now sends money back to the rural areas and they send food to him in Weldiya. He says that this is because food is cheaper in the rural areas and money is worth relatively more there* (Yimam 2009).

80 Pseudonym

In the two cases above we have two farmers both about the same age, both with dependants, both with land and both experiencing environmental stress as a result of worsening rainfall conditions. From this perspective their different migratory behaviour again seems unintelligible. In fact it seems, if anything, counter intuitive, as intuition would predict *Abreham,* with his compromised ability to work his land and applicable urban skill set, to be more likely to move than *Yimam,* for whom we can see no obvious advantage in mobility. However if we further explore the local, socio-political context of the households in question it becomes possible to appreciate how mobility, or the lack thereof, becomes the appropriate strategy for ameliorating the household's specific stresses.

In the case of *Abreham* an account of the actual decision making process revealed that although he stated an explicit desire to move, he was unable to do so as levels of social discrimination (see Chapter 5) mean that people would not trust the workmanship of a carpenter who only has one leg – expecting him to produce an inferior product. In the case of *Yimam* we find that his current job as a security guard was given to him as a result of him knowing government officials in Weldiya and that this situation arose out of him having previously been the *PA* in his rural community. In this regard he was informed about the work as a security guard not only because of his social networks (which lay in formal politics), but also because his experience as a local *PA* meant that he was familiar with wielding an AK-47 rifle which was needed for settling disputes in the rural areas, and was similarly required for security purposes on the construction site where he was now employed.

The above examples continue to make the case that there appears to be an incommensurablity in scale between the objects of interest in this enquiry: environmental stress and human mobility. For while environmental stress is a macro-scale factor, mobility

appears to be determined by a host of factors operating at a variety of scales, from the micro to the macro. Such a finding suggests that any assessment interested in the relationship between physical environmental stress and human mobility needs to account for the features influencing access at the level of the household and individual. In addition such an assessment needs to account for relationships of power in the community and understand the manner in which such power provides and/or prohibits access to certain material resources.

At this point one might argue that the accounts just provided, while interesting, are superfluous. For it is reasonable to expect exceptions to general trends in human mobility, because trends are just that: general. One might even suggest that in this case the existence of such exceptions, rather than defying the existence of a rule, makes that rule true in cases where exceptions do not exist. As a response it is worthwhile to reflect, briefly, on the examples of *Zeru* and *Abreham*. In the case of *Zeru*, wherein her differently-abled son allowed her to be exempt from the general rules governing land tenure and absenteeism (see Chapter 9), and gave her access to the aid projects running in the surrounding rural areas, we see a particular negotiation of the general rules (with the local administrator) regarding issues of land-tenure and access to the food-for-work schemes. Similarly in the case of *Abreham* we see that his wife was able to keep his land for him – despite his absence – as his role in the military was considered exceptional.

To appreciate the inevitability of such processes in shaping livelihoods, one needs to appreciate that rules and procedures in rural Ethiopia are not cast in stone. As I will argue below, this is a result of the particular relationship between the State, the *PA/Kebele* administrator, and the local population – the background for this relationship is detailed in Chapter 5. What it means however is that access to the resources, which are vital to livelihood security, is negotiated in informal ways at the local level. Since *barrier effects* mean that mobility does not present as a panacea to the conditions of rural livelihood

insecurity generated by environmental stress, it is the micro-level politics and negotiations with the local administrator, which differentiate livelihoods at the local scale, that become crucial in determining for whom mobility is a viable strategy and for whom it is not. To make the point that the above examples, although illustrative, are not simply exceptional, I offer a broad account of the location of important sources of power governing access to the resources in the field site by which livelihoods are differentiated.

Differentiating Livelihoods: Power and Access

In the previous chapters the discussion of livelihoods was limited to their material bases of production and practices of exchange. From the above discussions, focussed on the role played by less material forms of capital in the decision to move, it becomes clear that such an assessment is insufficient. This section of the work thus seeks to highlight the factors governing *access* to resources which are fundamental in differentiating livelihoods at the local level, and thus determining for whom mobility is a viable livelihood strategy. As such this next section takes lessons from Chambers and Conway's (1991) conception of intangible assets and Leach, Mearns & Scoones' (1999) notion of endowment and entitlement mapping (see Chapter 4) to explore how access to resources (and the structures governing this access) shape livelihood strategies and differentiate them at the local level. Notably here, this section of the work assumes that migration in a context of environmental stress represents an agentive, rather than passive, strategy.

In discussing access to resources and making the case for the inevitability of local-level politics in determining mobility decisions, this next section of the chapter aims to describe the processes structuring power and therefore mediating access to resources which are vitally important to livelihood security in northern Ethiopia. Since power operates at a

multitude of levels and in myriad ways, within a society, it is considered impossible to try and cover all the ways in which power is manifest in the field sites. As a result this next section will simply focus on those institutions which were found to have important implications for the factors mentioned in both non-migrant and migrant accounts of their decision (not) to move (described in Chapter 7). Such an account, although incomplete, is considered sufficient to make the point that the complex processes, operating at the scale of the individual/household will inevitably play a role in determining both the degree to, and manner in, which mobility manifests in a context of environmental stress.

Given the degree to which the Ethiopian State controls land (the basic factor of production in rural Ethiopia) any discussion of power relations need to address the formal power relations which are linked to the State. In this regard both the *tabia* and the *PA*, as explicitly political constructions, are headed by political representatives (termed 'chairmen'). These individuals are vested with remarkable power and essentially act as gatekeepers in all matters pertaining to government controlled resources. They can award and redistribute vacant land, control access to any formal sector employment opportunities that may arise, moderate access to food aid, advise on access to credit and have the ability to rule on local disputes. Notably, although they are supposed to be elected representatives acting on behalf of the community, all the individuals interviewed (including the chairmen themselves) described how the only individuals allowed to run for office had to first be appointed by a higher level of government (see Chapter 5). It was made clear, in the study areas, that this list of candidates was determined, first and foremost, by formal membership of the EPRDF.

Any decision made by the *tabia* or *PA* chairman could be contested by an individual who went to the administrator of the *Wereda* – the next level of government. Although this was occasionally done by aggrieved individuals, the monetary cost of getting to the regional centre (necessary in order to find an audience with the *Wereda* administrator) as well as the

impossibility of booking an appointment (and thereby ensuring a meeting) and the likelihood of having to return more than once, usually deterred complainants. In addition to these problems, individuals described how they feared recriminations – principally through exclusion from food for work programmes – from the *Tabia* or *PA* chairman[81] if they challenged a decision or voiced dissent.

Given the very local nature of the *Tabia* or *PA* chairman, their powerful gate-keeping role and the degree to which the national government dictates their election, one might think that national or regional policies are well realised on the ground in the rural areas. This is wrong for two principal reasons. The first follows from the above description of the limited ability of individuals to challenge the decisions of the chairman. Because of such limitations local chairmen are able to make decisions with a limited degree of accountability. This has left the system open to corruption and it was not uncommon to hear complaints over the fact that the local administration is corrupt and/or nepotism is rife, and that decisions regarding access to resources can be influenced by other powerful individuals in the community.

The second means by which the reach of regional or national policies is limited occurs due to what the Ethiopian administration might refer to as a 'lack of capacity' (Pers. Comms. Tafere 2009, Pers. Comms. Anonymous Interview 2009c, Pers. Commns. Kiros 2009, Pers. Commns. Azenfisu 2009). In this regard interviews with administrators revealed that in different areas and across different administrative levels there were fairly large discrepancies in what was believed to be formal state policy and/or law. Such confusion means that while local chairman understand that their job is to implement the policies of the state, their lack of knowledge about the formal policy (as well as the ambiguity about some policies) means that interpretations vary by administrator. As a result it appears that the understanding (and thus implementation) of government policy, more closely reflects the

81 In both study sites the chairman was male. It was also, although legally possible, not heard of to have a female head of the *Tabia* or *PA* in the field sites covered. See Chapter 5 for more on female representation in Ethiopian public life.

formal policy of the state at higher bureaucratic levels.

With the chairman's power stemming from the state's ownership of vital resources, the limited ability of individuals to formally challenge the decisions of the local chairmen and the chairman's reliance on the local constituency to be (re-)elected, it becomes clear that there are three main actors influencing power in the rural areas. The first is the state who, by its drawing up of policy and appointment of party loyalists into the position of gate-keeper, is empowered to make decisions regarding access to the most basic means of production and forms of income: land, jobs and food aid. The power of the state is significant, but limited by its poor penetration into the rural areas which means that local leadership can act with some autonomy. The second major power player is the chairman himself. Because of his position as gate-keeper over very fundamental means of production and sources of income he is vested with significant powers while the conditions which limit accountability mean that he is able to act with some degree of autonomy. Since it is common for the chairman to appoint other individuals to help with the administration of the community – such as supervising the use of community resources – these functionaries of the chairman are also in a position of significant power.

Finally it needs to be pointed out that the autonomy of the chairman is limited by the fact that he will likely be held accountable if problems arise which affect the functions of the state at higher levels and by the degree to which he has to be elected (albeit from a candidature of appointed party members) which means that he has to at least appeal to general notions of fairness in his rulings. Thus the final important players in shaping access in the community include other members of the community who have the ability to influence either the chairman or the community sense of fairness. Although it was impossible to identify all the ways in which people might influence either the local chairman or the community sense of fair conduct it should be pointed out that the frequent references to

nepotism, bribery and corruption suggest that individuals and families close to state functionaries can access resources more easily while, relatively, materially wealthy individuals can access political power in ways that poorer groups cannot. In addition, given the important role played by the church in Ethiopia, individuals with religious backgrounds should be considered as able to exert considerable influence on what the community would consider fair treatment of a given situation.

What is also notable in this context is the degree to which embroilment in local-level politics is the norm among households. Given what has been described to this point, such a finding should not be too surprising. For if environmental stress impoverishes everyone, thereby creating an imperative to move, yet at the same time migration does not present a panacea to the problems of livelihood (in)security created by environmental stress, then the factors which dictate access to the resources which mitigate that insecurity (such as land, credit, food aid and off-farm labour) become vital in determining for whom mobility proves an effective strategy for mediating the particular mix of livelihood stresses to which any household is exposed. Since access to land, credit food aid and off-farm labour is controlled by local state functionaries in a context of limited accountability, it is the local politics, which shapes this access, that will determine when, and among whom, the livelihood insecurity, generated by environmental stress, manifest as mobility.

As such it appears that vulnerability and opportunity are constructed at the level of the household through the relationships that households and individuals have with one another. Thus the examples provided in this chapter should not be viewed as special cases for the reason that they show mobility decisions to be based on micro-level, community and household-level politics. They are special cases for the fact that they show the importance of this politics so clearly, but not for the fact that such politics exist. For in almost every interview it was found that mobility narratives which cite any of: drought, rain, land and/or

schooling, only do so in the context of larger narratives in which the decisions pertaining to mobility are undertaken in relation to micro-level factors which determine the degree to which mobility represents a strategy for effectively securing a livelihood.

Having now made the case regarding the limitations of generalisable models it is worth revisiting our discussion on the character of mobility undertaken in response to environmental stress. What I intend to do here is explore what a conceptualisation which focusses on micro-politics lends us in terms of understanding the character of human movement. In this respect, as in chapter 7, by 'character' of mobility I refer, again, to the temporal and geographical extent as well as the 'forced' or 'voluntary' nature of mobility strategies enacted in a context of environmental stress.

Mobility Characteristics

It was noted in Chapter 6 that the characteristics of mobility strategies, in a context of environmental stress, were varied and that it was hard to generalise about the distance migrants would travel, the temporal extent of their stay and the degree to which it would be appropriate to characterise their decision to move as 'forced' or 'voluntary'. As pointed out in Chapters 2 & 4 these characteristics have been important in discussions on 'environmental refugees' for the manner in which they undermine or substantiate the suitability of conceiving of migrants as 'refugees' and for the manner in which they raise concerns about national sovereignty and migrant welfare under conditions of future climate change. As such it is worth exploring the light that can be shed on the complex dynamics of migrant behaviour through the application of an assessment which views mobility as an agentive strategy and which is focussed on the interplay of micro- and macro-level factors in determining mobility strategies.

It was pointed out in Chapter 6 that, historically, migrants had travelled long distances – as far as Asmara – under conditions of extreme livelihood insecurity induced, in part, by environmental stress. In such cases it was noted that migrants described undertaking long journeys on foot and in some cases only once all the household stores had been depleted. Similarly it was pointed out that today, some migrants were still willing to walk long distances (as far as three days) on foot and again only once the household resources had been fully depleted. At the same time other migrants attributed their choice of destination to the fact that it was the nearest town. While such behaviour might seem random at the macro-level it becomes intelligible if we take into consideration the complex micro-factors impacting on their livelihoods which shape mobility decisions.

In this regard it appears that the unwillingness of contemporary migrants to travel to Eritrea is the result of the changing circumstances which have resulted in the closing of the border between Eritrea and Ethiopia. In a similar fashion it appears that the feature distinguishing between migrants willingness to migrate to either the nearest town or to particular towns some distance away is determined by differences in the policies governing access to land and absenteeism across the Tigray and Amhara NRSs (see Chapter 9 for a detailed discussion of this issue). As was mentioned above, migrants from Habes chose to migrate to their nearest town because if they moved out of their *wereda* they faced potentially losing access to their land. In Ahuntegene, on the other hand migrants were more willing to migrate further afield, and it was principally from migrants moving within Amhara that one heard reports of migrants being willing to walk past closer towns to try and make a livelihood in specific towns, some of which were located a substantial distance away.

As regards the above, it appears that the most important factors determining where people will migrate does not pertain to the capital available to them (see Chapters 2 & 5) but rather to issues of land tenure, ethnic affiliations, prior knowledge of an area and the

existence of migrant networks. Issues of land tenure have been discussed in the above paragraph and issues around the importance of Ethiopia's federal model, built on ethnic politics, for dictating where people migrate have been discussed in the previous chapter. Prior knowledge of an area appeared important as people sought to draw on the mobility strategies that they had employed previously rather than travel on routes and go to towns that they did not know. In this regard, as well as previously having lived in such towns, having previously travelled to towns to partake in their markets served as an important means for gathering knowledge about a town and its suitability as a destination. In this regard it was common to hear accounts such as:

> Interviewer: Why did you choose to come to Weldiya?
> Respondent: I came here because it was the only town that I know that is close to my parents.
> Interviewer: How did you get to know about Weldiya?
> Respondent: I used to come here with my parents when they would come to the market
> – (Tsehai[82] 2009)

Other accounts which were more revealing of the importance of prior experience included the following from Ahuntegegne:

> Interviewer: What will you do if the drought/frost happens again this year?
> Respondent: I will pray for rain or take a loan but I won't leave.
> Interviewer: Some other people have said to me that because things are so bad they are thinking of leaving this place, would you do that?
> Respondent: No, I won't leave.
> Interviewer: Why not?
> Respondent: I can't go down the mountain as the weather there gives me a headache and a stomach ache.
> Interviewer: Is there a reason that you can't go to one of the cooler highland towns?
> Respondent: No, I don't know any of those towns. I can't go there. I only know the towns down the mountain and they make me sick.
> – (Wulataw[83] 2009)

As can be seen in the above account, knowledge of the potential destination area, garnered

82 Pseudonym
83 Pseudonym

through having migrated or visited the area previously, can also be important for generating social capital in that area. In this regard migrants described their migrant networks as important for ensuring that they would have someone to fall back on if things did not work out. One migrant's account makes this clear

> Interviewer: Why did you choose to come to Weldiya?
> Respondent: I came here because I have a brother here.
> Interviewer: Why was that important?
> Respondent: because I knew that whether or not things were good here I would be fine because my brother is here.
> – (Kalim[84] 2009)

In addition to providing support for newly arriving migrants, migrant networks were important in subsequent mobility decisions for the manner in which they sent information back to sending communities on the availability of work (also communicated by traders, truck drivers and other passers-by in the rural areas) in different towns.

With the above in mind it should be noted that some migrants would move on to new places where they had few, or no, social networks and about which they had no first hand knowledge. Here is seemed that new destinations would only be explored in the face of overwhelming reports of a lack of work in traditional destinations or previously visited destinations.

The major exception to general concern about moving to areas without social networks, came in the form of young male migrants who showed a willingness to migrate to areas where social networks were non-existent and about which they had no first hand knowledge (see previous chapter). Notably however, even in this regard young male respondents frequently described having migrated with friends, while non-migrants often expressed that their plans to migrate were on hold until a number of friends could decide to

84 Pseudonym

go together. Among the few cases where migrants reported having come to towns by themselves, without prior knowledge or social networks in the area, respondents described a highly stressful experience. Evidence of this came from such migrants describing that they would not move on to another town as the move is simply too stressful. Migrants who expressed a willingness to move on to other towns generally caveated this position with the statement that would only move if they were able to save vast amounts of money beforehand.

Since social capital appeared as the most important factor dictating migrants' choice of destination, and since networks of social capital are manifest at the local level, it further appears that the factors determining the choice of destination are micro in character. In this regard migrant choice of destination did not, in this fieldwork, appear to correlate to any general form which is dictated by the experience of environmental stress, or of any other factor operating at a large scale. As such it appears that an analytical focus on micro-factors, combined with an approach which views mobility as an active strategy, undertaken in a context where moving poses no simple solution to the levels of livelihood insecurity in the sending area, is able to make sense of what could otherwise only be conceived of random or haphazard behaviour.

With the above in mind it should be noted that social capital and migrant networks can be related through social structures such as cumulative causation (Massey 1990, Fussell 2004) (see chapter 3). As such it may be possible to make some more generalisable statements about where migrants will go. Notably the scale on which such networks operate is likely to be very localised (even if it is above the level of the individual). That said, the importance of local-level complexity should not be overlooked in a context of complex interacting multi-scalar forces. The following example from a migrant, Berhan[85] (2009), who grew up in Tigray but has now moved to Amhara – an unusual move in the context of

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Ethiopia's strong model of ethnic federalism – is illustrative of this.

Berhan, is a young migrant from Tigray who had come to study in Weldiya, in the Amhara NRS. Berhan describes how his decision to travel 180 kilometres out of Tigray into Amhara in order to attend vocational college was based on the fact that Tigray already had a surplus of qualified people in his field and thus there was little work available in Tigray. He went on to explain that because of ethnic politics resulting in contractors preferring to employ people who were trained within their ethnic territory, he would not be able to get a job if he trained in Tigray. Since he has an aunt who lives in Weldiya, and who was willing to provide him with lodging while he studied, Berhan decided to attend the vocational college in Amhara, where he thinks he is more likely to be able to get work once he is qualified.

In this case what we see is that well established mobility strategies aimed at dealing with environmental stress (i.e. attending school), can end up running counter to what might be predicted by a focus on regional scale factors (that migration to those schools would encourage migration within an NRS). Notably such exceptions are again explainable through an approach which focusses on the agentive elements of mobility and which takes into account the complexity of local livelihoods in the establishment of networks of social capital. In this case such a context was the existence of a family member living in another NRS which allowed the migrant to take advantage of some of the peculiarities of Ethiopia's ethnic, federal model which usually acts to constrains mobility to within the boundaries of an NRS.

The case for a micro-political analysis of the factors influencing the *choice of destination* of the migrants is not quite so strong when explaining the *temporal* extent of mobility strategies. For while migrant destinations did not appear to be determined by environmental stress, the permanence of that stress did appear to play something of a role in

determining the permanence of the move. Here it appeared that long running environmental stresses resulted in mobility decisions which were both more likely to be initiated with the intent of being permanent, or which would subsequently turn out to be permanent. To this end the most revealing accounts of migrants included statements like:

> "I will go back when the drought is over." (Mitsal[86] 2009).

Additionally, and as has already been mentioned, some households returned to their land after a time of absence and then, upon finding that the soil remained in a poor state, had returned to the urban areas. Similarly, highlighting the importance of non-environmental factors in such calculations, numerous migrants, when faced with the hypothetical question of whether they would move back to the rural areas if their land holdings were threatened, claimed that they would leave, rather than permanently lose their land. With this in mind it should be noted that, from the fieldwork, it appeared that the same could be said of any other livelihood stress such as that generated by the (un)availability of tenure. In such a case more permanent stresses appear to generate more permanent moves.

Having said all of the above, one should again be wary of placing too much stock in the ability of macro- or regional-scale features to determine the temporal extent of mobility. For as much as the permanence of the impoverishing effects in the rural areas affected the permanence of the move so too, it appears, did the migrant's success in the towns. Such success is obviously determined by a set of micro-scale factors which are both too numerous and too complex to allow for the description of an exhaustible list. In this regard it should be noted, however, that many of the respondents who had managed to find reliable work in the urban areas, or who had managed to start a successful business, described how they would not want to go back to the rural areas (even if the rains improved), or even on to other towns

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in the future as they felt that they had now 'made their life here'. As such, for these migrants the role of environmental stress, or of other macro-scale factors, in initiating their mobility no longer seemed to play a role in determining its permanence.

The final characteristic worth discussing in this chapter is that of the *'forced'* or *'voluntary' character* of mobility undertaken in a context of environmental stress. In this regard it should be noted that although a theme of this chapter has been to highlight the degree to which mobility, rather than being a passive response to livelihood stress, represents an agentive and purposeful strategy, this does not suggest that there is no human movement that can effectively be thought of as 'forced.' Although I will detail this more in Chapter 9, it is worth noting here that although someone makes an active decision to move, this does not imply that they either had a significant amount of time to make the decision (Richmond 1994); that they had host of other options available to them (Van Hear 1998); or that it was not push factors which dominated their decision (Gibney 2004). In fact, from the field work it seems quite clear, in many instances, the number of options were few, and that mobility, as a livelihood strategy, came to make sense precisely because of this lack of other options.

With this in mind it should be noted that not all migrants can be conceived as 'forced' to the same degree. The same forces which differentiate for whom mobility manifests as an effective strategy for dealing with the impoverishing effects of environmental stress overlap with factors which operate to differentiate wealth at the local level. In this regard the differences between migrants moving because they felt that there was nothing else they could do, and those moving for what they described as the 'fashion' of migration (see Chapter 6), were delineated in the local politics of the area. Particularly important in this regard were those items already mentioned, such as access to particular parcels of land, food-for-work schemes and credit. As has been shown already, the structures determining such access are located in the local level politics and as such the the 'forced' or 'voluntary'

character of the migrants was differentiated at the level of the individual/household.

Thus it appears that there is very little, in general, that can be said of migrations which take place in the context of environmental stress. For it appears that in all cases migration is multi-causal and that factors, other than environmental stress, acting at a variety of scales have the ability to determine who migrates, when they migrate, where they go, for how long they stay and the conditions of duress under which they make the move.

Conclusion

This chapter has expanded on the findings of the last chapter which sought to contextualise the mobility imperatives created by environmental stresses, within the socio-economic and political context in which that change is taking place. The focus of this chapter then fell on explaining exactly who moves in a context where people are equally affected by the macro-scale forces which were the concern of the previous chapter. As such this chapter concerned itself with micro-scale politics which generate internal differentiation at the level of the community, and which had important implications for who migrates.

Having made the case for the importance of micro-scale factors in determining for whom mobility proves and effective strategy, the chapter showed how the role of such micro-scale features will be inevitable in the context of northern Ethiopia. Here the ownership of vital resources by the State and the relationship between the State, local administrators and the community meant that local politics would inevitably govern access to such resources and thus dictate for whom the imperative to move, generated by environmental stress, would manifest in actual mobility.

What was notable in this chapter was that the focus on micro-scale politics revealed that migration in response to environmental stress is best conceived of as a strategy

undertaken by individuals for whom it makes sense at the household level. Also of note was the fact that micro-level factors had the ability to confound the results that might be expected by a focus on macro-level forces which act to shape migration. To this end the chapter closed by looking at how such an approach to understanding mobility, which focussed on micro-scale non-environmental factors in mobility decisions, was able to make sense of the seemingly contradictory characteristics of mobility which were described in the previous two chapters.

Something that has been mentioned in the last three chapters but which has not yet been addressed, is the differences in mobility strategies that appear to exist between the two field sites. In this regard it has to be acknowledged that if generalisable differences exist between the field-sites then there must be factors operating at a scale beyond the micro-level, yet at the same time below the macro-scale and which shape mobility strategies. The next chapter of this work concerns itself with explaining these differences and the implications of their existence for how we conceptualise the relationship between environmental stress and human mobility.

9

HISTORY AND POLICY

The previous two chapters have focussed on the importance of situating environmental stress in terms of the broader socio-political and economic context when attempting to understand the relationships between environmental stress and human mobility. As such the chapters have focussed on describing the interplay of factors before highlighting an incomensurabilty between the scale at which environmental stress operates and the scale of socio-political factors which are important in determining mobility decisions. The general trend in these chapters has thus been to get into ever finer detail in order to understand the actual narratives of individual migrants which, it has been argued, are rooted in the micro-level politics that pervade the lives of individual migrants and non-migrants alike. Having effectively made the case for contextualising environmental change within a broader set of factors impacting on mobility decisions, this chapter aims to take a step back from the micro-level detail. Its intentions are to elaborate on the critique that has already been made of the apolitical approach which characterises models put forward by proponents of the 'environmental refugee', and which results in a view of poverty and vulnerability as the natural and inevitable state of pre-industrial societies (described in Chapter 3). To do this, the chapter focuses on the historical situatedness of the socio-political and economic factors which impact upon mobility decisions.

In order to achieve this, the chapter will first describe the differences in mobility decisions observed across the two National Regional States of Amhara and Tigray. In doing so I intend to argue that the differences between the states are both real and significant, and that they are the product of particular historical processes, rather than random differences. The importance of these differences will also be used to highlight a greater level of

complexity in the relationship between human mobility and environmental stress by suggesting that in addition to macro- and micro- scale factors, there also exist important factors operating at a regional-scale which have implications for mobility characteristics. Following this the chapter will extend these arguments to show that the historical situatedness of these regional-scale factors also applies to macro-scale factors so that they too need to be conceived of as situated in a specific historical context.

Differences Between Field Sites

This first section of this chapter explores the different (non)mobility strategies employed in a context of environmental stress across the two National Regional States studied in this work. This section will highlight four differences across the states which played an important role in shaping mobility strategies. The four major differences that I will focus on are (i) the provision of micro-credit, (ii) policies governing house construction, (iii) access to food aid and (iv) policies on land tenancy and the state of that tenancy under conditions of absenteeism (the last of these has already been described to some extent in the previous chapter). These features were not conceived of as important prior to the fieldwork. Instead they were found to be at the root of important differences between the field sites which were revealed during the study. As such they have been chosen as salient examples (as opposed to an exhaustive list) of how particular historical processes matter in systematically structuring the non-environmental factors which interact with environmental stress in shaping mobility decisions.

Beginning with the provision and availability of micro-credit, Chapter 7 described the degree to which credit has become an important part of livelihood strategies in the context of an extended drought. In addition, the previous chapter described how

differentiated access to resources plays an important role in determining who moves, particularly in a context where mobility does not offer a panacea to the livelihood insecurity generated by environmental stress in the sending region.

The social dynamics governing access to micro-credit differs across Habes and Ahuntegegne due to there having been a generally greater emphasis on micro-credit schemes in Habes than in Ahuntegegne. This case was made apparent in the fieldwork where the *Tabia chairman* in Habes expressed his belief that it was good for people to have loans, stating explicitly that he had tried to get people to take loans. As additional evidence of this farmers in Habes described being encouraged by the local administrator to take loans, while no such accounts existed in Ahuntegegne.

The impact of institutional pressure to take loans in Habes resulted in both higher rates of default and (because more people had taken loans) a greater absolute number of defaulters. The explanation for this can be found in the accounts of farmers who described taking loans after being pressured to do so by local administrators. These farmers went on to describe how, because of the pressure to take loans, many of them had taken loans without giving much thought to how the money might best be spent. In some cases farmers even went so far to say that they just took the loan because they had been lead to believe that they should. The result of this, and of the persistent drought (since loans were often taken in order to purchase livestock which was vulnerable to drought), was that Habes experienced high rates of default on the loans provided, and that default affected large numbers of households. Since strict rules on loan default mean that a person cannot receive a second government loan if they have any loans outstanding, the high default rates in Habes combined with the large proportion of the population who took loans, means that large portions of the community are no longer able to access credit.

In Ahuntegegne, on the other hand, micro-credit had not been pushed so hard by local

administrators. The result is that farmers who did take loans had needed to express greater initiative in acquiring them. The general result was that these loans were better thought through and thus rates of default were lower as credit had been spent more wisely. Generally, in Ahuntegegne, then there was a less widespread experience of loan default and thus greater contemporaneous access to credit. This proved to be an important feature of mobility strategies not only for the manner in which access to credit generates local differences in the community, thereby generating different mechanisms for who migrates and under what conditions of duress, but also because numerous farmers described that they would take a loan if their food ran out. Many farmers, in Ahuntegegne, described how they would do this before migrating. Importantly then different access to micro-credit across the field sites results in different structures across the field sites, affecting both who moves and when they do so.

The second difference between the two field sites relates to policies governing house construction. House construction in Tigray was heavily monitored while in Amhara there was virtually no concern about where people built their houses, with the only mention of rural house construction in Amhara coming from a regional administrator in Bahir Dar who mentioned that greater attention may be paid to this issue in the future (Pers comms: Zeleke & Tegegne 2009). The ability to build a house has important implications for mobility strategies. Even amongst farmers with land the inability to build a house near that land combined with having to wait for permission to build a house in a more nucleated settlement elsewhere in the *Tabia,* created a major incentive for moving to the urban areas – from where migrants would usually return to the rural areas in order to till their land during the rainy season. In this regard migrants in both Atsbi and Wukro referred to the fact that being unable to build a house near their land in the rural areas had been important in their decision to move. In both Weldiya and Kone, on the other hand, no migrants reported that an inability to

access rural housing had affected their decision to move.

Thus we find that differences in rural housing policy have generated particular contexts which play an important role in differentiating who moves in the different NRS. In Tigray this group of likely migrants would include those individuals with access to land, but no access to housing as much as it might include those without access to land. In Amhara, on the other hand, this demographic of farmers with land but no housing is simply not existent on anywhere near the same scale[87] and thus there was a whole demographic of migrants in Tigray that simply did not exist in Amhara.

The third difference between the field sites on which I would like to focus is access to food aid. Access to food aid was significantly better in Habes than it was in Ahuntegegne. This was revealed in the interviews wherein only one respondent in Habes described not receiving systematic food aid, while multiple respondents in Ahuntegene described surviving without systematic food aid throughout the four years of drought. Additionally local administrators in Habes and Ahuntegegne described vastly differing numbers of people on food aid. In Habes the administrators acknowledged that virtually all houses had access to systematic food aid, while in Ahuntegegne, administrators described how they had to ask for emergency food aid precisely because so many people were not on systematic food aid. Finally, as further evidence of discrepancies in food aid coverage in the different field sites, one official, from an international aid organisation focussed on food security, stated that the contemporary government's privileging of Tigray meant that it had received better coverage in the food safety-net programme than other NRSs (Pers Comms. Anonymous interview 2009d).

As has been stated in Chapter 7 it is hard to understand the exact role played by food aid because, like any other factors impacting on migration, it becomes hard to distinguish the

87 I suggest the issue of scale here assuming that there may be some unaccounted reasons which prevent certain individuals from building a house in the rural areas of Amhara. That said these conditions do not operate in the same systematic fashion that they do in Tigray.

relative roles played by different factors in the decision to move. As such it would be hard to say what mobility strategies in Ahuntegegne might look like if there had been better access to food aid. With this in mind there exists good evidence from other studies that the availability of suitable support can act to suppress mobility as an outcome of production shocks generated by environmental stress (Paul 2005, Frey & Singer 2006). In addition to this the narrative from numerous farmers and migrants that they either would, or did, leave 'when the food runs out' suggests that the differential (un)availability of food aid plays an important role in moderating, at least, when people decide to move and (given the differences in coverage of food aid across the field sites) who moves, and under what conditions of duress.

The fourth and final difference between the two field sites, that I want to mention, pertains to policies on tenancy and allowances for absenteeism. Policies governing access to land in a context of absenteeism were mentioned in the previous chapter and they will receive a more full detailing here. The practices governing access to land under conditions of absenteeism varied markedly across the chosen field sites, as did the accounts of what constituted the formal policy on the matter. In this regard it should be noted that the formal policy on land tenancy and allowances for absenteeism are not uniformly understood by different administrators. At different levels of government there were markedly different accounts of what was, and what was not, allowed regarding farmer absenteeism from the land to which they had usufruct rights. What is notable however is that since decisions about access to land generally lie with the local leadership it is with them that the interpretation of the policy is most important (see Chapter 8 for a detailed account of power and access in the field sites).

Regardless of the exact legal details there was a general trend that absenteeism was accommodated to a greater extent in Amhara than it was in Tigray. This 'greater

accommodation' pertained both to the time that one was allowed to be away from one's land and the distance that one could travel from the land. In an interview with the *Tabia Chairman* in Habes, I was informed that the policy allowed people to live away from their land but maintain exclusive use-rights to it so long as their new place of residence was within the same *Wereda* as their land, and as long as they were not permanently absent from their land for a period exceeding two years. Exceptions to this were people with special needs such as students, the elderly, the sick or disabled (Pers comms: Lema, A. 2009).

The result of this policy is that migrants in Tigray tended to migrate within their *Wereda.* This manifest, in Habes, in the majority of people migrating to Atsbi, and with the majority of migrants in Atsbi coming from within the Atsbi *Wereda*. Evidence of the importance of this policy comes from numerous migrants who explicitly described their choice of destination in terms of their ability to live in Atsbi and maintain access to the harvest from their rural land during the rainy season. Further to this, ambiguity around the policies pertaining to absenteeism (a result of the multiple interpretations of what the law actually was and which lead some people to believe that they might lose their land simply as a result of not being permanently resident on it) and the arbitrariness with which these policies could be implemented by the local leadership (a product of the limited access to formal avenues for contesting the decisions of local administrators, see Chapter 8), meant that numerous respondents described being highly anxious about losing their land as a result being resident in Atsbi. This resulted in some migrants describing how they would attend meetings in their sending communities in order to to maintain a sense that they are a part of that community and thus maintain their entitlement to access their land on an ongoing basis.

To further highlight the extent to which the policies (and their ambiguity) governing access to land under conditions of absenteeism impacted on mobility strategies, the narratives of a number of migrants referenced that they had family who had remained in the

rural areas, in spite of the impoverishment they were experiencing there, because they were fearful of losing access to their land. Still other migrants described that if the government offered them an ultimatum on either returning to their land and maintaining access to it, or remaining in the urban areas but forfeiting access to their land, they would leave the life in urban areas in order to maintain access to their land[88].

In the Amhara NRS, on the other hand, there was a generally more accommodating policy towards absenteeism. That said there remained a fair degree of ambiguity as to the exact policy with differing interpretations being supplied by the administrators, at different levels of government. What is notable however is the generally longer distance of migrations (often past closer towns) undertaken by migrants in Ahuntegegne than in Habes. Additionally, amongst migrants in the receiving towns of Amhara there was no expression of concern about losing access to rural land and, similarly, non-migrants in Amhara did not express potentially losing their land as a reason not to move. As such it appears that differences in the policies governing land tenure and absenteeism, across the field sites, had important implications for who moves, where they go, for how long stay and what relationship they maintain with their sending areas.

Thus it appears that there are important differences between the two areas studied here. Such a finding is important for it seems to have a bearing on all of the issues about which the 'environmental refugee' discussion has been concerned: will people migrate, how many people will migrate, how far will they go, for how long will they stay, will they have a choice in the matter and to what extent is environment the sole cause of any migration.

With different regions exhibiting such important differences in mobility strategies one is forced to enquire as to the reason for these differences. What generates different

88 It should be noted here that some farmers and migrants described having access to plots of land in two w*eredas*. Although the interview process in this study did not undertake random sampling, and thus one should be wary of attaching too much meaning to numerical significance, there appeared to only be very few migrants with land in multiple *weredas*.

mobility characteristics in Amhara and Tigray? Can we explain the differences in terms of some broader structure and if so what are the implications of such findings for how we understand the relationship between environmental stress and human mobility? This next section of the chapter tackles these issues.

Thinking About History: Explaining the Differences

Before trying to describe the reasons underlying the different mobility strategies in the two field sites, two points first need mentioning. The first is that I intend to explain the differences by looking at the way in which policies affecting migration have come to exist in the two areas and why they might be different. The analytical approach that I use to achieve this is best captured by the method political ecologists would term 'chains of explanation' (see Chapters 2 & 4) (Blaikie 1985a). A notable feature of this approach is the difficulty one has in assigning explicit causation to the ever broader structures that shape local policies (Blaikie 1999). Given the usefulness of this approach, yet the problems inherent in it, it should be noted that what I intend to offer in this section is reasonable explanations for these differences between the field sites. Such explanations come principally from interviews with academics, policy makers and administrators working on the topics of concern in this work.

The second issue that needs addressing prior to a discussion of the existence of different policies across the different National Regional States is the generalised conception of the Ethiopian farmer. This is important as it is the farmer that is the object of policy and thus it becomes impossible to make sense of both policies, and their differences, without some sense of how the rural farmer is generally conceptualised in Northern Ethiopia. I should say at this point that by this discussion I am not intending to validate or deny the accuracy of these perceptions – for there exist other studies which address the accuracy of

these narratives and accounts (Keeley & Scoones 2000, Hoben 1995, Little 2008, Rahmato 2003, Crummey & Winter-Nelson 2003, Bassett & Crummey 2003). Instead I mention them only because their existence is real and thus informative of the policy-making process.

Regarding the general conception of the Ethiopian farmer the dominant and long standing narrative describes an inherent degrader of the soil (Hurni 1983). In this regard the Ethiopian farmer is generally described by administrators as 'ignorant' of efficient farming methods (Pers. Comms. Tsegay 2009, Pers. Comms. Anonymous Interview 2009e, Pers. Comms. Zeleke & Tegegne 2009, Pers. Comms. Bayefers 2009) and easily corruptible . In addition to being ignorant farmers are also generally conceived of as irrational in that they privilege short term gains over long term ones (Pers. Comms. Zeleke & Tegegne 2009).

This is one of the older narratives describing Ethiopian farmers (Hoben 1995, Little 2008) and it has been used extensively to explain the levels of degradation apparent in the north of the country (Hurni 1983). Extreme accounts of this narrative include descriptions of an 'axe culture' in Ethiopia where 'irrational farmers' would not leave home without an axe in case they should stumble upon some uncut tree that they could themselves immediately cut down (Ezra 1997). It should be noted on this front, that in response to growing literature which is critical of placing the workers of the land at the locus of degrading processes in Ethiopia, there has been an attempt to re-conceptualise the 'irrational farmer'. In practice, however, this only appears to have amounted to cosmetic changes amongst administrators. I say this as it became common to hear local administrators deny the 'irrationality' of the farmer and then go on to claim that farmers are incapable of understanding certain things or unable to see the importance of long term planning (Pers. Comms. Zeleke & Tegegne 2009).

The final important conception of the farmer is that (s)he is lazy and it is this laziness which, for the most part, accounts for the poverty apparent in the rural areas of the country. Evidence of the strength of this narrative comes not only from administrators who blame low

levels of farm productivity on farmer laziness (Pers. Comms. Kasse, Tesfaye and Yehun 2009), but also from administrative buildings in the rural areas which are emblazoned with encouragements telling the farmer 'not to be lazy' and to 'work hard' so that they might be wealthy and well fed. The existence of a laziness narrative is also apparent among, and strongly resisted by, the farmers themselves. To this end during numerous interviews farmers stated explicitly that although they could not fully account for the ever worsening production of their land, they were sure that it had nothing to do with either their laziness or lack of work on the land.

With the generic narrative pertaining to the Ethiopian-farmer-as-lazy-degrader set as context for describing rural/agricultural policy I turn now to some of the differences between Tigray and Amhara. I locate the explanation for these differences in two structural features. The first is the greater attention that appears to be paid by the national government to Tigray in comparison to other states – one major development organisation official described Tigray as being the size of a region but receiving the attention of a state (Pers Comms. Anonymous Interview 2009f). The second is the increased sense of state legitimacy apparent amongst both the population of Tigray and its administrators (Segers et al. 2009). It is difficult to pinpoint the exact reason for the national governments focus on Tigray and for the greater sense of governmental legitimacy which exists there, however it appears to be the case that much of the difference is a result of the liberation struggle which emerged from Tigray and the current make up of the EPRDF which is heavily constituted by people from Tigray and members of the TPLF (Segers et al. 2009) – see Chapter 5.

Regarding the governmental focus on Tigray a number of explanations exist. More generous accounts suggest that it is because of the historical neglect of the region as well as the damage experienced there during the conflict with the Derg that result in a greater imperative to provide services more rapidly (Pers. Comms. Bayefers 2009). More cynical

accounts suggest that the focus on Tigray is the simple product of ethnic politics and government favouritism. The truth is likely to include some elements of both of these but the result is that relevant policies are usually pushed harder into Tigray, resulting in their more comprehensive application, and their implementation at an earlier date.

Regarding the greater sense of legitimacy experienced by the government among both the population of Tigray and the State's administrators, the above narrative of state favouritism plays some role. Additionally however there appears to be what Admassie (2000) refers to, with regards to the Amhara when the emperor Hailie Selassie was in power, as a 'sense of closeness' to the leadership. In this regard basic ethnic affiliations appear to be important in generating a sense of governmental legitimacy in Tigray, and concurrent illegitimacy in Amhara (Admassie 2000). In addition to this, in Tigray, the history of the conflict means that there is a pervasive sense of both the administrators and the population being willing to 'work hard' to improve Tigray (Keeley & Scoones 2000, Segers et al. 2009, Berhanu 2000, Pers. Comms. Yintso 2009).

Running through all this there appears to be a narrative of the contemporary moment 'being Tigray's time' (Pers. Comms. Admassie 2009). Wherein the sacrifices made during the conflict should now be justified by making sure that the people of Tigray see the benefits of an improved state of security. This last point is particularly true of the local administrators who are often drawn from ex-TPLF combatants. The result is to further contribute to the comprehensiveness and enthusiasm with which national and regional policies are implemented in Tigray, as compared to the rest of the country. To this end interviews with administrators showed them to be both more willing to implement policies and more committed to their jobs, while interviews with farmers described how regionalist language and struggle discourses had played a role in implementing local policies. The clearest example of this came from the micro-credit schemes where farmers responded to questions

on why they had decided to take a micro-credit loan by describing how local administrators had encouraged them to do so, invoking language like: 'every TPLF-man should have a loan'. In certain instances farmers described being pressured into taking loans even when they did not want them in the first place.

The population in Amhara on the other hand shared little of these sentiments. For them discussions of the state were shrouded in a language of a deep mistrust of the current government. Such accounts included people threatening to protest[89] and included accounts from farmers such as the following:

> "Usually when the food runs out we get food aid from the government … now the government is ignoring us." (Soleg[90] 2009).

Having now shown how access to micro-credit, policies on house construction, access to food aid and policies on land tenure affect migration strategies, as well as having described how the farmer is generally conceived in policy and practice and why there might be some distinction in these policies across the different National Regional States, we are in a position to discuss why differences might exist across Amhara and Tigray, with specific reference to the four policies discussed in this chapter.

Beginning with the provision of micro-credit, we appear to have the most simple case of a policy being more vigorously pressed into Tigray than elsewhere. Local administrators in Habes appeared significantly more committed to getting micro-credit out amongst the community members who, as I have described above, were encouraged to take loans based on their association with the national government. In Ahuntegegne, on the other hand, I found that administrators were much more ambivalent about micro-credit policies. In

89 While this language was not heard in Tigray it should also be noted that North Wollo is a province with a long history of resistance to the government – under a variety of leaders (Rahmato 2009). In this regard I am wary of overstating the origins of the antagonistic language in North Wollo. Notably, however, such antagonism (whatever its source) had an impact on how well government policies were realised in North Wollo, compared to Tigray.

90 Pseudonym

addition, people in Ahuntegegne appeared more wary of governmental policies and thus there was a greater mis-trust of government policies promoting micro-credit schemes. As such loans were taken more widely in Habes and their use appeared less well considered. In Ahuntegegne, farmers could take loans if they wished, and this act of self-selection meant that loans were generally better thought through and thus less prevalent. This resulted in lower rates of default today and thus means that access to credit is less of a social differentiator in Ahuntegegne than it is in Habes.

The case of a general prohibition on house construction in Tigray was justified by Tigrayan officials based on the fact that the region wanted to focus on food security and as such did not want to compromise potentially fertile land by building houses on it (Pers. Comms. Anonymous Interview 2009e). They also stated that the logic against allowing haphazard house construction was so that they could focus service provision into more tightly packed settlements (Pers. Comms. Anonymous Interview 2009e). Embedded within this logic was a deep sense of farmer irrationality which meant that farmers needed to be told where they could and could not build their houses for fear that they would compromise their own livelihoods if given the choice (Pers. Comms. Anonymous Interview 2009e). When, on the other hand, officials in Bahir Dar were questioned as to the relatively laissez-faire attitude to house construction in the NRS the response was either that they were unsure as to why their was a difference between Amhara and Tigray or that they thought the laws would be implemented in Amhara once they had better zoning data, which was already available in Tigray (Pers. Comms Zeleke & Tegegne 2009). Such accounts reveal both the recurrent theme of farmer ignorance and the importance of the manner in which policies are first applied to Tigray before they are applied to the rest of the country.

The third case, pertaining to the differential availability of food aid, is one which has been mentioned a number of times in this work and which it is now necessary to explain. It

is thought that the greater access to food aid in Habes than in Ahuntegegne is the result of a number of factors. First off are the two points that Habes, in Tigray, would have had a greater governmental focus due to the national governments disproportionate focus on Tigray. In addition, local administrators would have done a better job assessing food aid requirements and thus overall food aid coverage would be better in Tigray than it is in Amhara.

Other important considerations pertain to the manner in which food aid is organised in Ethiopia. The general approach is that chronically food insecure households are placed on what are termed 'safety net programmes'. The logic behind these programmes is that the most vulnerable households will be placed on a five year programme which will entitle them to reliable access to food aid. After this time households will be re-assessed. Ideally in the time these households were receiving support poverty traps would be overcome and farmer wealth would increase. This would mean that houses could slowly be taken off the safety net programmes. Households not on the safety-net programme and which are only temporarily food insecure (in bad years) are meant to be accounted for in the system by the mobilisation of emergency food aid. The logic here is that these households will be able to access food aid when temporary shocks stress production to levels below those necessary for subsistence.

Within this context the single harvest in Habes, compared with the twin harvest in Ahuntegegne (see chapters 6 & 7), meant that chronic food insecurity could be better established in Habes as variability in rainfall was spread over one event as opposed to two. The result was that more farmers were defined as chronically food insecure and were thus able to access the food aid supplied by the safety net programme. In Ahuntegegne less farmers are registered with the safety-net programmes which are generally only available to vulnerable groups (such as female headed households and households with disabled members). Problematically however, for farmers captured by the emergency food aid

programmes, the dominant perception, amongst administrators – that farmers are opportunist, lazy and prone to dependency – means that mobilising emergency food aid can be difficult as the farmer's accounts of poor production are often dismissed by regional administrators as opportunist lies (Pers. Comms. Anonymous Interview$_a$ 2009g). In this regard, I had my own accounts of the food insecurity in Ahuntegegne dismissed by regional administrators in Bahir Dar, while local administrators, in Ahuntegegne, also described getting no response to their requests for more emergency food aid.

On top of all this is the fact that much of the food insecurity in Ahuntegegne is the product of a combination of failed *Belg* rains, later-onset *Kiremt* rains and then frost. This is unusual in northern Ethiopia where the dominant determinant of food security is thought to be production, which in turn is thought to be singly reliant on moisture availability. Since the recent *Kiremt* rains have been of sufficient quantity regional administrators, not attuned to the complex process by which later rains and frost interact to destroy crops, have believed that the harvest must have been good in Ahuntegegne. This has lead regional administrators to be even less likely to believe the farmer's and local administrators' claims of poor production and subsequent calls for more emergency food aid.

The above problem has been exacerbated by the fact that, government food-aid assessments are undertaken at the level of the *Wereda*. Since the Gubalafto[91] *Wereda* contains both highlands and lowlands (the latter not being affected by frosts) much of the wereda's food production has been sufficient due to the good amounts of rain that have fallen within the *Kiremt* season – late as it may have been. This means that Ahuntegegne's issues of food insecurity have been overlooked as *wereda*-level assessments have found generally sufficient levels of food production associated with sufficient quantities of rain. Therefore what we see is that the food aid provision is worse in Ahuntegegne due to the poorer coverage of safety-net programmes, the national focus on moisture availability and the geographical scale at

91 Gubalafto is the *wereda* in which Ahuntegegne is located

which its food security is assessed. This differential availability of food-aid across the field sites (as has already been described) has major implications for both who migrates and when they do so.

Finally, the different policies pertaining to land tenure and absenteeism also appear to have their roots in a number of causes. In this case it appears to be a combination of the fact that policies were implemented in Tigray before being implemented in the rest of the country and because of the changing political sentiments. In this regard Admassie (2009) echoes the argument of Keeley and Scoones (2000) who conclude that differences in policy in Ethiopia are a product of decentralisation and the resultant differences in regional administrative and political cultures. Admassie (2009) thus explains cross state differences in land tenure policy by pointing out that when policies were drawn up in Tigray, Marxist discourses and logics were dominant amongst the TPLF administrators. In Amhara on the other hand, the policies on land tenure and absenteeism were concretised later, as free market, libertarian hegemony pervaded the public discourse of good governance in the post-Cold War period. This has lead to a general prioritisation of equality in practices of administrators in Tigray, while a logic prioritising market efficiency has underpinned policy decisions among Amhara administrators (pers. Comms. Admassie 2009).

Further to the above, Admassie (2009) and Segers et al. (2009), suggest that TPLF administrators and policy makers – who were often comprised of ex-combatants fighting against the Derg forces – would be more politicised in the Marxist politics of the TPLF, than would be officials in Amhara. The result is that policy and administrators in Tigray see the ability to live away from one's land as unfair because it disproportionally favours those individuals with land who are entitled to the profits of their land while at the same time being entitled to access the potential benefits of wage employment in the towns. For those without land this is considered unfair as they only have access to jobs in the towns, and this

access is compromised by the increased pressure on jobs created by individuals, with land, who also seek urban employment. Thus the policy in Tigray is focussed on not disproportionately impoverishing those groups without land. In addition to this is the mantra of 'land-to-the-tiller' which pervaded the Marxist revolution in Ethiopia in the 1970s and thus sits closer to the forefront of politicised local Tigrayan administrators who were drawn from a pool of ex-TPLF combatants (see Chapter 5).

In Amhara, on the other hand, political sentiments are less well established among local administrators, who were less committed to the ideology of the TPLF and who have been described as being more opportunist in their alliances with the EPRDF than administrators in Tigray (Pers. Comms. Admassie 2009). Further to this is the logic of 'efficiency', contained in the neo-liberal world view, more dominant at the time of policy formation in Amhara, which results in policies that enable personal choice based on the idea that individual farmers, not the state, will know how best to increase their profits. Ideally these profits will feed back into the system leading to eventual benefit of the community as a whole (Pers. Comms Azenfisu 2009). The result is that the policies which govern access to land under conditions of absenteeism are significantly different across states which, as was argued above, has major implications for differentially determining both who migrates and where they migrate.

Thinking About Regional Differences

What then do these differences across the field sites tell us about the relationship between human mobility and physical environmental change? Firstly they suggest that in addition to the micro- and macro-scale factors (described in the previous chapter) a host of regional-level factors moderate the manner in which one might expect changes in the physical

environment to impact on mobility. It is thus clear that in addition to the complexity described in the previous chapter, and manifest at the local level, there exists another layer of complexity located at the regional scale.

In addition to showing an increased level of complexity however, it needs to be appreciated that the regional differences in the factors affecting mobility strategies are not simply the product of random events. Rather it has been shown above that these differences are located in specific historical processes, some of which are the product of global factors and others which appear to be more locally specific. In the case of the above examples such factors include the countries specific experience, framed within the global experience of the Cold War, of The Derg, the struggle against the Derg and the subsequent post-liberation politics. In addition to this has been the particular acts of framing of the 'peasant as degrader' and the construction of vulnerability as determined solely by moisture availability.

Having made the case that specific historical processes, rather than random ones, dictate the differences in regional-level factors which act to modify how mobility is enacted as a response to environmental stress, it should be fairly clear that a similar argument can also be made for macro-scale factors. For as was already pointed out in the above paragraph, the context in which regional-scale factors were defined in terms of history was generated by the international events of the Cold War. In this regard as much as the specific differences in policies governing absenteeism between the Amhara and Tigray NRS's can be located in particular historical events so too can the land tenure systems which prevent private ownership and sale. For their explanation lies in the revolutionary approach adopted during the early days of the Derg at the overthrow of the monarchy. Similarly, as was hinted at in Chapter 7**,** the contemporary place occupied by schooling in Ethiopia is manifest as a result of the particular form in which Ethiopia has integrated itself into the global economy under the leadership of the EPRDF. As such it appears that the mobility strategies enacted in

response to changes in the physical environment need to be viewed, in part, as products of the specific historical moments which structured the socio-economic and political context in which they occur.

Conclusion

This chapter aimed to show the historical situatedness of the non-environmental factors playing an important role in mediating the relationship between environmental stress and human mobility. To do so it sought to compare the mobility strategies observed in Tigray with those in Amhara, showing that the relationship between environmental stress and human mobility is mediated in important ways by factors located in the specific history of Ethiopia. In this regard, important historical processes were the previous control of political power by the Amhara, the birth of the TPLF in Tigray, the nature of the struggle against the Derg and the role of the TPLF in the current EPRDF coalition.

What the chapter highlighted then is the degree to which the ahistorical approach of proponent accounts of 'environmental refugees' is insufficient. For if the manner in, and degree to, which environmental stress manifests in mobility is mediated by non-environmental factors, and these factors have specific historical origins then a teleological approach which naturalises poverty and vulnerability is insufficient. For it appears to provide little insight into the sort of mobility behaviour we might (or might not) expect in a context of environmental stress.

In addition, such an analysis also highlighted the role played by meso-scale (See Chapter 4) factors in mediating the relationship between environmental stress and human mobility. Such factors were thought to operate in addition to the micro- and macro-level structures, and were constituted by socio-political factors which manifest at the regional

level within Ethiopia.

Having now detailed the empirical data from this work, the following chapter goes on to discuss these findings in light of the literature and theory introduced in Chapters 2 and 3 respectively. The principal aims of this discussion will be to explore what migration theory can tell us about the mobility strategies being employed in a context of environmental stress, what this means for both the proponent and critical accounts of 'environmental refugees', what pertinent questions future research might ask and what such findings mean for policy making aimed at protecting the rights and welfare of people exposed to future climate change.

10

FINDINGS, DISCUSSION AND CONCLUSION

This final chapter of the thesis discusses the study findings, reflects on their implications for conceiving of the relationship between environmental stress and mobility and details the work's contribution to understanding the relationship between climate change and human mobility. In addition the chapter reflects on avenues for future study which present as a result of these findings.

Findings

Beginning with the most basic findings, it is clear from the fieldwork in northern Ethiopia that the state of the physical environment has a significant impact on the mobility decisions of both households and individuals. Evidence of this comes from farmers describing how environmental stress impoverishes their livelihood, the degree to which migrants cited rural impoverishment and environmental stress in motivating their decision to move and the fact that migrants described how they would return to their rural livelihoods if they had reliable evidence that the environmental conditions had improved.

Additionally, however, the fieldwork revealed, quite plainly, that non-environmental factors also played an important role in the mobility decisions taken in a context of environmental stress. Evidence of this came from observing a host of factors which: impacted livelihood's exposure to environmental stresses, determined the degree to which movement was a particularly suitable response to livelihood stress and both increased or decreased the imperative to, or opportunity cost of moving.

As such, an important conclusion is that while the state of the physical environment

matters in mobility decisions, it does so not in spite of the socio-political and economic context in which it occurs, but rather, precisely because of it. Pertinent in this regard is that such socio-political contexts were not found to be random, natural or inevitable. Instead they appear to be the product of particular historical events, which are themselves shaped by antecedent events which had been shaped by broader structures of political economy.

With the idea of interacting environmental and non-environmental factors in mind, notable in this work was the finding that such factors appeared to operate at different scales. In this regard environmental stress was observed to operate at a relatively macro-scale, meaning that it had generic implications for mobility decisions. Non-environmental factors, on the other hand, were found to operate at a host of scales. As such it was as a result of non-environmental factors that communities were internally differentiated and thus by them that mobility decisions were determined. By such an account it appears that environmental factors merely shape mobility imperatives while, non-environmental factors determine mobility decisions.

As a result of the above findings, this work was revealing of the particular characteristics of mobility undertaken in a context of environmental stress. Regarding the geographical extent of movement in response to environmental stress, evidence from the fieldwork undermined generalised claims about how far people would move. Notable findings documented migrants travelling hundreds of kilometres, on foot (from North Wollo to Asseb and from Eastern Tigray to Asmara) while others described moving to the nearest town. Such findings undermine general statements about the legitimacy of the 'environmental refugee' label, based on whether mobility strategies will result in people crossing an international border as a response to environmental stress. Interestingly, as confirmation of the findings described above, it was found that people's choice of destination appeared to be determined by non-environmental factors (such as job prospects, access to

social networks and land tenure agreements) rather than their experience of environmental stress.

Further, on the 'forced' or 'voluntary' character of mobility in a context of environmental stress, study findings suggest that environmental stress is capable of generating movement among individuals which could be conceived of, for all intents and purposes, as 'forced'. At the same time however, other circumstances showed that movement might be better conceived of as a 'voluntary' response to environmental stress. In addition, a number of other migrants, citing environmental stress, appeared to have made decisions about moving which did not fit into either a 'forced' or 'voluntary' conceptualisation, and were thought to be best conceived of as some mix of the two (see Chapter 4 for how these terms were conceptualised and conditions assessed). Notable again, was that it did not appear to be the intensity of the environmental stress which was determining the 'forced' or 'voluntary' nature of the move. Such characteristics appeared, instead to be determined by non-environmental factors, such as access to land.

Who migrates in conditions of environmental stress also appeared to be determined more by non-environmental factors than by some feature inherent in the bio-physical stress itself. In this regard, the fieldwork revealed that more important than environmental stress in determining who moves were the structures dictating access to land, national policies on education and developmental policies. As such the dominant migrant demographics were young, landless individuals, seeking an education and without dependants. Notably however, even with such macro-scale, non-environmental, features accounted for, this work suggested that it was micro-scale factors which determined for whom migration was a suitable livelihood strategy with decisions being based on a host of individual factors which differentiated communities at the local level.

While non-environmental factors appeared to determine most of the characteristics of

mobility decisions undertaken in a context of environmental stress, the nature of that stress did appear to play something of a determining role in the duration of any move. In this regard the work documented migrants who had left the rural areas and not bothered to go back as they had heard that the environmental conditions had not improved. The work also documented migrants who described returning to the rural areas, only to leave again upon finding that the biophysical conditions remained poor. In addition, other migrants described that they would return to their land if they knew that the rains had improved. Thus it seems that an important determinant of the temporal extent of people's move to urban areas was the time-scale over which the stress to which they were responding persisted.

Finally the question of when people move, appeared, like the temporal extent of that movement, to be determined, in certain respects, by the nature of the change in the physical environment. Notably, however, this decision appeared to be tempered by the existence of specific non-environmental factors. Regarding the importance of the biophysical event, it was common to hear people describing how they would migrate when the food in their houses runs out. This suggests at least some links with the severity of the biophysical event on food stocks. Notably however, in terms of non-environmental factors, it was firstly shown that household access to food is not only an issue of local production which in turn, is not solely determined by the state of the physical environment. In addition, not everyone decided to move when the food runs out, with some respondents describing that they would not move, regardless of the severity of their impoverishment, while others moved in advance of what they thought would be impoverishing conditions.

Although those not moving tended to be old and with access to land, no major social features could be identified with those individuals who decided to move in advance of major food stress. As such the timing of people's movement, appears to be only loosely connected to the state of the physical environment, with a strong role being played by non-

environmental factors, operating at a highly individualised, micro-scales.

Having now highlighted the major findings of the thesis, it remains to contextualise them within the broader conceptual debates on 'environmental refugees', climate change and migration. To do so I turn first to a discussion of their conceptual implications for understanding the relationship between environmental stress and mobility.

A Discussion of Findings

Before exploring the conceptual implications of the study findings for the potential relationship between climate change and human migration, the findings described above (on the complex interactions between environmental and non-environmental factors in mobility decisions) prompts reflection on the notion of *causation* in environment-society relationships. This is particularly the case in the climate change debate where the notion of causation has significant political implications regarding potential compensation for climate change impacts. As such I devote the next section of the chapter to a brief discussion on conceiving of causation when thinking about environmental stress and human mobility.

A note on causation

The question of whether or not climate change will *cause* a particular social outcome is founded in a dominant logic of mechanical, cause-and-effect models. In such models the central idea is that events are linked to one another in chronological order. As such one can understand the relation of one event to another by altering events which occur earlier in a sequence and examining the impact of such alterations on subsequent outcomes. Should an outcome persist regardless of how an earlier event is amended, one may conclude that there

is no relationship between the observed events.

Because environment-society relationships are incredibly complex, laboratory tests in which one can control all the variables other than those of interest are hard to construct. As a result, enquiries into the relationship between biophysical and social processes have had to rely on counter-factual thought experiments (Walters & Vayda 2009). In this approach, causation is explored by comparing an observed case of interactions with a hypothetical case in which the elements of interest are removed from the interaction. If the outcome remains the same in both cases then the feature which was omitted in the hypothetical case is thought to have no relationship to the outcome being observed.

Applying this approach, the question: 'does environmental stress *cause* migration?', could be explored by asking: could the cases of mobility observed in the field sites be explained in the absence of environmental stress? In answer to this question, one might point to Chapter 6, where migrant accounts described moving in response to the impoverishing effects of environmental stress, and suggest that it would be hard to imagine patterns of rural-urban migration looking the same if environmental conditions had been 'perfect' in the field sites. As such, using the logic described above, one could claim that mobility in the field sites is, in part, caused by environmental stress.

Such an argument, which describes environmental stress as a cause of migration, is not, however, without its problems. For as Chapters 7 & 8 showed, non-environmental factors also impact on mobility decisions. Clear cases of this pertain to access to food aid and land tenure, both of which undermined the imperative to move in a context of environmental stress. As such one could cite a counter factual case in which everyone had abundant land and secure sources of food, and in which environmental stress did not generate mobility. By such an account one could argue that environmental stress does not cause migration and instead it is the structures determining access to food and land which

matter.

Considering the above arguments, it appears that there are problems with both. In the case of the former (which is essentially the proponent account) a causal relationship is described between environmental stress and migration meaning one is forced to effectively naturalise the socio-political and economic context. This process, and its prominence in the proponent narrative, was described in Chapter 3, and as such won't be detailed again here. Notable in this study, however, is the manner in which Chapter 9 (comparing the different mobility patterns across the different NRS), has clearly shown how such a context cannot be naturalised. For instead of natural or inevitable, socio-political contexts appear to be shaped by particular historical events located in structures of political economy.

Considering the second argument, which locates the causal relationship with mobility in the socio-political context (effectively the critical position on 'environmental refugees'), again there appear to be problems. Most important among these is the assumption that the socio-political context is infinitely malleable. Such a case leads one to discount the role played by the bio-physcial environment, a feature which, itself is the product of confusing debates about causation with determinism. For while it is certainly true that environmental stress does not determine mobility (as Chapter 8 showed), Chapter 6 presented evidence to suggest that it would be hard to imagine mobility strategies looking the same in a context without environmental stress. As such an approach which discounts the role of such stress, based on assumptions about the malleability of the social environment, seems unsatisfactory.

What such findings and reflections thus suggest is the limited value of focussing on *causation* in discussions about the relationship between environmental stress and mobility. A more useful enquiry appears to be: will environmental stress have a meaningful impact on mobility decisions; and if so: why? Such an approach will be capable of exploring the role played by environmental stress, while at the same time acknowledging the fact that such a

role will only be manifest as a result of the socio-political context in which it occurs. The role of non-environmental factors is an inevitability because environmental stress always occurs in a context, and that context will be structured by forces of political economy (more on this later in the chapter).

With the above in mind, it is pointed out that conceptually, it might not be useful to try and talk about whether or not environmental stress *causes* migration. Better terminology might be querying whether or not environmental stress will *result* in mobility. Such an approach is thought to be both more analytically correct and to be more likely to account for the fact that it is the interaction between environmental and non-environmental factors that needs to be understood if one is to understand the features of mobility about which we have reason to be concerned. Having explored the limitations of an approach focussed on causation I move now to reflect on the implications of the study's findings for how we conceive of the relationship between environmental stress and human mobility.

Re-conceiving the relationship between environmental stress and mobility

Having reflected on the impoverishing effects of focussing on causation, a starting point for reflecting on the findings described at the start of this chapter is to note how a focus on environmental stress in mobility decisions (driven by concerns about environment on the one hand and accountability on the other) appears to afford an impoverished understanding of the relationship between environmental stress and human mobility. In this regard an exclusive focus on the role played by environmental stress, fails to account for the manner in which such stress can synergistically interact with a host of non-environmental factors (such as schooling and tenure relationships) in shaping mobility decisions. This means that a sole focus on environmental stress is likely to both understate the role it plays in mobility

decisions and limit our understanding of the complex basis on which mobility decisions are taken.

In addition to highlighting the potentially simplifying effects of a sole focus on environmental stress, the findings also reveal the limitations of simplistic conceptions of migration/mobility contained in both proponent and critical accounts of the 'environmental refugee'. The shortcomings of 'common sense', proponent, accounts, based on neo-classically influenced push-pull models (see Chapters 2 &3), were highlighted most clearly by finding that barrier effects could act in powerful ways to constrain mobility. Such effects highlighted the problems with conceiving of the migrant as unencumbered in their response to environmental stress, while, the observation that powerful barrier effects might prevent movement (even if the result meant death) highlighted the problem of conceiving of migration as an inevitable outcome of environmental stress.

Related to these conceptual failings (regarding migration and the potential migrant) proponent conceptions of the rural and urban areas as dichotomous, and rural livelihoods as atomised, homogeneous and static are also problematic. Regarding the failings of viewing the rural and urban areas as dichotomous, Chapter 7 revealed how urban livelihoods were also reliant on environmental goods. Here it was shown that particular environmental stresses also decreased the desirability of urban areas as potential destination points for ameliorating the impacts those stresses were generating in the rural areas. Notable in this study was the price/availability of food and timber. As such the dichotomous understanding of rural and urban areas, which stylises rural livelihoods as founded on environmental goods and thus vulnerable to changes in the biophysical environment and urban livelihoods as immune to such changes, is false.

Pertaining to conceptions of rural livelihoods as atomised, homogeneous and static, this research highlighted major failings with such a simplistic conception. Instead of being

atomised the work showed rural livelihoods to be highly political, with access to vital resources being negotiated in an ongoing basis. Additionally rural livelihoods revealed themselves to be absolutely reliant on processes of exchange. As a result rural livelihoods showed their dynamism in both the short term, by which they were able to manage highly variable production schedules, and in the long term, whereby they were shown to have responded to the socio-political changes that took place in Ethiopia in the last century. The result of such observations was to note that livelihoods are not homogeneous, but rather highly differentiated at the local level. In fact, as a result of mobility being found to present a compromised solution to environmental stress-generated livelihood insecurity, such differences were found to be crucial in determining for whom mobility was a viable response to environmental stress and for whom it was not.

This last observation brings us to a major conceptual finding revealed by this work. It relates to both of the conceptual failings described above and pertains to an incommensurability in scale between environmental stress and human mobility. Here the problem with enquiries into the relationship between environmental stress and mobility have assumed that environmental stress was a factor, acting at a scale which meant that it could be determinate of some feature of mobility decisions. As such, both critical and proponent accounts of the relationship between environmental stress and human mobility have made sweeping claims about the nature, or form, mobility might take in response. What the findings from this study reveal however is that environmental stress seems to be in no way determinate of any characteristic of mobility about which we have reason to be concerned, with the only potential exception being the duration of that move – which appears to be linked to the duration of the environmental stress.

From the above it should be clear that more appropriate conceptions of mobility would include the idea that mobility is an agentive strategy, rather than a passive

inevitability. As such it will only be undertaken by individuals for whom it makes sense to do so, and when it makes sense to do so. To appreciate this one also needs to draw on an account of rural livelihoods which understands the ability to move to be constrained, while acknowledging that rural communities are internally differentiated. As such it makes sense to conceive of environmental stress as capable of shaping mobility strategies, but not determining them. For such strategies appear to be determined by micro-level contexts manifest as a result of internal community differentiation.

While such conceptual amendments might help us better understand the relationship between environmental stress and human mobility, it is still useful to explore the light that can be shed on the findings of this thesis in terms of the theory described in Chapter 2. The next section of this concluding chapter occupies itself with this task.

Thinking About Mobility in a Context of Environmental Stress

When attempting to make sense of the mobility strategies observed in this work, it is worth keeping two points in mind. First are the reflections of Castles and Miller (2009), that no single theory is likely going to be able to provide both a useful and complete account of migration. Rather, in order to understand migration, one should look for the multiple connections, operating at all scales, between two places (Castles & Miller 2009). In this regard migration theory presents a useful place from which to explore the different features of those connections. Secondly, as was mentioned in Chapter 2, much of the explicit theorising of migration has focussed on the international movement of people. As such, we should not be surprised if the findings from studies on international migration do not map directly on to these observations of internal migration. Instead, what will be pointed out below are the useful insights which can be gleaned from international migration theory in

understanding the patterns of mobility observed in this study.

A laboured point from this study has essentially been the insights into the relationship between environmental stress and human mobility which can be gleaned from theory on the new economics of labour migration. In this regard an important finding of the work was that mobility decisions are not taken in response to the experience of an environmental stress in isolation. Rather they are only undertaken when they make sense in terms of the whole array of livelihood strategies. In a context where livelihoods, and livelihood options, were shown to be differentiated at the local level, the lens provided by the new economics of labour migration was crucial to understanding who moves and what the character of that movement might look like. In this regard the work was found to corroborate the findings of Hampshire and Randall (1999), described in Chapter 4.

In identifying the new economics of labour migration as valuable it is important to note that I am not suggesting that there is some single proxy against which all mobility decisions can be interpreted. As Massey (1998) and Castles and Miller (2009) both point out, an endorsement of the new economics of labour migration is not intended to argue that migrant rationality is aimed at livelihood security, and thus all mobility decisions can be described in terms of those ends. Rather the use of such a theory is aimed at highlighting that an understanding of mobility decisions requires an appreciation of what mobility might mean for other livelihood strategies. This, in turn, requires an appreciation of the highly heterogeneous social context in which livelihoods exist.

While the new economics of labour migration proved powerful in explaining the bases of mobility decisions in a highly heterogeneous community, network theory also provides explanatory power regarding migrants choice of destination. As was discussed in Chapter 7, social capital proved to be absolutely crucial in dictating migrant's choice in destination. In this regard it was found that it was only in the face of overwhelming

information about the lack of livelihood opportunities in particular areas that migrants would disregard an area in which they either had social networks or previous experience. Notably, network effects appeared to be more important than distance in determining migrant's choice of destination[92]. Such network effects are thought to be particularly relevant in the Ethiopian context, and as a response to environmental stress. For where urban labour markets are saturated, where migrants arrive with little capital and where social security is minimal; social capital becomes fundamentally important for buffering shocks, and providing both social support and information about employment opportunities.

In highlighting the importance of network theory for explaining mobility decisions, another relevant finding is worth mentioning. This pertains to the importance of iterative linkages between sending and receiving areas. Such a finding is particularly important in the context of the literature on 'environmental refugees' wherein proponent, 'common sense models', have invoked a quantum time step; conceiving of environmental change and population growth in terms of 'before' and 'after' (see Chapter 3 for details). For in this work, a focus on the relationship between sending and receiving areas makes quite clear how misleading such a quantum view of time and mobility might prove.

In this regard it was found that potential migrants were put off moving by the increasing number of migrants already in the towns. This was a product of migratory pressures driving up costs of living, increasing job insecurity and decreasing wages in the urban areas. At the same time, farmers leaving their land to be share-cropped created additional livelihood opportunities in the rural areas with every move to the towns. Thus it appeared that with every migration to the urban areas, the incentive for a subsequent migration was reduced. At the extreme end of such a process was an account (documented in Chapter 7) of a farmer describing how he would only move to the towns when the rains

92 Given the lack of rigorous sampling methods and lack of a quantitative basis for this thesis, the strength of such claims should be interpreted with care.

improved as now food was too expensive and there were no jobs in the towns.

Such findings do not suggest that there is much evidence for mobility 'tipping points' in the context of slow onset environmental stresses. That said, one should remain wary of the potential for non-linear responses under different societal circumstances, or at different points in time. This is especially the case for complex systems, of which the relationship between mobility and environmental stress is clearly one (Morrissey 2009).

A penultimate theory which sheds light on the relationship between environmental stress and mobility described in this work, is that of dual labour-market theory. In this regard, although there was little evidence of social stigma around jobs shaping mobility strategies (Massey et al. 1993), the importance of sociological features was apparent in migrant descriptions of their choice of destination. Particularly revealing here was the manner in which Ethiopia's ethnic federal model shaped decisions about migrant destinations. Here, Chapter 7 described how language barriers, racists sentiments and fears of ethnic violence, meant that migrants generally sought to move within their own ethnic territory. Keeping this in mind it should be noted that particular social circumstances also meant that some migrants deliberately sought to move out of 'their' NRS. In both regards, however, sociological accounts proved revealing.

The final theoretical framework with relevance to this thesis pertains to world systems theory. Chapter 2 described world systems theory as explaining migration through an analysis of the political and economic forces which shape market expansion. Like the reference to dual labour-market theory however, evidence of the migration linkages on which the theory was founded are not obvious in this field work. That said, as with the sociological account from dual labour market-theory, an analysis of the political and economic forces structuring the features found to be important in mobility decisions in northern Ethiopia, is revealing.

Chapter 9 has already discussed the value of an historical perspective in understanding how the non-environmental factors, which impact on mobility decisions in a context of environmental stress, are shaped by particular political and economic forces. However while it was useful to differentiate these features at the federal level there is also value in exploring how such features are shaped at the national and international level – as would be required by a political ecology approach (see Chapter 2).

Beginning with land tenure in Ethiopia, while Chapter 7 showed the importance of land tenure in mediating mobility responses in a context of environmental stress, Chapter 5 showed such particular forms of tenure to be the result of historical changes in the country – notably the shift from imperial feudalism to nationalisation and redistribution. That said, control over land has for a long time been at the centre of political economy in Ethiopia with it being the prime mechanism for achieving legitimacy during the *Derg* era (Zewde 2001) and the the basis by which revenues were raised for military expansion and control under the imperial regime (Vaughan & Tronvoll 2003). Similarly, in the post-1991 period, the decision to maintain state ownership of all the country's land has been empowering for the contemporary government where the large agrarian polity makes land ownership central to political control (Admassie 2001, Vaughan & Tronvoll 2003) and compromises the formation of a middle-class civil society capable of checking the powers of the state (Abbink 2006).

Further to the above, one might point out that contemporary Ethiopia's maintenance of the *Kebele* and *Wereda* system, although founded as means to administer the redistribution of land under the Derg (and thus subject to the same political economy structures), remains about enabling contemporary party structures access to farmers on the ground. As such this political economy of centralised control in contemporary Ethiopia, as described in Chapters 5 & 8, is at the heart of the political structures which shape livelihood differentiation at the

local level, and thus determine mobility strategies in a context of environmental stress. One could similarly point to the manner in which the desire to attend schooling today in Ethiopia is part of the governments shift towards a more open economy (itself a partial necessity of the cessation of the Cold War), which, Chapter 7 has showed, changed the role of education in the lives of young people, thereby mediating the mobility response in a context of environmental stress.

Reflecting on the politically structured nature of features important in mobility decisions in a context of environmental stress highlights two things. The first is to emphasise the point made at the end of Chapter 9: that the non-environmental factors interacting with environmental stress in determining mobility decisions are not random, inevitable or natural. Instead they are structured by specific features of the political economy.

The second, and related, point stems from the fact that this political economy operates at a global level. What I mean here is that the historical features which have shaped non-environmental factors in Ethiopia have not operated in isolation from the rest of the world; rather they have been embroiled in global politics. Evidence of this comes from the first half of Chapter 5 which describes Ethiopia's invasion and occupation by Italy, its existence as a British protectorate, Ethiopia's subsequent courting of American favour and then the shift towards socialism. Similarly the ushering in of the post-1991 government was related to collapse of the Soviet Union, which pushed Ethiopia to open its markets, and formalise its democratic institutions. Notably here, in the contemporary context, as the end of Chapter 5 showed, Ethiopia's ability to operate with such a disregard for the democratic principals inscribed in its constitution, lies in its geo-strategic importance in the Horn, its relationship with its neighbours and 'the War on Terror'. This keeps aid flowing into the country, empowers the government regarding its distribution of land, jobs and aid, and as such allows the government to maintain its centralised control of the resources required for

most livelihoods. These features, as Chapters 7, 8 & 9, have shown are fundamental in determining mobility decisions in a context of environmental stress.

Reflecting on the impacts of such findings for our conception of the relationship between environmental stress and human mobility, it is worth recalling why it is that environmental stress has become a focus of migration studies. As was pointed out in Chapter 3, a large part of this has been findings on the inevitability of climate change which means that some climate change-related stresses will manifest, placing migratory pressures on human populations. In this context a concern has been with understanding north-south linkages with the potential for conducting discussions on compensation. Hence the focus on the role of climate change on mobility; trying to work out how much of a role climate change, as opposed to other factors, plays in mobility decisions.

As has already been argued by this thesis, such a singular focus on the impacts of environmental stress impoverishes our understanding of the relationship between environmental stress and human mobility. In addition however, what reflections from world systems theory suggest is that the north-south connections are not limited just to issues of GHG emissions and climate change. Instead, world systems theory suggests that the relationship between environmental stress and human mobility is determined by non-environmental features, the existence of which is located within a global political economy.

Thus, if we are concerned about the conditions of human vulnerability that might be generated as a result of mobility undertaken in response to climate change, this study's findings, that the conditions of duress under which someone moves in response to environmental stress is determined by non-environmental factors located in the global political economy, suggest that in order to understand the impacts of climate change on mobility and vulnerability, requires a contextualisation of those processes within an analysis of the global political economy. As such understanding the impacts of GHG emissions in the

Global North, on livelihoods and human rights in the Global South, requires a focus which is broader than simply the impacts of climate change-related stresses on livelihoods. For these livelihoods need to be contextualised within other north-south linkages, within the global political economy.

Having reflected on both the findings of this thesis and how such findings might be made sense of in terms of the dominant theory used to explore this work, I turn now to describe the contributions this work has made to the literature on environmental stress and human mobility.

Contributions

As was mentioned in Chapter 2, this thesis represented the first effort, known to this author, at linking migration theory with political ecology as a means to explore the notion of 'environmental refugees'. Such an approach appears to have been successful, allowing this study to make a number of contributions. The first of these was to contextualise the literature on 'environmental refugees' in the writing of migration theorists working on the relationship between environmental stress and human mobility. Here, a political ecology approach provided insights into the polarisation of the literature on 'environmental refugees', highlighting, the degree to which it revolved around claims to discursive legitimacy, generating policy approaches which were opposed by migration scholars but supported by environmentalists.

Such an approach, provided a distinction between the existing analysis of the debate, which was focussed on maximilist and minimalist accounts, suggesting the notion of proponent and critical accounts as getting more at the heart of the disagreement. Such a distinction, in turn, generated a focus on the conceptual failings of the proponent claims,

allowing for a more nuanced critique of the conceptual models which were being invoked in predicting huge numbers of 'environmental refugees' later in this century. Fundamental to this critique were insights from both migration theory and political ecology which highlighted problems with simplistic atomistic, apolitical, ahistorical, homogenising and modernist development narratives.

From this position the work was able to set-up a study which (free from the politics of describing an environmental problem, and instead interested in the workings of a relationship) explored the interaction between environmental stress (rather than change) and human mobility, focussing on the manner in which environmental and non-environmental factors interact to shape mobility strategies in a context of environmental stress. Such a conceptual approach created a space for the work to undertake a rigorous engagement between the more recent literature on 'environmental refugees' and the more established literature exploring the relationship between environmental stress (in drylands) and human mobility. Such engagement was thought useful as it has often been missing in work on 'environmental refugees' which has tended to cherry-pick empirical findings which prove useful in either criticising or endorsing the notion of an 'environmental refugee'.

A product of the above efforts was the ability to generate a study approach which focussed on resolving likely conceptual failings in the models by which the relationship between environmental stress and mobility was being conceived. In this regard the work presents a coherent study of rural-urban migration in a context of environmental stress. To this end the work was able to embrace the conceptual overlap between political ecology and migration theory to explore issues of structure, agency and scale which are thought to pervade the conceptual problem of the relationship between environmental stress and human mobility. As such it is from this work that the main contributions of this thesis come.

Pertaining to issues of structure and agency the work has provided, what appears to

be, a comprehensive means for exploring the interaction of environmental and non-environmental factors shaping mobility decisions. If not comprehensive, the description of *additive, vulnerability, enabling* and *barrier effects* provides a platform from which to build a more complete theory of how environmental stress might manifest differentially in different contexts, as a response to environmental stress.

Regarding issues of scale the work's contribution was to draw both migration theory and political ecology's long-standing tradition of placing the decision-maker at the centre of the analysis. While to date, research has disaggregated communities to the level of ethnic, class or socio-political group (e.g. Findley (1994), Hampshire (2002) and Wouterse and van den Berg (2004) – see Chapter 4), this research acknowledged that it is individual's who make decisions about their mobility and that the environment is experienced differentially by different households, based on their location within a social context. Such an approach revealed an incommensurable problem, pertaining to scale, in work focussed on the relationship between environmental change and human migration. For while it was true that environmental stress operates at the macro-scale to shape mobility imperatives, it is non-environmental factors, operating at the micro-scale, which determined the geographical extent of mobility strategies as well as for whom, when and under what conditions of duress those strategies were employed. As such a major finding of this work has been that there is little about the character of mobility decisions that can be inferred from the fact that they are undertaken in a context of environmental stress; with the duration of people's move appearing to be the only exception.

Finally, this focus on structure, agency and scale, in the context of political ecology and migration theory's historical focus on historical materialism, has generated a conceptual conclusion which highlights the need for understanding the linkages between biophysical systems, mobility decisions and global political economy. In this regard the work asks why,

if mobility decisions in a context of environmental stress are determined by non-environmental factors, we think it sufficient to focus only on the north-south linkages generating that stress – specifically GHG emissions? In this regard the work has showed how non-environmental features shaping mobility decisions are themselves structured by factors operating within the global political economy. As such it has been argued that any understanding of the relationship between climate change and migration, or environmental stress and human mobility, will be incomplete without an appreciation for the global political economy context which is acting to shape individual decisions about mobility.

Future Research

Having detailed the findings and contributions of this work, I turn, finally, to describe areas of future research which could be revealing of the relationship between environmental stress and human mobility.

The most obvious piece of future research would entail a study similar to this one in which better use is made of ecological data to verify the accounts of environmental stress. Like this study, such data need not offer proof of environmental change, but simply of real stress which is analogous to the types of stress expected to accompany (climatically-driven) changes in the environment. Such a study would be particularly useful for exploring the conceptual claims, about migration and livelihoods, made in this work. It would also be valuable to interrogate the identification of additive, vulnerability, enabling and barrier effects as useful for conceiving of the relationship between environmental and non-environmental factors in mobility decisions.

In a similar fashion, studies of climate-change-analogous, rapid onset stresses, conceived with a focus on exploring the relationship between environmental and non-

environmental factors in mobility decisions, would prove useful in interrogating the findings of this work and the generalisability of its claims.

A specific question posed by this work pertains to the seemingly contradictory findings on the importance of network effects yet at the same time a limited capacity for tipping points in migration as a response to environmental stress. In this regard the work's findings that network effects were important in shaping mobility decisions conflicts with the fact that large rural-urban migrant populations in the the towns undermines the incentives for subsequent movement. Such a finding leads to the question: what limits the forces of cumulative causation, in a context where network effects appear important? Such a question is vital to understanding whether the limits to cumulative causation are context specific and, as such, whether we might see significant potential for migration tipping points elsewhere, in other contexts. Given the potential importance in understanding tipping points in mobility decisions, as well as the complex ways in which cumulative causation works and is limited (Fussell 2004), a study exploring the role of cumulative forces and their limitations in a context of environmental stress, would be of value to understanding both cumulative processes in mobility decisions and the impact of environmental stress on mobility.

A final area of research which needs more work and which stems from the findings of this study is on the linkages between multi-scalar features of political economy and mobility decisions in a context of environmental stress. While this work has explored these features to an extent which is sufficient to claim that features of political economy matter, there is an explicit question on the political economy of climate change and mobility which needs exploring. In this regard, as Chapter 3 described, there is a whole global political economy around the construction of the 'climate'/'environmental refugee'. Notable in the case of environmental stress and mobility is that such structures will both interact with mobility decisions on the ground and with national-level interest in controlling mobility, which are

themselves located in features of political economy. These interactions of global discourses, bureaucratic labels, national interests and individual decisions about mobility, will shape human security and demographics in particular ways. Given that we seek to understand both human security and demographic change, an exploration of these interactions lies at the heart of understanding the how climate change (as both a social and physical phenomenon) will impact livelihoods and mobility decisions – see the conclusion, below, for a more detailed example of how such insecurity might manifest.

Conclusion

The findings of this work present some problems for groups working on the relationship between climate change and migration. With its most notable finding being that human mobility is the function of a number of factors, operating in highly complex ways across multiple scales, the work both presents as an indictment of existing predictions on the number of people who will be displaced by climate change and casts doubt on our ability to make more accurate predictions in the future. As such these findings might not prove encouraging for policy makers, for whom numerical models are useful for making decisions, and climate change advocates, for whom the use of numbers is a powerful means of raising public awareness. That said, this work is not only critical and it does provide some prescriptive insights.

Notable in this regard is that this study warns against presenting the threat of climate change in terms of the migration problem it might cause. As this work has shown migration is not simply a problem and it may be counter-productive to view it as such. To this end one should note that a focus on migration as the problem, would overlook the levels of livelihood insecurity experienced by those individuals who do not migrate. With this work having

shown that barrier effects can be so great as to undermine mobility as a livelihood strategy altogether, a focus on migration may well overlook the important issue of livelihood insecurity among non-migrants.

In addition to such problems is the fact that migration in many instances may not be bad. In this regard this work showed how migration was related to certain socially desirable outcomes, such as increasing access to education. As such the portrayal of migration as a problem overlooks the complicated role it might play in achieving desirable outcomes.

Nuancing these two observations however, is the fact that whether migration is aggregately good or not, it seems true that given the complex set of factors upon which mobility decisions are taken, it is the individuals themselves who are most likely to make the correct decision about whether or not mobility will prove an effective livelihood strategy for securing their livelihood. In this regard it appeared, from this study, that farmers and migrants were generally making wise decisions about whether or not to move. Certainly, given the parameters upon which mobility decisions were based, they seemed more likely to get the decision right than would an institution for whom it would be practically impossible to to collect all the data needed to assess such decisions.

As such it is worth noting that policy responses to climate change should simultaneously seek international cooperation on limiting GHG emissions and improve the availability of information so that individuals and households might make better decisions on whether or not to move. In terms of the latter, a number of options are available. These are not limited to, but might include: providing information to rural areas about job availability in the different towns, ensuring labour standards in migrant receiving areas, reducing barriers to schooling in receiving areas, ensuring employers engage in skills training with their labour, providing reception points in receiving areas wherein the skill sets of arriving migrants could be matched with potential employers and where skills training could be

offered, and improving transport linkages which reduce the costs of moving people, goods and information.

While the above solutions sound promising there can be no doubt that practical obstacles will present in their implementation. In addition to such problems however is a more major problem which presents itself in the Ethiopian case. Specifically, that the Ethiopian government does not appear interested in having its rural population move to the towns. Such an act would threaten the current government's electoral dominance and undermine their ability to mobilise support and party allegiance, through their control of land and food aid. As such any initiatives of the sort described above would be thwarted for the manner in which they are out of touch with the dominant conditions of political economy in Ethiopia.

As such, and as was described above, it appears that in a similar manner to understanding mobility decisions, generating interventions which will address the potential insecurity of individuals exposed to environmental stresses will require a comprehensive understanding of the political economic context in which those interventions might be made. In this regard, while such an understanding might not result in the automatic generation of solutions; any other solutions will be rendered useless if they conflict with such a political economy. Thus if interventions aimed at reducing the negative impacts of mobility decisions in a context of climate change are to be based on anything other than chance, they will require an understanding of the complex inter-linkages between political economy, climate change and mobility.

APPENDIX A

URBAN MIGRANT SEMI-STRUCTURED QUESTIONNAIRE

1. **Name?**
2. **Sex?**
3. **Age?**
4. **Education?**
5. **Do you have other family members?**
    1. Where do they live?
6. **Where did you live before you came to [Town]?**
    1. How far away is this place and how did you get here?
7. **Have you lived anywhere else other than where you were before?**
    1. What was the motivation for previous moves?
8. **How long have you been in [Town]?**
    1. Had you always planned to stay away for this long?
    2. Why have you stayed this long?/Why don't you want to stay longer?
9. **Why did you choose to leave the rural areas? – If land, then did they want to come to [Town] when they thought they could get land in the rural areas/if they had land would they go back?**
    1. What type of work did you do in the rural areas?
    2. Did you like life in the rural areas?
10. **Do you still have contact with your family that live in the rural areas?**
    1. What sort of contact do you have with them? – do you send them things or do they send you things?
    2. How often do you go back to the rural areas?
    3. When did you last go back to the rural areas?
    4. When do you think you will next go back?
11. **When did you decide to come to [Town]?**
    1. Was it your decision?
    2. Was it a difficult decision?
    3. What sort of planning did you have to do before coming to [Town] – saving money etc.
    4. For how long did you plan?
    5. Were you nervous about coming to [Town]?
12. **Why did you choose to come to [Town]?**
    1. Why [Town] and not somewhere else?
    2. Where in [Town] did you live when you first arrived here?
    3. What did you bring with you?
    4. Where do you live now (house? hotel? etc.) with who?
    5. Was it difficult when you first got here?
    6. Is it difficult now?
    7. What has changed?
13. **Do you have other family/friends who want to come to [Town]?**
    1. Why do you think they do/don't want to come?
    2. Will you help them?
    3. What would you advise them to do before coming?
14. **What jobs have you done since living in [Town]?**
    1. How did you get these jobs?
    2. Did you need skills to get those jobs, where did you learn those skills?
15. **What do you do in your spare time – weekends, evenings – and what do you do for fun?**
    1. Do you have many friends in [Town]?

2. How did/do you make friends here?
3. Do you like living in [Town]? What do you like/dislike about it?

16. Is [Town] the same as you thought it would be?

1. Where did you get your information about how it would be here?
2. Have you had any problems here?

17. Do you think your life in [Town] is better than your life in the rural areas?

1. Is it a good thing that you are in [Town] – is life better or worse for your family this way?

18. Do you see yourself ever returning to the rural areas?

19. Do you see yourself staying in [Town] or will you try and go to another town?

APPENDIX B

RURAL LIVELIHOOD SEMI-STRUCTURED QUESTIONNAIRE

1. **Name?**
2. **Sex?**
3. **Age?**
4. **Place of birth?**
5. **Schooling?**
6. **Where else have you lived?**
    1. What did you do while living there?
7. **Time in village?**
8. **Number of people in Household?**
    1. Relationship to head of the household?
    2. Number (and ages) of children in the household?
9. **Do you have family members in any other village/Town?**
10. **Consumption and production (and change):**
    1. Do you have land to grow food?
    2. What types of food do you grow?
    3. What things do you have to buy for the household – foods, other
    4. How do you get the money to buy these things?
        1. About how many months worth of food do you sell to buy these things?
    5. For how many months of the year does the food you grow last (after selling)
    6. How do you make up the food shortfall in the house?
        1. How have the prices of things changes
11. **What assets does your household own/have access to?**
    1. How does/did your household get its land and this house?
    2. How many head of cattle does your household own/have access to?
    3. How did you get your cattle?
    4. What do you do with your cattle?
12. **Energy and Water (plus changes):**
    1. Where do you get water (does the distance change)
    2. Where do you get fuel?
13. **Is your farm as productive as it used to be**
    1. Why and when do you think it changed?
14. **Changes in farming practice:**
    1. What have you changed in response to these changes in productivity
15. **What do you do in an average day?**
    1. how do actions change during different times of year
16. **Number of meals a day?**
    1. What sorts of food do you eat?
17. **Have you experienced any stresses or shocks recently?**
    1. how have you changed your activities so as to deal with these shocks/stresses?
18. **Has the household been better or worse off in the past?**
    1. What caused the household to move between the levels of well being?
19. **What do you do in times of drought?**
    1. Have droughts changed
20. **What will you do if the conditions for farming continue to get worse?**
21. **What do you do when you get sick?**
22. **Do you like living in this village?**

APPENDIX C

RURAL LIFE HISTORY SEMI-STRUCTURED QUESTIONNAIRE

1. **Name?**
2. **Sex?**
3. **Age?**
4. **Place of birth?**
5. **Schooling?**
6. **Where else have you lived?**
7. What did you do while living there?
8. **Time in village?**
9. **Number of people in Household?**
    1. Relationship to head of the household?
    2. Number (and ages) of children in the household?
10. **Do you have family members in any other village/Town?**
11. **Consumption and production (plus changes):**
    1. From where do you get food?
    2. How long does the food you grow last you?
    3. Where do you get the food you can't grow?
    4. What, other than these foods, do you have to buy
    5. Where do you get the money to buy these things
    6. Is there anything else on which you spend food?
    7. How have the prices of things changes
12. **What assets does your household own/have access to?**
    1. How does/did your household get its land and this house?
    2. How many head of cattle does your household own/have access to?
    3. How did you get your cattle?
    4. What do you do with your cattle?
13. **How was life different for young people when you were young compared to the lives of young people today?**
14. **Does the area now look different to the way that it used to?**
15. **Is the climate now different to how it used to be?**
16. **Do you remember when the Italians were in Ethiopia?**
    1. How was life changed by the arrival of the Italians?
17. **Do you remember the drought of 1966/67 (EC)?**
    1. How did that drought affect you and how did you survive?
18. **Do you remember when the Derg replaced the Haile Selassie Government?**
    1. How did the arrival of the Derg affect people's lives in the rural areas?
    2. How did it affect farming?
19. **Do you remember the drought of 1976/77?**
    1. How did that drought affect you and how did you survive?
20. **Were there problems under the Derg government in this place with fighting against the Derg?**
    1. How did this affect farming and life in this area?
21. **How has the coming to power of the EPRDF affected life in this area?**
22. **Have there been any other large changes in the area that you can think of?**

APPENDIX D

EXAMPLE INTERVIEW TRANSCRIPT – URBAN MIGRANT

Atsbi Interview respondent 48. Interview conducted on the 31st of May 2009.
Note: Example transcript has ignored the introductory questions on: Age, Name, Sex etc. Questions correspond to Appendix A

Do you have other family members?
Does she live with anyone else in Atsbi?
- *She says that she has five children*

What are the ages of the oldest and youngest?
- *The oldest is sixteen and the youngest is four.*

Where did you live before you came to Atsbi?
Where was she living before she came to Atsbi?
- *[rural area]*

How far away is that from Atsbi?
- *About a thirty minute walk*

Have you lived anywhere else other than where you were before?
Has she lived anywhere else, other than [rural area]?
- *No.*

How long have you been in Atsbi?
How long ago did she come to live in Atsbi?
- *About ten years.*

Why did you choose to leave the rural areas? – if land, then did they want to come to Atsbi when they thought they could get land in the rural areas/if they had land would they go back?
Could you ask her why she chose to leave the rural areas?
- *She says that she was born in [rural area] but came to Atsbi because of the low productivity of the land.*

What does she think caused the land to be unproductive?
- *She thinks it was caused by the shortage of rainfall.*

With the productivity of the land getting worse, why did she choose to leave [rural area] when she did?
- *She says that it was not only the productivity which was the problem, her husband also left her and she had no house and was living with her parents.*

Can she tell me why this meant she had to leave?
- *She says that her her husband had savings from which they could buy seed if they needed it. He also had family who had oxen that they need to plough the land. After he left her she had to live with her parents and sharecrop the land. She says that after doing this and terrace building for five years she decided to come to Atsbi to find work.*

Where did she get her land from?

- *From the government in 1983 (Ethiopian Calendar).*

Do you still have contact with your family that live in the rural areas?
Does she still go back to [rural area] ever?
- *She says that she goes back to visit her father (her mother has died) and her sibling.*

How often does she go back?
- *She goes back at the time of the harvest so that she can collect the sharecropped produce from her land.*

Could you ask who she sharecrops her land to?
- *She says that she sharecrops it to someone who is rich in the rural areas and has their own land.*

And how long does the produce that she gets from the land last her in Atsbi?
- *About three or four months.*

Why did you choose to come to Atsbi?
Why did she choose to come to Atsbi, rather than another town?
- *She says she wanted to be close to her family.*

What jobs have you done since living in Atsbi?
What work has she done while living in Atsbi?
- *Builds terraces, washes clothes does some work as a daily labourer. She also has the food she gets from her land.*

Could you ask her if she is worries about losing her land in the rural areas because she lives in Atsbi?
- *Yes*

If the government told her that she either had to go back to [rural area] or lose her land, would she rather go back and keep the land or stay in Atsbi and lose the land?
- *She says that she would go back to the land.*

Do you think your life in Atsbi is better than your life in the rural areas?
Does she think that her life here is better than in [rural area]?
- *Atsbi is better?*

Why?
- *She says it is better because of the jobs here.*

Do you see yourself ever returning to the rural areas?
Does she think that she will ever go back to [rural area]?
- *She says that a big problem with going back is that she would have to buy seed for her land.*

How much would it cost her to buy the seed?
- *She says it would cost her 1000 Birr to buy enough seed to plant her land.*

Do you see yourself staying in Atsbi or will you try and go to another town?
Does she think she will stay in Atsbi or does she want to move to another town?
- *She says that she would like to save enough money that she could buy seed and go back to the rural areas. She would rather do this than go to a bigger city. She says the problem is that with the bad rainfall she won't get back seed that she plants in a drought year.*

APPENDIX E

EXAMPLE INTERVIEW TRANSCRIPT – RURAL LIVELIHOOD

Ahuntegegne Interview respondent 7. Interview conducted on the 9th of September 2009.
Note: Example transcript has ignored the introductory questions on: Age, Name, Sex etc.
Questions correspond to Appendix B

Schooling?
Did she go to school?
- *No.*

Where else have you lived?
Have she lived anywhere other than Ahuntegegne?
- *No.*

Number of people in Household?
How many people live in her house with her?
- *Her and her husband.*

She has no children?
- *Yes, there are also eight children.*

What are the ages of her oldest and youngest children?
- *The oldest is thirty-one years old. The youngest is five years old.*

Do you have family members in any other village/town?
Does she have any other family members living in any other place, away from Ahuntegegne?
- *No.*

Consumption and production (plus changes):
Do she have any land on which to plant crops?
- *Yes.*

and what crops does she plant on the land?
- *Barley and potato.*

Any onions or other vegetables?
- *No, she doesn't plant any onion. She says it is too affected by pests.*

How long does the harvest from her land last her?
- *She says there has been no harvest for the last four years.*

What does she do when there is no harvest?
- *She says that when there is no harvest they have to buy seed so that they can plant crops next year.*

Why does she keep buying seed when the harvest is failing?
- *So that they can grow crops to feed the animals.*

If the rain was good, how long would the harvest from the land last her?
- *The whole year.*

When was the last time this happened?

– *In 1998 (Ethiopian calendar).*

How does she survive when there is no harvest from the land? Where does she get food?

– *She buys sorghum from the market.*

Where does she get the money to be able to afford this?

– *From selling sheep.*

Has she had to sell many sheep to survive for the last four years?

– *Yes, they have had to sell many sheep.*

How long will she be able to keep selling sheep so that you can buy food for the family?

– *She says that there are only four sheep left.*

Are the sheep the only animals that she has?

– *She also has some sheep from her relatives that she is looking after.*

Why does she look after these sheep? Have they been given to her?

– *No, she says that her relatives are just supporting her. She says that she will get half the profit from the sale of any off-spring of the sheep.*

Does she have any other income in the house, other than from the sheep she sells and the animals of her relatives?

– *She also has a son who is working as a sheep trader.*

Is there much money from sheep trading?

– *No, she says the money from sheep trading is small.*

Can she say how much money?

– *Maybe two or three Birr per sheep.*

Could you ask her what the major expenses in the house, other than food?

– *School materials, clothing, land tax and church fees.*

and which of these are the most expensive?

– *Food and schooling.*

What assets does your household own/have access to?

She said she had land, where did she get it from?

– *She says she got it from the Haile Selassie government.*

and she was able to keep the same land through the times of the *Derg* and EPRDF?

– *Yes, she has kept it, but it has gotten smaller over time.*

How did she get the house that she lives in?

– *She says that part of the house was built by her husband and another part was built with the help of her friends.*

What animals does she have? Are there any, other than the sheep?

– *They have: four sheep, two cows, one calf and one goat. She says that they used to have more but they have had to sell them because of the drought.*

With her son acting as a trader, could you ask her why, unlike the other people we have spoken to, she doesn't purchase young sheep, fatten them and sell them again?

– *She says that she can't do this now as there is a sheep disease which is contagious. With the sheep in her herd being so skinny because of the drought, she is worried that her animals will get infected.*

Energy and Water (plus changes):

Where does she get water from?

– *In the summer she gets water from a stream.*

and in the winter?

- *she says that in the winter the stream dries up and she has to get water from a pump.*

How far is the pump from her house?

- *About one hour.*

Is that one hour there and back or just there?

- *one hour, there and back.*

What does she use for cooking fuel?

- *A mix of animal dung and eucalyptus*

Where does she get the eucalyptus from?

- *They have their own trees*

Do they just use the eucalyptus trees for cooking?

- *No, they just use the leaves and twigs for cooking. The main part of the tree is used for building their house.*

Is your farm as productive as it used to be?

Could you ask her if her farm is as productive as it used to be?

- *She says that the productivity of the farm has gone down.*

When does she think it started to go down?

- *Since Hailie Selassie.*

Why does she think it went down?

- *Because of the increasing drought and frost.*

Have there been any other changes other than drought and frost?

- *She says that the wind and water erosion have also damaged her land. Also, pests are getting worse.*

Does she know why the pests are getting worse?

- *She doesn't know.*

Changes in farming practice:

Could you ask her, if she has changed the way she farms at all?

- *She says that she tried using compost when the government told her to but she think that this has had no effect.*

What stresses shocks have you experienced recently?

Have there been any challenges for the household recently?

- *Yes: drought, pests, frost, sheep disease*

and has anything else happened which has made life more difficult?

- *She says that her husband has also died.*

What will she do if the conditions here continue to get worse?

- *She will eventually sell her sheep. After this, if the famine continues, she says that she will die.*

Could you ask her why she would rather die here than move somewhere else?

- *She says that she is unable to move because she has children*

Would it not be possible for one of her older children to go to the towns?

- *She says that the oldest child cannot leave as he has to look after the household.*

Other people have said they would take a loan to survive, would she not do that?

- *She says that she doesn't want a loan because it is not profitable. She says that she took a loan previously and made no money off it.*

And what about using the loan to buy food, like other people?

- *She says that maybe then it would be a good idea to take a loan.*

Do you like living in this village?
Is anything good about living here?

- *She says that she does not like living here. She says that the area used to be good. It will be good again, if the weather changes.*

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