# Climatised Moves

## Climate-induced Migration and the Politics of Environmental Discourse

Bettini, Giovanni

2013

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Climate migration has become an iconic topic in international climate politics and policy.

This work, combining political ecology, critical security studies and post-foundational theories, traces the changes of conflicting discourses across time and space, and assesses the different forms of security they interpellate.

While initially attracting attention as a security issue, visualised by the spectre of mounting waves of climate refugees, it is now mainstreamed and (re)signified in the soft terms of human security. The motto of governed migration as an adaptation strategy seems to configure climate migration as an object for mundane governance rather than any exceptional measures.

The exceptionalism of security and the mundanity of governance appear to congrue to a de-politicization of climate migration. A biopolitical government of disordered and dangerous populations at the fringes of capital and development appears at the horizon, once the blurred distinction between exception and rule dissolves.

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## LUND UNIVERSITY

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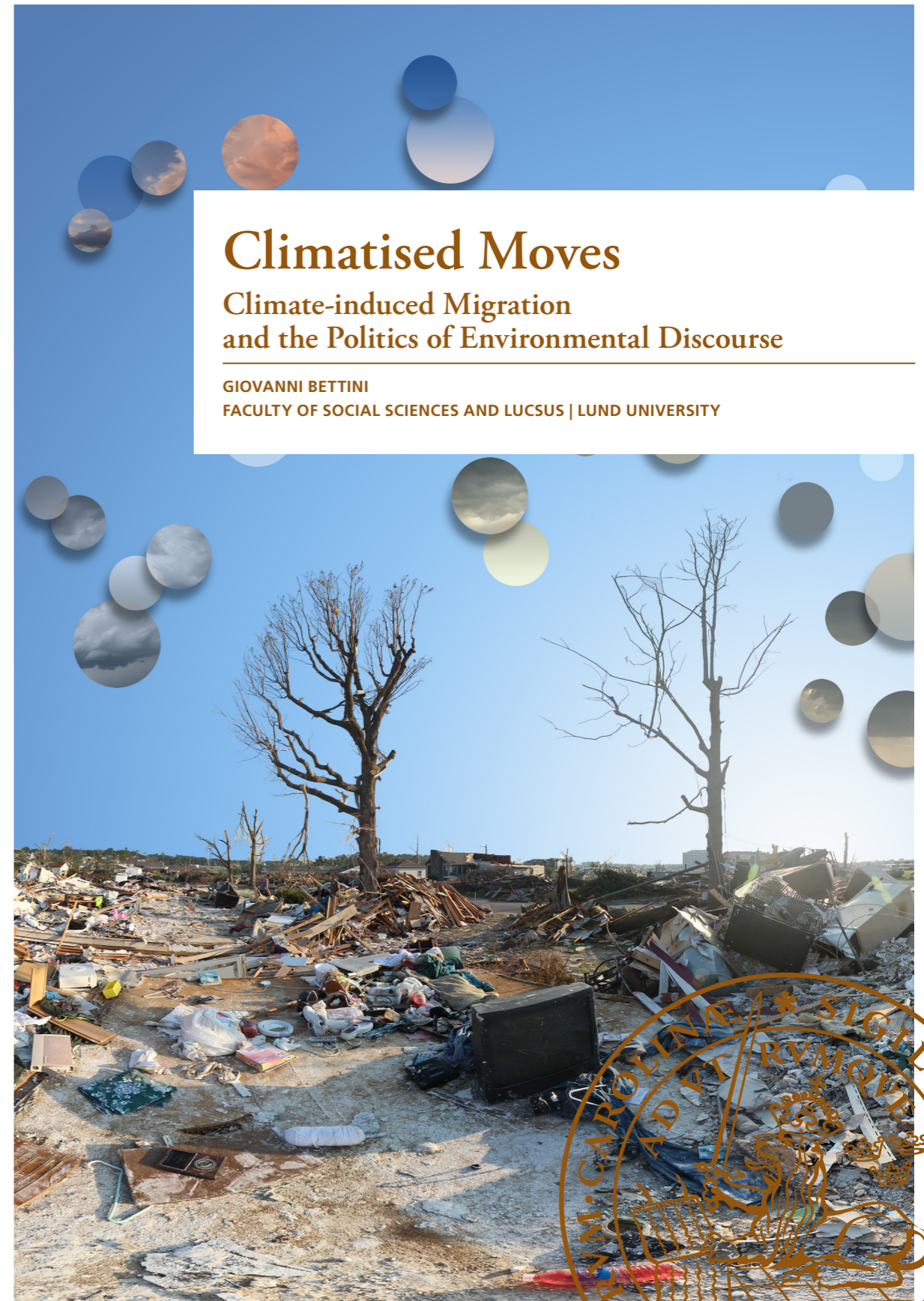
# LUCID

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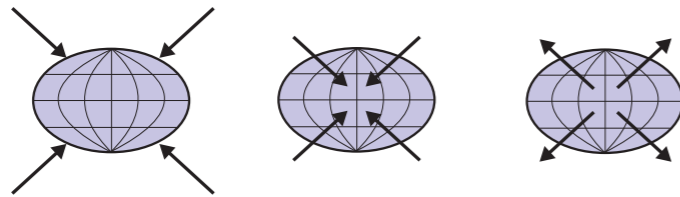


LUCID is a Linnaeus Centre at Lund University. It is funded by the Swedish Research Council Formas, comprises six disciplines from three faculties and is coordinated by LUCSUS as a faculty independent research centre. Research aims at the integration of social and natural dimensions of sustainability in the context of grand sustainability challenges such as climate change, biodiversity loss, water scarcity and land use change. The scope is broad, the ambition is bold and the modes of operation are collaborative. Over the course of ten years we will develop sustainability as a research field from multidisciplinarity to interdisciplinarity to transdisciplinarity.

# Climatised Moves

## Climate-induced Migration and
## the Politics of Environmental Discourse

Giovanni Bettini

**LUND**
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# Contents

# Acknowledgements

Geocentrum has been, by name and by nature, the centre of my wander as a PhD candidate. For those not familiar with the topography of Lund University, Geocentrum is the building that hosts LUCSUS, the institute I have been affiliated at, but also the Linnaeus Centre LUCID, the Department of Human Geography and the Human Ecology Division. The medley of perspectives and intellectual sensibilities that ferments in the rooms, corridors, stairwell (and smoking/parking lot) at Geocentrum has been a most fertile ground for cultivating my scholarly and intellectual development, providing innumerable sources of inspiration, occasions for discussions, as well as encouragement in the happy and less happy steps of this journey. For these reasons, I am grateful to all the colleagues and staff that in these years have gravitated towards Geocentrum.

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Lund, June 2013

# Acronyms

| | |
|---|---|
| ADB | Asian Development Bank |
| APMEN | Asia-Pacific Migration and Environment Network |
| CM | Climate migration |
| EM | Environmental migration |
| EU | European Union |
| IPCC | Intergovernmental Panel on Climate Change |
| NGO | Non-governmental organization |
| UN | United Nations |
| UNEP | United Nations Environment Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| WGBU | German Advisory Council on Global Change |

# List of Papers

**Paper I**
Bettini, G. (2013). Climates barbarians at the gate? A critique of
apocalyptic narratives on climate refugees *Geoforum, 45*, 63-72.

**Paper II**
Bettini, G. (2013). (In)convenient convergences: "Climate refugees",
apocalyptic discourses and the depoliticization of the debate on climate-
induced migration. In C. Methmann, D. Rothe, & B. Stephan (Eds.),
*(De)constructing the greenhouse: Interpretive approaches to global climate
governance*. London, New York: Routledge.

**Paper III**
Bettini G., Andersson, E. Sand Sand Waves and Human Tides – Comparing
the debates on climate-induced migration and desertification. Submitted to a
peer-reviewed journal.

**Paper IV**
Bettini, G., & Karaliotas, L. (2013). Exploring the limits of peak oil-
Naturalizing the political, de-politicizing energy. *The Geographical Journal* (In
Press).

**Paper V**
Bettini, G. (2013) Climate migration as an adaptation strategy:
de-securitizing climate-induced migration, or making the unruly governable?
Submitted to a peer-reviewed journal.

# Introduction

Islands sinking under rising seas – their inhabitants deprived of their homeland. Desolated remnants of human settlements devoured by encroaching deserts. Desperate victims of climate change walking in muddy, dark waters: the few things they could save from the storm's fury stick out of the baskets they carry on their heads. Humanitarian catastrophes spreading throughout the planet menacing international peace and security. Tides of peoples displaced from the global south pushing at affluent countries' gates. Climate refugee camps mushrooming in the epicentres of global capital[1].

Such (post)apocalyptic imaginaries, in the course of the 2000s, brought the question of how climate will influence human migration (in brief, CM) to the attention of on-governmental organizations (NGOs), media, as well as scholarly and policy circles. The rhetoric of crisis went hand in hand with the invocation of a security lexicon. Professor Norman Myers was among the loudest voices connoting CM as a global security challenge: he foresaw the raise of abrupt, uncontrollable tides of millions of climate-induced displaced. Starting off as humanitarian emergencies, such waves could act as threat-multipliers endangering regional and international stability (Myers, 2005; Myers & Kent, 1995). More or less crude variations of this storyline figured in official documents that stressed the security implications of climate change (Council of the European Union, 2008; Schwartz & Randall, 2003; Stern, 2007; United Nations General Assembly, 2009; WBGU, 2008) – even in the motivations for the Peace Prize awarded to Al Gore and the Intergovernmental Panel on Climate Change (IPCC) by Norwegian Nobel Committee (2007). The media and NGOs joined the chorus and stressed the compelling character of CM by mobilizing crisis narratives (e.g. Christian Aid, 2007; Environmental Justice Foundation, 2009; Greenpeace, 2008; Knight, 2009; WPC, 2010). Thanks to such dramatic emphasis, a topic previously familiar only to

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[1]See for instance http://www.postcardsfromthefuture.co.uk

specialists reached the centre of climate politics. For instance, it is explicitly addressed in paragraph 14 of the so-called Cancun Adaptation Framework signed by the parties to the UNFCCC (2010), which is arguably the highest instance of international climate law.

The apocalyptic narratives on climate refugees and their security implications have raised concerns among critical scholars. The first wave of interventions questioned the analytic/scientific grounds of the narratives on mounting waves of climate refugees – pointing for instance to the underlying mechanistic understanding of migration, to the poor evidence for the numerical estimates, or the fuzziness and almost impossible operationalization of the concept of climate refugees (Black, 2001; Brown, 2008b; Castles, 2002; Tacoli, 2009). Various studies highlight how the emphasis on climate refugees and the security implications of CM could be functional to a variety of vested interests (Castles, 2002; Hartmann, 2010, p. 239). Others ventilate the concern that the securitization of CM could foment restrictive attitudes towards migration, possibly leading to the implementation of extraordinary measures and to a militarization of CM (Black, 2001; Hartmann, 2010; Smith, 2007; White, 2011). In a nutshell, the question in the backdrop of such critiques is whether the strong tones in the narratives on climate refugees are *alarming* or *alarmists* – whether they are faithful to the best available scientific evidence and point to the seriousness of CM, or exaggerate it for various reasons.

The first goal of this work is to, in dialogue with a series of recent studies (Barnett & Campbell, 2010; Farbotko, 2010; Jakobeit & Methmann, 2012; Oels, 2010), bring the first wave of critiques one step forward. By means of an interpretive analytic framework, this work shifts the critique to a different plane, de-naturalizing CM and exploring the political *meanings* inscribed in different problematizations of CM. The first wave of studies essentially propose a functionalist analysis: they discuss the interests or actors of which narratives on climate refugees are emanations of, and focus on the 'immediate' consequences that the invocation of security may have. An aspect underexplored in the literature is for instance that crisis narratives on climate refugees are mobilized by a broad range of positions from 'traditional' security analysts (Schwartz & Randall, 2003) to humanitarian perspectives (Christian Aid, 2007) and even radical discourses in the far left of the political spectrum (WPC, 2010). By looking closer at such a convergence and to the role that the narratives on 'climate refugees' assume in the interactions and struggles on CM, I will be in the position to explore the more subtle (but nonetheless crucial) effects that apocalyptic and securitising narratives can have on the

political landscape of CM. This allows me to evaluate the impact of securitizing narratives on climate refugees not only on the basis of the signs of a militarization of the issue, but also in reference to the more compassionate calls for governance instruments for the 'protection' of climate refugees (Biermann & Boas, 2008; Byravan & Rajan, 2006; Docherty & Giannini, 2009). One hypothesis that is explored in the following is that crisis narratives do not guarantee the prioritization of an issue. To the contrary, under certain circumstances the emphasis on the apocalyptic character of a matter can paradoxically go hand in hand with its (re)normalization and de-politicization – in line with the broader tendency towards a post-politicization of environmental matters (Swyngedouw, 2010a, 2011, 2013).

The tranquil pursuit of such lines of enquiry is somehow destabilised by an apparently puzzling transition in the CM debate. It has shown signs of a substantial shift, which contradict the 'expectations' of both the supporters and the critics of the securitization of CM. There is no evidence that any exceptional measures have been implemented, at least not yet (Oels, 2013; Trombetta, 2008). In fact, there has been a wave of interventions, especially in advocacy and policy circles, characterized by a marked softening of tones (e.g. ADB, 2012; Foresight, 2011; Warner, Afifi et al., 2012), and CM seems on its way to be mainstreamed. CM is being reframed in the more palatable terms of human security. With a marginalization of the register of crisis and apocalypse, the debate seems now to be concerned with designing governance strategies to manage climate-related migration, harvesting its positive effects and minimizing its drawbacks. Significantly, the discussion is shifting away from waves of victimized climate refugees to fear or to protect. The figure that embodies such logics is that of the climate migrant, rather than refugee: less of a victim than the climate refugee, and more of an industrious individual. Supported by the international community and of smart regional policies, she can learn to be resilient by becoming an efficient entrepreneur of herself. Assisted in the development of the necessary capacities, the climate migrant is to become able to follow the signals of international labour markets and rise to the occasion they offer to reduce vulnerability by differentiating income sources – and in the most extreme cases, to relocate in a planned and orderly manner. In the emerging discourses, governed migration should be made into an adaptation strategy, through policies that allow temporary labour migration to maximize household and community resilience (on this, see paper V).

Such profound changes raise a series of further analytical and political questions that constitute the second area of interest for this work. To begin with, the absence of any 'exceptional' measures forces us to reflect upon the

way in which security should be understood. Is the absence of exceptional measures a sign of the failure of the securitization of CM, as some streams of environmental security studies would suggest? Or does the downsizing or replacement of 'traditional' security narratives with the emphasis on human security, represent an opening to more democratic approaches to CM?

To deal with such themes, this work reads the evolution of the CM debate as a symptom for the entangled and multi-faceted character of climate security – which parts of the mainstream literature do not fully reflect. Indeed, a relevant share of environmental and climate security studies is rooted in a binary that opposes a *bad* and a *good* security (cf. Barnett, 2011; Dalby, 2009; Detraz & Betsill, 2009; O'Brien & Leichenko, 2007; Warner, Afifi et al., 2008). Put simply[2], the former represents 'traditional' security concerns: environmental stress is seen as a source of dangers, possibly leading to turmoil and violent conflicts, which calls for national or state-centred strategies for avoiding (or defending oneself from) such outcomes. The latter, entails an apparent humanisation of security: the focus shifts to the negative effects of environmental degradation on the well-being of *humans*, and the implicit injunction is not to implement defensive strategies, but to protect the vulnerable populations from the harmful impacts of environmental degradation. From now on, I will refer to this binary as *security* vs *human security*.

Although I do not question the idea that the inscription of CM in the field of security would most likely jeopardize the prospects for *fair* and *solidary* approaches, I will elaborate on two hypothesis. First, the very binary understanding of security shows its shortcomings in relation to the CM case, where discourses grounded in human security are not necessarily as heterogeneous to security discourses, in terms of the relations they reproduce and the effects they have. The two articulations of security seem to coalesce towards a political landscape in which the very distinction between 'bad' and 'good' security, between exception and rule, and between apocalypse and business-as-usual is blurred. Second, the emphasis on human security does not necessarily guarantee (more) democratic policies. Rather,  the strategies of government envisioned under the banner of human security seem to be part of a broader biopolitical project aimed at inscribing and disciplining the life of

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[2] For a more detail account, see below the section that describes environmental and climate security.

concerned populations into existing neoliberal relations (on this see paper V), as much as the apocalyptic narrative on climate refugees.

The third related topical theme in this work is the positioning and role that radicals or 'red-greens' take in the CM debate and in the political struggles that surround climate change. In brief, with radical/red-green I refer to political groups and orientations that combine an environmental concern with a leftist position on socio-economic matters, grounded in a focus on the concept of class and in a Marxian-oriented or anarchist critique of the capitalist relations of production and social reproduction. In this, they differ from what Dobson (2007) defines as 'green ideologies', in that the latter imply (to varying degrees) an abandonment of the distinction between left and right and of the centrality of class as a set of relations necessary for understanding political and economic dynamics.

To understand red-green approaches to CM, it is useful to consider their positioning in the broader context of climate politics. Indeed, frustration and disenchantment seem to be shared feelings with regards to the (un)success in the 'fight against climate change'. The disappointment (?) about the patent ineptitude of the international community to be incisive, or at least to avoid that worst-case scenarios become reality, is worsened by the growing awareness of the side-effects of climate mainstreaming. While it is true that climate change has become a top policy issue and is recognized as a global challenge at every single gathering of the world's political elites, many of the original demands for action on climate have been co-opted into the lexicon and mechanisms of dominant neoliberal forces. For instance, the inescapable dimensions of (in)justice of climate change, which affects the most those the least responsible for it and with the least means for coping with it (Bond, 2012; Newell, 2005; Paavola & Adger, 2006; Roberts & Parks, 2007) has become almost universally acknowledged. But when it comes to the crunch, one sees the affirmation of practices and regimes distant from a climate justice agenda. At least from a radical viewpoint, the establishment and affirmation of carbon markets[3], or the run/rush to biofuels connected to large scale land-acquisitions in the south (Borras, McMichael et al., 2010; De Schutter, 2011; Neville & Dauvergne, 2012; White & Dasgupta, 2010), seem closer to a

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[3] For an overview, see Stephan and Paterson (2012) and Calel (2013); for critical approaches, see Boyd, Boykoff et al. (2011), Gutiérrez (2011), Layfield (2012), Lohmann (2012), Newell and Paterson (2010).

commodification of the atmosphere and to instances of primitive accumulation than to fair climate policies.

In such a context, red-greens seem to fall short of imaginaries and agendas that open up the political field to alternative pathways, and thus they fail to facilitate the emersion of political 'subject-hoods' (Samaddar, 2010) strong enough to fight both the inertia of existing, destructive, socio-environmental relations and the co-opting aggression of economic interests. Lacking such imaginaries and agendas they risk falling into the traps of radicalized articulations of the ecological modernization paradigm. Or of neo-Malthusianism and environmental determinism – although political ecology should have been enough for unveiling the class dimensions and colonial heritage embedded in both.

Such strains appeared clearly in the CM debate, where even red-greens have touched the deterministic, Malthusian and apocalyptic chords of the narratives on climate refugees. Chords that might help reaching the headlines of newspapers, but offer very little in terms of equitable and democratic strategies for avoiding that climate change, will negatively affect the mobility of marginalized strata of the population – either by displacing them, or by containing them in regions made inhospitable by adverse impacts[4]. Until now, red-greens have not been able to pro/impose alternative, radical lines, imaginaries and agendas on CM. A contention, developed in the following, is that this should be a major concern for red-green perspectives, which risk being stuck between the alarmist Malthusian rhetoric and the moderate, analytically more accurate but insidious framing of CM in terms of human security and adaptation.

In order to generate a normative and constructive critique targeted at red-green perspectives engaged with CM, this work explores the imaginaries and narratives mobilized by red-greens in their understanding and approaches to CM. This is not taken at face value, but looking at how red-greens position themselves towards hegemonic discourses on climate change and CM, and how such a positioning does impact the possibilities for red-green to impose alternative agendas on CM and climate change.

In sum, this work attempts to de-stabilise and de-naturalise CM. To that end, I consider CM as something that moves in that it concerns (quite literally)

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[4] On the issue of so called 'trapped populations', see Black, Bennett et al. (2011), Foresight (2011), Warner et al. (2012).

the intersection between two 'movements', that of changing climates and those of people vulnerable to the adverse impacts of climate change. This work concerns something moving also in the sense that, as we have seen, the debate on CM has changed dramatically over the last decade(s). The assessment of the transformations in this political landscape is an important component of the thesis. Moreover, as hinted in the title, conflicting problematizations of CM are not neutral emanations of a set of biophysical phenomena, but constructs that reify a series of phenomena into an issue to be researched and governed. Finally, CM moves also in the sense that it has had a strong symbolic weight and the politics of CM cannot be understood without considering the imaginary contents that different narratives mobilize. CM is an emblematic issue that disquiets in that it symptomatises a series of political strains and condensates them in intelligible and contentious imaginaries. While describing climate refugees as "the human face of climate change" (Care International; cf. Gemenne, 2011a) is problematic in many ways, not least for the incongruity of the very concept of climate refuges, it still conveys more than a grain of truth. It signals the extent to which governing climate means governing populations, and the echo obtained by narratives on climate refugees testifies how crucial such aspect is.

# Outline of the thesis

The thesis comprises this introduction, two opening chapters, a section with overall conclusions, and five papers. The chapter *Understanding climate migration* provides a vista on the emergence of CM as a topic of concern for research and government: it locates the debate within the track of environmental and sustainability discourses; it traces the evolution of the factions that animate the debate, and briefly introduces topical themes that have generated controversies throughout the history of CM. *Theories and methods* develops the theoretical framework that informs this work, engaging with debates in political ecology, discourse theory, environmental security studies, and post-foundational political theory. The chapter also discusses the structuration and scope of the thesis as well as the methodological choices in relation to the analytical method, and the materials analysed.

The *Conclusions* wrap up and re-join the arguments developed throughout the papers. It summarises some main 'findings' and reflects upon the insights

that this work offers on the positioning of radical/red-green groups in the CM and climate debate.

Paper I, *Climate barbarians at the gate?,* is published as a single-authored article in *Geoforum*. It explores the ingredients of apocalyptic narratives on climate refugees, traces their normative assumptions and the imaginaries they mobilize. It also reflects on the forms of security that such alarmist narratives interpellate. Thereby, it argues that apocalyptic narratives on climate refugees may not only favour a pathologisation of migration, an othering of the concerned populations and a militarization of CM. They may also, in an apparent paradox, re-normalise and de-politicize CM – mirroring the de/post-politicizing tendencies in environmental and climate politics highlighted in the literature. On such bases, the mobilizations of these narratives by radical perspectives is criticised as counterproductive.

Paper II, *(In)convenient convergences*, is published as a single-authored chapter in a peer-reviewed volume (Methmann & Rothe, 2013). Although it substantially overlaps with Paper I, the text is included here since it provides a more detailed theoretical analysis than *Climate Barbarians*. Indeed it provides a theoretically informed reading, along the lines of discourse theory, of the transversal success of apocalyptic narratives on climate refugees. It looks closer at the mechanisms through which conflicting discourses interact and at the conditions in which such discourses can converge on common narratives. Thereby it discusses the role that the convergence on climate refugees plays in the (re)shaping of the political landscape of CM and climate change.

Paper III, *Sand waves and human tides*, co-authored with Elina Andersson, starts from the fact that surprisingly few observers take a comparative approach for studying the politics of knowledge and policy connected to CM. Withstanding the novelty of CM and the need for novel research, this paper argues that 'lessons' can be taken from previous cases of environmental issues. The paper compares the debate on CM to that on desertification and highlights significant similarities in the way desertification and CM are made into global environmental challenges and in the forms of how scientific knowledge, research and evidence are mobilized for grounding and providing legitimacy to the two issues. Given that such traits were among the causes of the poor success of the fight against desertification, the article warns about the risk that CM discourses, by reproducing such traits, could end up with the same problems of its (in)famous predecessor.

Paper IV, *Exploring the limits of peak oil*, co-authored with Lazaros Karaliotas, is published in *The Geographical Journal*. This thematic detour is undertaken since peak oil offers a fertile field for reflecting upon themes crucial

to my analysis of the CM debate, such as environmental determinism, the multiple meanings and political implications of environmental security, and the effects of the mobilization of rhetoric on natural limits, scarcity, and ecological crisis. By examining academic interventions and initiatives such as the Degrowth Movement and the Transition Network, the paper documents how a series of red-green discourses and movements mobilise the narrative of peak oil as an alarm bell that signals the inevitability of the present ecological crises and of the coming collapse of the fossil-fuel economy. The paper, developing an analysis on two levels, argues that the red-green mobilisation of peak oil is problematic. First, a close reading of red-green discourses shows how the weaknesses of the narrative highlighted in the literature are reproduced by the red-greens. Second, building on discourse and political theory, the paper highlights that red-green interpellations of peak oil fail to transcend hegemonic discursive structuration in the field of environmental and energy security, where geopolitical apocalyptic imaginaries and biopolitical forms of securitisation are linked in reproducing post-politicization processes. Hence, the paper insists that the invocation of peak oil forecloses the space for radical alternatives to the present socio-ecological regime of accumulation and circulation.

Paper V, *CM as an adaptation strategy: de-securitizing climate-induced migration, or making the unruly governable?* is a single-authored paper submitted to a peer-reviewed journal. It documents and discusses the transformation in the debate on CM that accompanies the emergence of the mundane register centred both on human security and on the idea that (governed) migration may present a successful adaptation strategy. After detailing the contours of this emerging register in contrast against the previously dominant securitising narratives on climate refugees, the paper argues that, in spite of its more refined analytical grounds, the new register does not represent a break as substantial as could be expected. Drawing on the Foucauldian concept of biopolitics, I show that both the old and the new registers are functional to imprinting biopolitical subjectivities onto the concerned populations and to inscribe their life into existing neoliberal relations: in the old register, by the individuation and pathologization of the sources of bad circulation; in the new, by fostering individuals able to sustain good circulation and economic development. It concludes by arguing that the 'de-securitization' of the debate does not imply an opening for more democratic policies on CM.

# Understanding climate migration

CM is a multi-faceted issue that touches upon a series of hot topics, and is discussed from a broad range of angles. In order to situate CM in the context of environmental politics, to provide a brief genealogy of the debate and a sketch of the fault lines that carve it, the following section provides a reasoned introduction to CM built along two axes: temporal and thematic.

## Historical development

When looking at the history of CM, one obvious question is: when does the 'story' begin? To answer the question is less straightforward, since to locate the beginning of a story cannot be an innocent choice. As already anticipated, I do not consider CM as a transparent empirical object, but as a situated problematization that individuates, connects and signifies a series of phenomena into an issue to be researched and governed. Therefore, the birth of CM and its relation to other contiguous debates has an important imprint. The debates from which CM inherited traits, the points of continuity and ruptures in these debates and the questions and angles excluded, all are crucial for understanding what objects are rendered researchable and governable, by whom and how.

In the literature, it is customary to make the story begin around the end of the 1970s (e.g. Foresight, 2011; Gemenne, 2011a; Laczko & Aghazarm, 2009; Morrissey, 2012; White, 2011), when the UN Environmental Program (El-Hinnawi, 1985) and the World Watch Institute (Jacobsen, 1988) published two reports on environmental refugees. Although that phase had a high significance for the CM debate (as discussed below), to start telling the story from that point is less given than one could think. As the next section highlights, today's debate has deep roots in the broader discussions on how ecological conditions and environmental changes *in general* influence mobility,
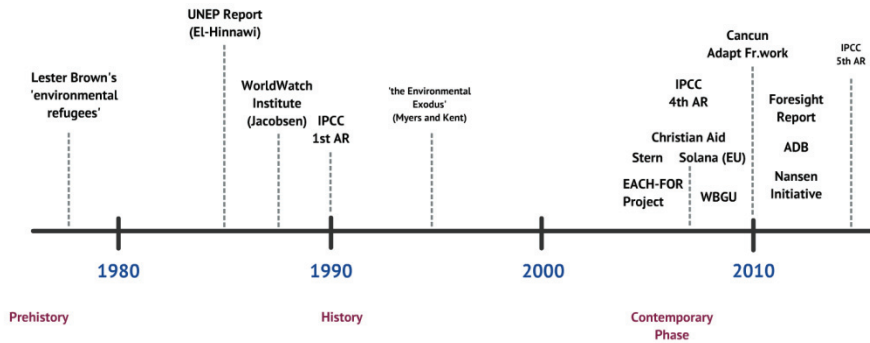
**Figure 1**
Timeline of the CM debate, indicating landmark publications and visualizing the periodization
proposed in the text (Own graphic)

and such roots are important in that they contain the seeds of political
questions linking population and the environment that are often obscured in
the contemporary debate. Therefore, in order to detail how discourses on CM
have taken their present form, it is useful to embed CM into discussions on
broader but related topics; for doing that, I propose a heuristic periodization of
the debate into a prehistoric, a historic and a contemporary phase. Figure 1
visualizes the timeline for such a periodization, and puts on a 'historical map' a
series of key publications that will be discussed in the following analysis.


## Prehistory

There is a long 'prehistory' to the debate, a phase in which the connections
between ecological conditions and mobility were discussed in terms and
contexts different to today's debate. Nevertheless, this phase was significant in
that it left profound intellectual legacies on the present problematizations of
CM.

Arguably, the not-so-friendly 'dialogue' between Karl Marx (1983,
Notebook VI) and Thomas Malthus (1996) already contained the seeds for the
future CM debate. To those not convinced by such a lineage, David Harvey
(1974, 1996) offers a translation of the Marx-Malthus dialectic into terms that
highlight the relevance (or heritage) of XIX century political economy for the
contemporary debate on population and the environment. The views on the
relationship between resources and population held by Malthus and Marx

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revolve on basically the same questions that, although reframed according to the times' lexicon, would later overheat the debates on the environment and population/mobility. There is continuity between the old discussion on resource scarcity and *surplus populations*, and the debate on those vulnerable to and possibly displaced by climate change. In a nutshell, Malthus claims that, while populations grow geometrically, agricultural productivity increases only arithmetically, and that leads inevitably to the creation of a surplus population held in misery by resource constraints and forced to leave the land they inhabited. Since in Malthus' view the (uprooted) poor are at the roots of turmoil and social unrest, the surplus population is dangerous and has to be controlled if not 'curbed'. To such a view, Marx opposed a relational view on scarcity: scarcity is not a natural condition, but a product of a mode of economic and social (re)production. In such a light, the concept of surplus population is seen as a class-selective instrument for governing people rather than a datum of reality[5]. Coming closer to our times and to environmental discourses, Harvey (1974, p. 270) highlights how Malthusian logics informed for instance a key document for environmentalism, that is 'The Limits to Growth' report (Meadows, Meadows et al., 1972). The report, through its system thinking and computer modeling of populations, applies more refined but in principle analogous methods as Malthus for warning against the unavoidability of overpopulation. A continuity with such themes is found also in recent debates on the impacts of environmental conditions on mobility and on CM: in this context, the neo-Malthusian perspective replaces the scarcity of resources with the impacts of climate change, but the logic is analogous, as the conclusions are. According to neo-Malthusian perspectives on CM, climate change, by jeopardizing the resource base of vulnerable areas, will unavoidably create a surplus population, displaced by global warming – the waves of climate refugees to be feared because of their destabilizing effects (for critique, see Bettini, 2013; Hartmann, 1998; White, 2011). Although translated into the vocabulary of the present and updated to target the day's issues of concern, the Malthus-Marx dialectic is less outdated for the CM debate than it could be assumed.

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[5] Quite illustrative is Marx's observation that, while overpopulation is discussed in relation to a series of historical periods and places and pointed to as the cause of the decline of various societies, "we never hear that there were surplus slaves in the antiquity"(1983, p. 607).

It is less controversial to note that geographers, demographers, (environmental) historians and anthropologists for a long time have worked on the interaction between ecological conditions and mobility (on this, see Adamo & Izazola, 2010; de Sherbinin, Carr et al., 2007; Hunter, 2005; Marino, 2012; Morrissey, 2009). Ample discussions targeted both sides of the relation, i.e. both the impacts of migrants on ecosystems in the areas from and to which they move, and the ways in which ecological changes stimulate or inhibit movements. The wandering of Viking villagers under the push of advancing ices in northern Greenland is an archaic example dating back to 1000-1400 A.D. (for a brief summary, see Orlove, 2005). The uprooting of peasants from the USA plains by a mixed ecological and economic crisis (the emblematic Dust Bowl) in the 1930s is a more recent case (for a critical introduction, see Worster, 2004). Interestingly, even the pioneers of migration studies – as early as in the 19th century – ranked environmental conditions among the principal factors of population movements (on this, see Piguet, 2012).

Summing up, these brief examples show that the nexus between ecological conditions and human mobility is not per se a new issue, and has been discussed and studied for a very long time. As the following shows, what is new is rather the ideological framing that the topic has received, as well as the contexts in which it has been discussed. Even more importantly, the fundamental questions at stake, as the lineage to the Malthus-Marx debate shows, are deeply political and their contentious kernel has origins older than climate change.

## History: Environmental Migration

A key step towards the contemporary CM debate – marking the transition from what we have called the pre-historical to the historical phase – took place when the nexus ecological conditions-population-mobility was re-branded as environmental migration (hereafter, EM). Crucial for the success of the re-branding was the publication of the two landmark reports by the UN Environment Program (El-Hinnawi, 1985) and the WorldWatch Institute (Jacobsen, 1988). These reports, as anticipated above, are customarily taken as the (symbolic) birth of the debate.

The customary account can be questioned, however, since it overlooks the deeper roots sketched above. But more importantly, such an account risks being a shortcut that allows avoiding the discussion about the context in which the question of CM emerged. Of course, when taken at face value, the two

reports launched, operationalized and gave momentum to the term environmental refugee, coined a few years earlier by Lester Brown (1976). From this seed, a series of terms would emerge through the years, such as ecomigrants (Reuveny, 2008); climate exiles (Byravan & Rajan, 2006); climigrants (Bronen, 2009); and ecological refugees (Westra, 2009) – a plethora of labels that, while attracting attention to the topic, served to confound more than to illuminate the debate.

But at a deeper level, the two reports offer insights into the particular discursive landscape from which CM emerged as a topic of concern, manifesting traits of the problematization that was to become dominant all the way to the present.

Indeed, the two reports signal also that the emergence of the label environmental migration corresponded to the inscription of the nexus ecological conditions-mobility into a specific discursive context. That is, it became a topic of concern for research and policy within the cluster of research milieus, institutions and organizations connected to the environmentalist discourses[6] arising in the 1970s. With the coinage of the EM-term, the nexus was appropriated by and translated into the terms of the discourses concerned with global environmental degradation and the reaching of planetary limits that animated the Northern political landscape in the wake of the United Nations Conference on the Human Environment held in Stockholm in 1972 and the influential Bruntlandt Report (World Commission on Environment and Development, 1987).

The way EM is narrated in the two reports (in terms of framing, authorship, contents and tones) shows the organic connection between EM and other global environmental challenges in environmentalist discourses, such as the flagship issues of biodiversity, desertification and climate change. These issues were the focus of the three international conventions signed in the aftermath of the 1992 UN Earth Summit held in Rio de Janeiro.

One such palpable connection is that, since the very beginning of the debate on EM, a large share of the discussion revolved around whether and how *desertification* influenced migration (on this link, see Black, 2001; El-Hinnawi, 1985; Leighton, 2006, 2011; Myers & Kent, 1995). The contiguity

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[6] 'Environmentalist discourse' is of course a quite broad label that groups a series of positions. For different and detailed analysis, see for instance Clapp (2005), Dauvergne (2005), Dobson (2007), Dryzek (1997), Forsyth (2003).

of EM to global environmental discourses is evident also when considering the key figures of that time's debate. For instance, the United Nations Environment Programme (UNEP, which published El-Hinnawi's (1985) report) was a key institution in funding and designing the track of the Stockholm Conference to tackle environmental issues. Moreover, the Worldwatch Institute and its founder Lester Brown were key figures in the environmental science and advocacy of those years.

Furthermore, one finds strong affinities between early reports on EM and environmental discourse of the time in terms of their tones (often alarmist and calling for urgent action), the scale of the objects of concern (global), the kind of 'science' mobilized, the subject of the discourse (the international/global community), as well as the horizon in term of 'solutions' (some form of international, top-down protocol or agreement).

The firm anchoring of EM in environmentalist discourses is witnessed also by the fact that the emerging narratives on EM contained the same contradictions that carved the broader environmentalist context. Also, dissenting voices on the emerging problematization of EM struck much the same chords as those of the critiques of the dominant environmental discourses. The critiques against the former (for some early examples, see Black, 2001; Findley, 1994; Kibreab, 1997; Suhrke, 1994) are reminiscent of the critiques raised against the power/knowledge assemblage that sustained environmentalist discourses in general. For instance, the points of contention opposing mainstream and alternative positions towards global environmental issues summarized by Adger et al. (2001), overlap significantly with those on which different understandings of EM clash. Both streams of critique (those against mainstream environmentalist discourses and those against EM/CM) touch upon key aspects dear to political ecology. For instance, in both cases, the critics point to the peculiar role that science assumes in environmentalist discourses (see Paper III) and the dominance of natural scientific perspectives. Critics also question the top-down and often technocratic character of environmental discourses. They also point to a series of strains that carved the broader landscape of environmentalism, such as the precarious (if possible at all) synthesis of the conservationist, Malthusian, developmentalists, and progressive components of the 1970s environmentalist discourse.

## The Contemporary phase

Another important step in the history of the debate was marked by climate change entering the scene of environmental politics. During the 1990s, climate change started its climb to the top of the rank of environmental concerns, becoming in a few years the most urgent sustainability challenge. As such, it attracted increasing political attention as well as research funding. The discussion on EM mirrored such a development and more and more attention was devoted to the impacts of climate change on mobility. A key step for the emergence of the narrower debate on climate (rather than environmental) migration was the publishing of the IPCC's first assessment report in 1990. A particular passage from Working Group II's "Summary of findings" was to have a great impact, namely the statement that "[t]he gravest effects of climate change may be those on human migration as millions are displaced by shoreline erosion, coastal flooding and severe drought" (IPCC, 1992: 103)[7]. Such a strong tone called for attention to CM, and displacement found its place in the basket of global warming's most dangerous impacts. From that moment, a heated debate started, a debate that for several years would monopolize the scenes and set in opposition[8] those warning of the risks connected to prospective mounting waves of environmental or climate refugees (e.g. Myers, 1997, 2005) — and those highlighting the analytical fallacies and potential political risks of concepts such as climate and environmental refugees (e.g. Black, 2001; Castles, 2002).

We now have the elements for clarifying the relationship between EM and CM. In principle, CM could be defined as a sub-question of EM, since it focuses on one specific (very prominent) driver of environmental change. The mechanisms that risk displacing vulnerable populations (such as land degradation, soil erosion, drought, extreme weather events, etc.), are the same for both EM and CM. An exception is the case of climate-driven sea-level rise, with low-lying areas at risk of being submerged and thereby rendered uninhabitable (Nicholls, Marinova et al., 2011). The case of small island states has become an emblematic (although contested) example of CM (Barnett & Campbell, 2010; Farbotko & Lazrus, 2012), but in effect it concerns a minor

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[7] In passing, it should be noted that the IPCC's position on EM and CM is quite articulated, has changed over time and in general has been quite cautious (on this, see the concerned sections in Paper II, and the works referred to there.

[8] On such a polarization, see Paper V.

share of the populations identified as at risk of climate-induced migration. Thus, rather than on the basis of different processes, CM and EM can be distinguished by the causes of such processes. While for EM the causes of environmental degradation are difficult to single out, for CM anthropogenic global warming (with all that it means) can be isolated as *the* cause of the ecological processes that influence mobility. This does not mean that, on the ground, it is easy – if possible at all – to individuate climate refugees or migrants, given that the impacts of climate change enter into the intricate set of socio-economic processes that influence migration (Black, Adger et al., 2011; Massey, Axinn et al., 2010). The difference is that, at least in principle, it is possible to attribute the responsibility for CM to climate change.

In the literature, the relationship beween CM and EM is confused. CM is often used as a synecdoche for EM or as special case of it, while others treat the two as synonyms. Such confounding semantic floating is seen even in recent edited volumes (Jäger, Frühmann et al., 2009; Laczko & Aghazarm, 2009; Piguet, 2012). A bibliometric analysis can open up for some reflections. Figure 2 plots the number of academic publications citing (in title, abstract, and/or keywords) the terms environmental refugees (as a proxy for EM) and climate refugees (as a proxy for CM) over the last two decades, obtained with Thompson Reuters ISI (Web of Knowledge)[9].

As the graph shows, the oscillations in the number of papers on EM and CM follow a comparable pattern. Not surprisingly, one finds peaks for both EM and CM after (with the usual academic delay) the publication of IPCC's reports (in 1990, 1995, 2001 and 2007), which confirms the fact that the two are often used as interchangeably. EM has also been discussed by a higher number of papers and maintains a high currency regardless of the increased attention devoted to CM. One reason for this is that IPCC's 2007 AR still discusses the topic, although in a context directly related to climate change, using the term environmental migration, to which it devotes two dedicated Boxes (2007: 365, 736). Nevertheless, the longevity of the EM label should not be interpreted as against the growing centrality of CM, but as a result of the confusion/blurring between EM and CM. Many papers and publications do not have a clear demarcation between the two as confirmed by the fact that about one sixth of the total search results cite both terms.

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[9] Similar results can be obtained also via 'Google' and 'Google Scholar' - although with a much higher number of entries, given the broader basis of those search engines.
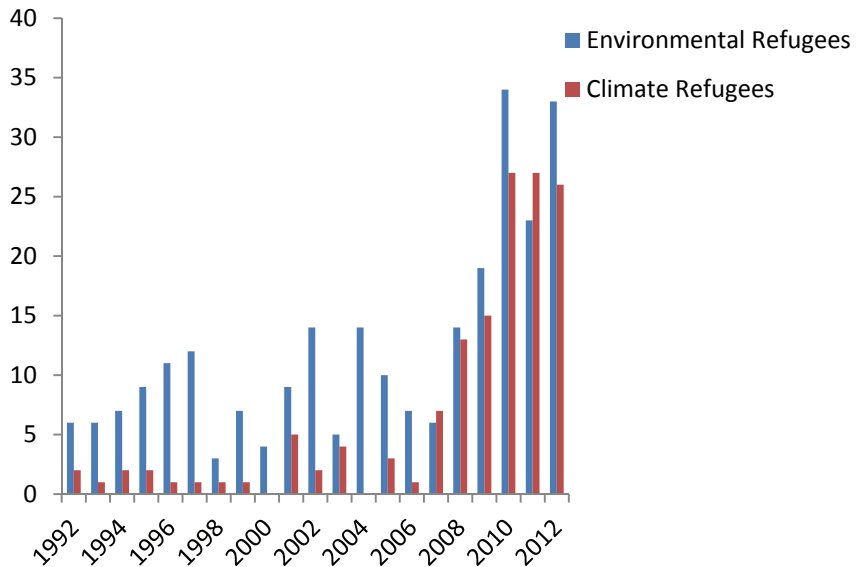
**Figure 2**
Number of academic publications citing (in title, abstract, and/or keywords) the terms 'environental refugees' and climate refugees'.
Source: Thompson Reuters ISI (Web of Knowledge).
Graphic: Author

Between 2006 and 2010, CM enjoyed a decisive (and until now sustained) burst in the attention it receives – as seen also in the graph in Figure 2. By then, the problematization of the environment-mobility nexus in terms of CM reached its maturity, at least in terms of policy currency. In that period, various influential academic interventions discussed environmentally-induced displacement in terms of climate refugees (Biermann & Boas, 2008; Bronen, 2009; Byravan & Rajan, 2006; Docherty & Giannini, 2009; McLeman & Smit, 2006). Moreover, a number of influential actors reinforced the importance of CM by entering the debate with the prognosis that CM will represent a security issue, (re)restated at top international levels (Council of the European Union, 2008; Stern, 2007; WBGU, 2008), thereby adding weight to the issue of CM. Various NGOs organized opinion campaigns and published reports on the need to protect climate refugees (Christian Aid, 2007; Environmental Justice Foundation, 2009), and various alliances were launched in order to mainstream and lobby for the issue. For instance, the Climate Change, Environment and Migration Alliance (CCEMA) was initiated in 2008, as a multi-stakeholder partnership involving a group of influential

organizations.[10] A few large-scale research initiatives were launched, such as the EU-funded EACH-FOR project, run between 2007 and 2009, with the substantial contribution of the UN University (Jäger et al., 2009).

Recent years are illustrative of how CM has become a topic of huge interest in international environmental politics. In the contextof the United Nations Framework Convention on Climate Change (UNFCCC), the Cancun Adaptation Framework (signed by the parties in December 2010) makes explicit reference to CM by urging member countries to implement "[m]easures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation"(UNFCCC, 2010). This commitment was explicitly restated under the discussions on "Loss and damage" at COP18, in Doha, in 2012[11]. The Intergovernmental Panel on Climate Change (IPCC) has devoted a section of the forthcoming 5th Assessment Report to the issue of CM[12].

Following a pathway similar to that of climate change, CM has been mainstreamed[13]: it is now a salient object within top political arenas and has entered the agendas of mainstream or generalist organizations and actors that are not dealing specifically/solely with CM. For instance, the World Bank has targeted the issue on various occasions and discussed it in its yearly flagship report in 2010 (World Bank, 2010).

A very influential research initiative was the 'Migration and Global Environmental Change' project that the UK Government commissioned to the Foresight Programme. The project was no small enterprise, involving more than 300 international leading experts, stakeholders and about 70 background

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[10] The list of the participants in the alliance is impressive, featuring the International Organization for Migration (IOM); the Stockholm Environment Institute (SEI); the United Nations Environment Program (UNEP); the United Nations Office for the Coordination of Humanitarian Affairs (OCHA); the United Nations University - Institute for Environment and Human Security (UNU-EHS); the University of Sussex - The Development Research Centre on Migration, Globalisation and Poverty (DRC); and the World Wild Fund for Nature (WWF). Source: www.ccema-portal.org/article/read/start.

[11] For a detailed description on CM's route within the UNFCC's framework, see Warner (2012).

[12] See the outline of Chapter 12 available in the document "Agreed Reference Material for the IPCC Fifth Assessment Report", accessible at www.ipcc.ch/pdf/ar5/ar5-outline-compilation.pdf.

[13] For an analysis of climate mainstreaming, see Methmann (2010).

papers[14]. The final outcome of the project, the so called Foresight report, had a high visibility in the media and a huge impact on the academic debate[15].

Another recent high-profile State-led project is the so called Nansen Initiative, which was launched by the Norwegian and the Swiss governments in October 2012. As a follow-up to the Nansen Conference on Climate Change and Displacement organized in 2011 by the Norwegian Government, the initiative's stated mission is, for a period of three years, to foster a state-owned consultative process aimed at building consensus on the need to formulate a global agenda for the protection of "persons displaced across borders in the context of natural disasters"[16].

Moreover, the Asian Development Bank (ADB) has been the main character of two high-profile initiatives. It funded "a regional project designed to generate policy options for addressing climate-induced migration in Asia and the Pacific"[17], resulting in a series of case studies and a lengthy final policy report (ADB, 2012). One could say that the relevance of such a report is not so much in the message, but more in the messenger. Its contents are research-wise not ground-breaking, in the sense that it praises a balanced and multi-causal approach to CM, and in this it compiles previous studies and the multi-faceted empirical evidence so far collected. The report does not elaborate any revolutionary take, innovative policy approaches, or original conceptual model. Nonetheless, it was accepted by ADB members – testifying a broad acceptance of the relevance of CM as a topic among a series of Asian governments[18]. Furthermore, in collaboration with IOM, the ADB recently launched the Asia-Pacific Migration and Environment Network (APMEN),[19] an online platform for sharing information and research results, as well as for 'spreading the word' on CM.

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[14] See www.bis.gov.uk/foresight/our-work/projects/published-projects/global-migration

[15] On the project's impacts, see the 'One-year review' available at www.bis.gov.uk/assets/foresight/docs/migration/12-1265-migration-one-year-review.pdf

[16] For more information, consult www.norway.gr/News_and_events/Curent-affairs/Launching-the-Nansen-Initiative/

[17] Source: www.adb.org/themes/climate-change/climate-induced-migration

[18] As a curiosity, the ticklish nature of the issues discussed in the report is confirmed by the fact that no borders are drawn in the maps printed in the document.

[19] See the homepage available at http://www.apmen.iom.int/en/

The mainstreaming of the debate has implied also a marked softening of the tones. Thus, the exceptional figure of the climate refugee has given way to the broader notion of the climate migrant. To the emphasis on the need to avoid displacement, such approaches add the call to enhance the resilience of the concerned individuals so that governed migration can become a successful adaptation strategy. Security is an ingredient of this register as well, but articulated in terms of human security. Such traits can be individuated in all the documents of the actors cited above, as well as in the large majority of the latest academic publications (on this, see Paper V).

This emerging register has more refined analytical grounds. It entails the abandonment of mechanistic understanding of migration; and it understands CM in relation to the array of structural processes (such as urbanization and the efforts for governing it) which affect the populations identified as being at risk of displacement due to climate changes.

These softer tones have provided a more palatable problematization of CM, one which allows mainstream organizations and bodies to discuss the issue without touching upon too controversial areas, such as the legal regimes surrounding refugeehood, or the binding allocation of responsibility and duties that the 'protection of climate refugees' would imply.

# Thematic angles

This section identifies and digs deeper into a few themes that emerged during the previous historical overview. These themes recur in the literature that analyses the CM debate (Assan & Rosenfeld, 2012; Morrissey, 2012; Oliver-Smith, 2012; Piguet, Pécoud et al., 2011), although not always expressed in exactly the same wording. Notably, such themes have been at the roots of the series of (often sterile) clashes that have rendered the EM and CM debate so tumultuous.

## Social vs natural sciences?

Several scholars have attempted to make sense of the fragmented debate by identifying critical points in the discussion and grouping different contributions around polarized positions (Barnett & Webber, 2009; Bates, 2002; Castles, 2002; Gemenne, 2011a; Morrissey, 2009; Suhrke, 1994). All

such explanations, although with different nuances, point to the existence of disciplinary clashes between perspectives connected to environmental (natural) sciences on one side, and migration studies on the other. The most common point is an opposition between the maximalist/alarmist school involving mainly environmental scientists and the minimalist/skeptic perspectives heralded mainly by migration scholars[20] (Gemenne, 2011a; Morrissey, 2009; Suhrke, 1994). For instance, according to Dun and Gemenne, the polarization of the EM debate was due to contrasting academic approaches: "[j]ust as most classical theories on migration tend to ignore the environment as a driver of migration, most theories on environmental governance ignore migration flows"(2008, p. 10). In less trenchant words, the literature points to the fact that, on the one hand, the maximalists have employed (over)simplified and mechanistic accounts of the complex phenomenon of migration, thereby failing to incorporate important analytical tools developed by migration studies.

On the other hand, the minimalists, although rightly objecting to the fallacies of the maximalist school, have seemed not to have grasped the whole novelty and sheer magnitude of the impacts that escalating environmental/climate changes can have on migration processes. For sure, such a disciplinary divide had an important role in originating diatribes, and this divide has, arguably, delayed the advancement of research on EM and CM. Nonetheless, an aspect that finds too little attention in the 'reflective' literature is that the divide is not simply disciplinary, but also manifests the specific discourse(s) within which EM/CM emerged. Thus, while EM was problematized along the lines typical of the 'environmental politics' discussed above, and consequently within a specific 'regime of truth'. This regime did not represent universal understandings, concerns or agendas, and migration scholars and other social scientists often did not understand it nor subscribe to it. This ought to remind us that the terms of EM and CM have, or at least, have had, an appeal mainly within milieus related to the environmentalist discourses. This can then account not only for the blindness that other perspectives have had to the urgency of environmental/climatic changes, but also for the parochial problematizations of EM and CM that gained currency within the environmental literature.

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[20] For a discussion on this polarization, see Paper V

## Climate migration: human or natural?

A surface of attrition in the debate relates to different understandings of the so called human and natural 'spheres', a question rooted more in ontological positions than in disciplinary belongings. Quite surprisingly, few studies in the literature deal explicitly with this central issue (cf. Oliver-Smith, 2012).

In the CM debate, one can distinguish between two poles, that is, two divergent tendencies, each stressing either side of a continuum expressing the human-nature dialectic. These give primacy to the biophysical ('natural') aspects and the social facets of the dialectic, respectively.

On the one end, there are views, which give primacy to nature, or, in more secular terms, to environmental factors. Such approaches tend to blur the distinction between exposure to environmental stresses and their actual impacts on human arrangements. As argued by Heltberg et al., "even catastrophic and irreversible damage to natural systems from climate change need not result in catastrophic and irreversible damage to humans. In contrast, catastrophic and irreversible damage to humans can result even from modest changes in natural systems" (2009, 89). These views, then, fail to adequately consider the transmission of natural changes to the human sphere, and vice versa. However, central in the transmission of natural changes into adverse human impacts, is the (lack of) adaptive capacity of a human system, a capacity that depends on institutions and socio-economic structures. Thus, the population of an area exposed to serious environmental degradation can (under certain circumstances) cope with and adapt to such degradation, and is therefore not automatically forced to flee. To simply observe that the risk-areas for mass out-migration are located in developing countries[21] confirms such an assertion. For instance, the typical example of a country at risk from sea-level rise is Bangladesh, and not the Netherlands, even if a significant fraction of the latter's territory actually lies below the sea-level. In other words, the capacity to respond to changes is socially, economically and politically determined. An automatic translation of risk exposure into actual adverse impact is an erroneous logical step, since it forgets the human element, which does not follow the 'laws of nature' in a deterministic fashion, but is historically and socially constructed. Such natural-ontological approaches overlook the

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[21] See for example, the hot-spots of vulnerability identified in the often cited report  (WBGU, 2008).

relevance and explanatory role of social relations and power structures. The environment has impacts on humans predominantly via the mediation of social structures, relations and constructions. Of course, the degree of detachment from ecological conditions varies for different sets of productive relations and social arrangements. For instance, technological advancement can lead to a more mediated and less evident dependency on 'nature'[22], and in such cases social, political and economic variables are by and large the main determinants of migratory processes. I would claim that to underestimate the importance of social, economic and political relations in the 'digestion' of ecological conditions by humans is an example of Malthusian determinism[23]. A component of the natural-ontological views is thus the tendency to extend the (allegedly) objective laws of nature to the social. If the machinery of such approaches is fed with a situation defined as a case of scarcity or of stress, their congenital determinism and mechanicism lead such views, as pointed out by David Harvey, to almost unavoidably predict 'the worse' and slide towards undifferentiated doomsday-like attitudes, risking to represent a justification for "politics of fear" (Harvey, 1974)[24].

At the opposite end of the continuum, the human-ontological views give priority to social/human aspects, and risk not recognizing the relevance of ecological aspects on human systems and thereby on migration processes. Yet, acknowledging the importance of social mediation is not synonymous to a denial of ecological variables. Dipesh Chakrabarty clearly expresses this point: "whatever our socioeconomic and technological choices, whatever the rights we wish to celebrate as our freedom, we cannot afford to destabilize conditions ... that work like boundary parameters of human existence" (2009, 218), conditions and boundaries that include biophysical systems. Even when the discussion is not about the very survival of humanity as a whole, Chakrabarty's words serve as an exhortation not to forget the relevance of ecological conditions as material 'conditions of possibility' for societal and human constructions. For instance, it is hard to deny that the rapid alterations in soil fertility that climate change will have on certain areas has very deep impacts on

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[22] Of course, the level of mediation or detachment is uneven across social groups (Newell, 2005). Moreover, countries can 'export' elsewhere their dependency to environmental/ecological factors, and get someone else to mediate in their place (Hornborg, 2009).

[23] For two recent examples of contributions ascribable to this stream of works, see (Burke, Miguel et al., 2009); (Zhang, Brecke et al., 2007)

[24] On this see also Paper IV.

subsistence agriculture communities. The force of ecological factors emerges even more extremely in the case of islands that risk being submerged by rising seas. In sum, there is a risk of ending up with conceptualisations of the social that abstract human systems from their biophysical components/foundations. This implies an underestimation of the impacts (however mediated they are) of environmental factors on humans, and a denial of the role played by ecological factors in the construction of social relations, structures and modes of production, a role that cannot be deterministically predetermined but is undeniable.

CM, located at the cross-section of the social (human mobility) and the ecological (environmental changes), invites a questioning of the dichotomous ontological grounds on which both poles reside. Phenomena such as CM question the distinction between human and natural spheres. When Bruno Latour's claim that "the terms 'nature' and 'society' do not designate domains of reality" (Latour, 2004, 53), he points to the fact that these terms represent human constructions realized by humans to understand and act upon 'reality', constructions that are historically and politically connoted. It might be the case that views based on the nature-society dichotomy, giving ontological primacy to either the social or the natural, are not the best choice for understanding the present time's ecological issues. In bolder words, CM signals the need for overcoming standpoints that imply two ontologically separated spheres – human VS natural – and to instead conceptualize them as semi-permeable interfaces. A step forward may be represented by the introduction of socio-ecological systems and regimes, within which the so-called human-nature interaction is understood as an organic relation. Moore provides a hint to what this means in his historical analysis of agrarian transformations, where he "situate[es] ecological relations *internal* to the political economy of capitalism – not merely placing concepts of ecology" (Moore, 2008, 61). A relational and dialectical conceptualization of the interaction of nature-society overcomes the shortfalls of mutually exclusive ontological positions which, by crystallizing single aspects of the interaction, fail to understand the complex, mutual and iterative interactions that emerge when looking at CM. It may also open up for an integration of environmental and human chains of causality, embracing and giving account of the multiple social and ecological relations working behind the phenomena called CM.

# What drives migration?

The previous reflections are a good introduction to another much more discussed theme, one that has in effect opposed both environmental scientists and migration scholars. This theme concerns the different understandings of how migration processes work, and especially causality[25] has had a central role in the diatribes on EM and CM. Put simply, the question has been: is there a "direct relationship between the level of exposure to climatic risks and the likelihood of migration in response" (McLeman & Smit, 2006)? In blunt words, the question is whether it is correct to present ecological factors as *the* cause of voluntary or forced outmigration, and to generalize the assumption that environmental degradation or increased ecological stresses lead to increased international migration. Accepting such a claim means, or comes close to inferring, a direct and unidirectional causality from environmental changes to migratory processes. Many scholars, especially from migration studies, have reacted strongly against the general validity of such a chain of causation (Black, 2001; Castles, 2002).

A good amount of empirical evidence denies the general validity of the causal hypothesis that: 'increased ecological stress leads to intensified outmigration'. Several studies on semi-arid regions reveal a relationship between rainfall and migration that is actually the reverse of the fact-claim of the unidirectional causal chain. The studies on Mali by Findley (1994), and on Burkina Faso by Henry et al. (Henry, Schoumaker et al., 2004) witness that a rainfall decrease can lead to decreased international migration. This arguably happens since water stresses (e.g. via increased food prices or shrinking yields) reduce the resources available for households, thereby diminishing the resources that can be invested in migration to a foreign country.

These empirical elements are a good introduction for some more theoretical arguments. Castles and Black emphasise the complexity and multi-causality of migratory processes, and question the correctness of isolating one (a certain ecological variable) among several factors that can play a role in a migration decision (Black, 2001; Castles, 2002). Indeed a characteristic of migration that clearly emerges in CM is the *social selectivity* of mobility: the

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[25] This is one of the 'classical' issues of migration studies that has led to intense debates and conflicting views: understanding the relation between different drivers of migration. For an overview, see e.g. (Brettell & Hollifield, 2008; Castles & Miller, 2009; Massey, Arango et al., 1998).

responses to environmental stresses are mediated by a person's gender; caste; class, area of residence; relation to formal and informal institutions in place; access to existing migration networks; and so forth.

These elements are crucial in the decision of whether to migrate, for how long, and to what destination (Black, Arnell et al.; Massey et al., 2010). The different answers that these questions have in different cases individuate *diverse forms* of migration. A good body of empirical evidence indicates that ecological factors (for instance extreme weather events, resource shortages, or land degradation) mainly affect the mobility of the weakest in a social context. When outflows of people from a certain area are closely connected to environmental stresses, it is by and large the most vulnerable (because of gender, caste, class or other factors) that leave; and in such cases they tend to resort to temporary and short-distance migration to cope with the environmental stress, and not to international migration[26]. Long-distance migration follows different patterns. It is usually a planned strategy, "a household decision to 'invest' in the migration of certain household members in order to bring longer-term benefits to other members of the household" (Black, Kniveton et al., 2008, 24), rather than an emergency response. Migrating to a foreign country is costly and requires high amounts of human, social and economic capital, and therefore it is not the poorest that most frequently embark on international migration (Castles & Miller, 2009; Gray, 2009; UNDP, 2009). These elements indicate that it is reasonable to expect that the direct influence of climatic changes is mainly on local or intra-regional patterns of mobility (Biermann & Boas, 2008; Black et al., 2008; Foresight, 2011; Tacoli, 2009). On the one hand, this does not deny that ecological conditions have impacts on long-term trends in international migratory processes. On the other hand, the rhetoric of abrupt flows of climate refugees invading developed countries seems therefore highly questionable, if not completely unjustified.

In sum, such reflections cast doubt upon the validity of a direct and unidirectional causal chain between climate and migration. However relevant ecological conditions are in determining population flows, they cannot be abstracted from the context of the social relations of a certain setting, crucial in the origination of vulnerabilities. A parallel can be drawn to classical migration

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[26] See e.g. the case studies in Burkina Faso, Nepal and Ecuador: Gray(2009), Henry(2004), Massey(2007).

theories, which focus only on economic elements: these have been shown to have serious difficulties in explaining why people move, because they risk underestimating other social and political variables than economy (Massey et al., 1998). Just like economic dynamics do not exist in a vacuum, so environmental factors alone do not give account for the whole picture either. When assessing the connection between ecological conditions and mobility, it therefore seems appropriate to embrace a combination of distinct and multiple causal mechanisms: social stratifications, economic aspects, and ownership of different forms of capital, etc.

An example of the advantages of such an approach is given by the insights provided by the case of 'the poorest' and most vulnerable. It makes visible that, given the various costs connected to migration, the most vulnerable may end up in a lock-in situation, where the degradation of living conditions and incomes further narrows the spectrum of possible choices and prevents migration altogether. Therefore, when researching areas subjected to adverse impacts of environmental changes, one may need to pose a somewhat counterintuitive question. Besides assessing numbers of climate refugees, it might be more relevant to ask how many will *not* be able to migrate in the context of climate change or other environmental stresses (Black et al.; Foresight, 2011).

## Do Numbers add up?

Another hot topic in the debate has been the validity and usefulness of estimates and scenarios of the future magnitude of CM. One ingredient creating the attention devoted to EM and CM have been the staggering numbers (foreseeing up to hundreds of millions climate refugees by 2100) which have been widespread in academic publications, grey literature, and even in policy papers and political statements (see e.g. Biermann & Boas, 2008; Christian Aid, 2007; Council of the European Union, 2008; Environmental Justice Foundation, 2009; Knight, 2009; Stern, 2007)

Such scenarios are built – often by environmental sciences scholars – from projected macro-level environmental changes, such as land degradation and sea-level rise. The next step is to spot regions vulnerable to the impacts of such changes. On this basis, the likely number of people forced to out-migrate from a certain region is estimated. Such regional projections are then aggregated into global scenarios (Myers, 1997).

A clear consensus has emerged among researchers that such quantitative estimates are unreliable, and that they represent "nothing but rule of the thumb" (Piguet, 2010:517). First of all, most of the estimates in the CM debate[27] are connected to the work of Myers (Myers, 1993, 2005; Myers & Kent, 1995). Although the IPCC downsizes such estimates as, "at best, guesswork" (IPCC, 2007: 365), they have gained credibility by 'circular referencing': influential publications (usually not entitled to evaluate the numbers), such as the Stern Review (2007), refer to the numbers that thereby increasingly become legitimate 'facts'. The widely cited estimates by Christian Aid (referring to Myers) got much echo through media resonance rather than because of empirically grounded science. Also the famous 'security hot-spots' map (WBGU, 2008), often reproduced for visualizing the severity of CM and emphasizing its security implications, actually only point out areas at risk, not the actual occurrence of CM.

In sum, the popularity and 'legitimacy' gained by these numbers has less to do with their solidity than with other institutional, cognitive or political dynamics.

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[27] For a schematic account of this point, see Foresight (2011:28), (Jakobeit & Methmann, 2012) and Gemenne (2011b)

# Theories

## Political ecology: anti-essentialist and materialist

As the previous sections have anticipated, my approach to CM focuses on a radical questioning of the dominant narratives that have emerged over time. Radical' in the sense that I discuss the foundations of the narratives and discourses on CM. In order to do that, I explore the ontological roots of competing understandings of socio-ecological issue, discuss the processes and logics through which knowledge on CM is built and gains legitimacy, and situate CM in the landscape of the environmental discourses and regimes. In this endeavor, political ecology has represented an invaluable starting point: in many ways, it constitutes the intellectual and analytical pre-condition to my research. This section serves to acknowledge and highlight how my work is indebted to political ecology.

In the wake of the success it enjoyed in the last decades, political ecology has developed into an articulated set of positions that encompass diverse normative and theoretical stances, as well research interests (for instance, Escobar, 1999; Forsyth, 2003; Moore, 2011; Paulson & Gezon, 2005; Peet, Robbins et al., 2011; Peet & Watts, 1996; Robbins, 2004; Stott & Sullivan, 2000; Swyngedouw & Heynen, 2003), and its contours and prospects are debated in the literature (Escobar, 1999; Loftus, 2012; Paulson, Gezon et al., 2003; Walker, 2005, 2007; Vayda & Walters, 1999).

I found in political ecology a unique tool thanks to two of its peculiar traits that makes of it an antidote to the forms of determinism that have been prominent in many of the approaches to environmental issues I am familiar with. First, political ecology assesses the shaping of environments and the distribution of benefits and burdens of environmental degradation through a Marxist-inspired political economic lens that moves the attention from ecological scarcity or overpopulation to the underlying relations of production and related unequal distribution of land and resources (Peet et al., 2011; Stott & Sullivan, 2000). To this, political ecology combines an anti-essentialist stance towards environment matters and the related forms of knowledge

(Escobar, 1999; Forsyth, 2003; Paulson & Gezon, 2005; Robbins, 2004). Borrowing Stott and Sullivan's words, political ecology is grounded upon the constructivist belief that "the 'science' of environment is socially and politically situated, rather than unambiguous or separable from the subjective location of human perception" (2000, p. 2).

The vast number of studies that combine these two aspects offered me a solid and critical grip on the recent history of environmental politics, as well as a frame for my exploration of the imaginaries, forms of knowledge and governance strategies underlying the emergence of CM. Political ecology offers a reading that significantly deviates from benign mainstream accounts of the trajectory of environmental politics from 1970s environmentalism to the contemporary re-articulation in terms of 'global environmental governance' (Adger et al., 2001; Peet et al., 2011). It casts a darker shadow on the global and disinterested viewpoint preached by manifestos of early environmentalism such as the Club or Rome's *Limits to Growth* (Meadows et al., 1972) and the Brundtland Report (World Commission on Environment and Development, 1987), by showing the first world optic and the Malthusian assumptions that they embed (see Peet et al., 2011; Stott & Sullivan, 2000). Such traits, which one finds for instance at the core of the international discourse on the 'fight against desertification' (see Paper V), were highlighted and contested by a series of empirical studies on land degradation. Their findings undermined the then dominant views centred on the role of over-population and improper practices by local populations, by revealing the political economic roots of land degradation and the active role that 'underdeveloped' populations in many cases have in environmental management (Blaikie, 1985; Leach & Mearns, 1996b; Martinez-Alier, 2002; Thomas & Middleton, 1994; Thompson & Warburton, 1985; Tiffen, Mortimore et al., 1994). Such lines of critique informed my approach to CM: one finds similar assumptions also behind the mechanistic views on the impacts of environmental conditions and climate change on human mobility (see above, as well as Papers I, III, and V).

Related to the determinism nested in such Malthusian assumptions are also the crisis narratives and apocalypticism that, as acknowledged by Dobson, are almost omnipresent ingredients of ecological discourses (2007, p. 16, 104-5). Such ecologies of fear (Davis, 1999; Harvey, 2000) have been extensively criticised by political ecologists, and the linkage between the environmental determinism embedded in dominant environmental discourses and the idea of a looming unavoidable catastrophe has been highlighted (e.g. Taylor & Buttel, 1992). The evidence for large-scale environmental degradation is translated by crisis narratives into a "belief that we are on the verge of global catastrophe,

placing strain on a fragile earth" (Adger et al., 2001:708-9). Such narratives also externalize the causes of the threat, individuate in an external enemy that 'we' should fight against (Adger et al., 2001; Forsyth, 2003), be it advancing deserts (cf. Bauer & Stringer, 2009; Lambin, Turner et al., 2001; Thomas & Middleton, 1994), a fetishized CO2 in the case of climate change (cf. Swyngedouw, 2010a), or mounting waves of climate refugees. Political ecology provided useful for my assessment of the ingredients, normative contents and political implications of such crisis narratives in the case of CM (see Papers I, III, and IV).

Political ecology has inspired me also for developing an anti-essentialist understanding of 'nature' and 'environment', a topic discussed above. Such a position informed my overall ontological standpoint on what the 'environment' is, my understanding of materiality in the context of environmental matters and resource politics (on this see Paper IV), as well as of how ecological conditions influence social phenomena, such as migration.

Political ecology is explicitly mobilized also in the article *Sand waves and Human Tides* (Paper III), which discusses how a series of scientifically problematic assumptions maintained currency within dominant discourses on CM. In doing so, it draws on the concepts of 'environmental myth' (Lambin et al., 2001; Thomas & Middleton, 1994), 'orthodoxy' (Forsyth, 2003; Stringer, 2009), 'received wisdom' (Leach & Mearns, 1996b) and 'institutional facts/truth' (Thomas & Middleton, 1994; Thompson & Warburton, 1985) as developed in a series of studies on desertification.

By comparing CM and desertification on the basis of such concepts, the article points to striking similarities between the myths on desertification and many of the assumptions and rationales underlying several of the hot, polarizing topics in the CM debate introduced above. For instance, the way in which the numerical estimates foreseeing hundreds of millions of climate refugees gained currency (see section above) is not dissimilar to the path followed by the (un)popular desertification maps, which also guaranteed saliency to the 'fight against desertification' in spite of being, at best, guesswork. Moreover, the emblematic but loosely definable figure of climate refugees finds a good predecessor in the idea of a setting up a global struggle against advancing desert: both were supported by imaginaries of advancing waves (either of sand or of displaced), equally evocative and problematic as objects for policy agendas.

Political ecology provides insights on how such myths can gain the status of (semi)facts within academy and/or policy circuits – although they are grounded on "uncertain, highly contested, and misleading" (Forsyth, 2003:24)

readings of empirical findings, and ignore alternative interpretations that challenge their claims and provide other types of problem framing (Forsyth, 2003; Sullivan, 2000; Swift, 1996). As Paper III documents, both for CM and desertification, myths, despite their lack of scientific rigor, can become resilient and have a strong effect on policy since they justify intervention, suggesting 'simple' solutions that often fit the interests of groups and institutions, whose power they (re)produce (Forsyth, 2003; Lambin et al., 2001; Leach & Mearns, 1996b). Thereby, such myths get a bearing on policy (Lambin et al., 2001), those implemented for desertification, and those envisioned for CM. Once a myth gets embodied in policies and institutions as for desertification, or when research, policies and campaigns are structured around them as for CM, it offers a raison d'être for agencies and institutions whose legitimacy and status are bound to such narratives, which become a sort of 'institutional facts' (Thompson & Warburton, 1985).

Apart from helping understanding some aspects of the CM debate, the concept of myths, as discussed by political ecology, proves useful in that it gets into sight the fracture between 'the real' and the concepts/narratives/explanations through which it is made sense of. Both for desertification and CM the concepts highlights the importance in environmental debates of assumptions, narratives and imaginaries that are understandable, paradigmatic, evocative, and convey an intelligible message with a grip beyond the strictly rational. Such ingredients of environmental discourses, although full of significance, do not provide the neutral account of an empirically documented phenomenon nor follow a strictly rational reasoning, as their scientific tone would promise. Coherence, non-contradiction, or strict adherence to empirical evidence are not the primary principles behind such explanations and assumptions. Rather, it is their elusiveness that allows them to provide clear-cut and evocative storylines able to appeal to a broader public while furnishing politicians and donors with strong punch-lines, agendas and 'enemies'. The facts that ambiguity is a pre-condition for the success of myths, in that it allows them to 'resonate' with various discourses and narratives and thereby provides them with saliency, is an issue that can be extended to environmental narratives in general. What comes to the surface is the social construction of the definitions, narratives and explanations that concern environmental issue.

Political ecology, as anticipated, has had an important role in questioning the essentialist assumptions that characterized much of environmental sciences/studies in the past. It has been one of the traditions most successfully

questioning the neutrality of the forms of knowledge through which environmental matters have been defined, made sense of and governed.

Nonetheless, the response that most of political ecology has proposed to such questions has not been fully satisfactory, and has not come much further than the point reached by Leach and Mearns in their seminal work on received wisdoms and environmental blueprints on land degradation (1996a). There, Leach and Mearns recognize that simplification is inherent in the construction of any explanation or narrative able to make intelligible a picture otherwise fragmented, site-specific and too complex. From this, Leach and Mearns, and many other studies along the same line (e.g. Forsyth, 2003), seem to deduce that the point is to support a democratization of environmental expertise and public policy. What such a democratization would strive for is not a naïve overcoming of ambiguity or simplifications. Rather, it is the fostering of more inclusive and pluralistic practices of knowledge production, which acknowledge the conditionality of knowledge – in other words, which see science/knowledge as "uphold[ing] different social and political commitments and claims"(Leach & Mearns, 1996a:31), or as relative to different regimes of truth.

Such a suggestion leaves us partially unsatisfied. To substitute myths with narratives/explanations open to science and to avoid Malthusian and/or colonial imaginaries, surely removes some of the most detestable traits of various environmental regimes. Nevertheless, it does not indicate where to anchor environmental politics once such myths dissolve. The fall of myths (and the acknowledgement of the fracture) drags down also the faith in the possibility to ground environmental politics in an immediate nature or in any science pretending to have a direct access to the real. The question of where – outside the 'outside' of nature – to find anchoring points for positing environmental politics (thus going beyond critical deconstruction) is a pressing one. For dealing with it, discourse theory has had an important tool, in the way I will describe in the next section.

# More than words: discourse theory

If political ecology is a precondition to this work, discourse theory constitutes its grammar. It provides a theoretically solid and elaborated skeleton to the constructivist approach to environmental issues anticipated above, and it allows taking a clear stand on a series of questions ambiguous in political ecology.

Moreover, it affords a series of operational tools for analysing the forms of knowledge and the narratives on CM, as well as for discussing the political dynamics in the landscape of climate change. Finally, it constitutes a key for accessing a series of political and social theories. In this section, only a few salient points of the theoretical framework of this thesis (influenced by post-structuralist discourse theory) will be highlighted, given that the various papers provide more a details on 'technical' aspects.

To begin with, discourse theory shows that a constructivist approach to environmental issues or climate change has nothing to do with any denial of the two. To consider CM as constructed does not mean downsizing or trivializing the impacts on the concerned people – whether displaced from or trapped in places made inhospitable by global warming. To acknowledge the discursive dimensions of environmental issues has nothing to do with denying them, nor with any form of idealism. In fact, it signals an anti-essentialist stance: even the entities and processes that do exist independently from human will and thought, are always made sense of and signified[28]. As pointed out by Žižek, "never do we reach the point at which "the circumstances themselves begin to speak', the point at which language starts to function immediately as 'language of the Real'"(2008 [1989]). In other words, meaningful objects (even those that refer to natural phenomena) cannot "constitute themselves as objects outside any discursive condition of emergence"(Laclau & Mouffe, 2001:108). In the case of climate change: although it exists whether one thinks about it or not, it becomes an object for social practice and interaction through signifiers and concepts that are not transparent referents of biophysical processes.

It is important to clearly define the much abused and misused word discourse. Following the path traced by Stavrakakis (1997), Žižek (2008 [1989]) and Laclau and Mouffe (Laclau, 2005; Laclau & Mouffe, 2001), discourses are here considered as entities constitutive of and determining social relations and objects, rather than as merely argumentative or cognitive entities (Laclau & Mouffe, 2001:96) confined in the linguistic or argumentative sphere[29]. To the contrary, in this thesis narratives are defined as generative

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[28] This is not at all a controversial stance; in fact, it is shared by most contemporary ontologies, see for instance Berger and Luckmann (1979), Bhaskar (2008), Castree and Braun (Castree & Braun, 2001), Laclau and Bhaskar (1998), Sayer (2000), Žižek (2008 [1989]).

[29] Others restrict discourse to 'meaning' and words, to which they oppose material objects, institutions and practices. For instance, see (Hajer, 1995:60).

"sequence[s] of events, experiences, or actions with a plot that ties together different parts into a meaningful whole" (Feldman, Brown et al., 2004: 148). One could say that narratives are only words, but words that matter: since narratives articulate the surplus meaning(s) through which phenomena and events are symbolized, and given that this meaning determines how phenomena are organized and inscribed in the symbolic structure of different discourses, they have implications beyond words. This meaning is thus inherently political.

Discourses are (re)produced in the articulation of elements which assume meaning in relation to each other, differentially, and not because of an intrinsic essence (Glynos & Howarth, 2007; Laclau, 2005). What distinguishes a discourse is thus the way it (re)signifies and articulates 'discursive' (Laclau & Mouffe, 2001) or 'proto-ideological' (Stavrakakis, 1997) elements[30], rather than in the elements per se.

As emerges from the articles, these remarks offer a way out from a few deadlocks. To begin with, they provide a refined operative tool for criticizing crisis narratives on environmental matters, without denying their urgency or dismissing any trust in 'science' and the empirical testing of claims. For instance, the word apocalyptic is used in my work (see Papers I, II, IV) as something qualitatively different from the distinction between alarmist and alarming – which is ultimately about whether a narrative or explanation is fair to the best scientific knowledge or exaggerates it (see e.g. Risbey, 2008). The point here is not whether a narrative exaggerates the seriousness of global warming, of land degradation, or of whatever environmental issue, but the question is how a (grave) matter is signified and inscribed into discourses, with what meanings and in what relation to existing discursive structures and relations.

Moreover, discourse theory facilitates the exploration of the interactions (and struggles) of different discourses and of their implications. The fact that meaning is differential, implies that an object can assume divergent meanings in conflicting discourses (Hajer, 1995; Laclau, 2005; Stavrakakis, 1997). This in turn indicates that if a set of discourses converge onto a narrative, or symbolize certain discursive elements in similar ways, this does not mean that

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[30] Discursive or proto-ideological elements are the building blocks of discursive formations, almost synonymous to what is elsewhere defined 'floating signifier' or 'difference' Laclau (1996, 2005), Laclau & Mouffe (2001), Žižek (2008 [1989], 95ff).

such discourses can be assimilated for anything beyond the common narratives. In the case of CM, that capitalist and a radical discourse share a set of apocalyptic narratives on climate refugees does not imply the (counterfactual) claim that they share common goals, agendas or are forming an hegemonic coalition (see Paper II). A similar case stands for peak oil, the invocation of which puts red-greens in the company of conservative right-wing discourses (see "Exploring the limits"). Marteen Hajer offers some tools for the analysis of the 'micro-interactions' of the narratives (an aspect underdeveloped in Laclau's (1995, 2006) work), suggesting that different discourses convergence onto a certain narrative (a storyline in Hajer's terminology) less because of some trait inherent to the narrative, than for "discursive affinities" – e.g. a certain narrative resonates for those discourses and "sounds right", works for making sense of a phenomenon, and is sufficiently compatible to their discursive structure (1995). In the case of peak oil, red-greens find in it an alarm bell warning against the gravity of energy and environmental crisis, the proof of an inescapable rift in capital accumulation processes, or an ultimate limit to the economic growth – while for a conservative viewpoint peak oil can call for campaigns for ensuring a vantage position in the run to the last drops available[31].

These aspects of discourse theory provide theoretical grounds also on the reflections on simplification and ambiguity of myths discussed in the previous section. For instance, discourse theory helps grasping in theoretical terms the apparent contradiction between the growing attention to CM and the intricacy of the debate, which we have seen is characterized by polarizations, ambiguities and confusion. The latter are often explained on the basis of recurring to (mis)communication among different academic disciplines, disagreements on factual aspects, or the conflicting ideological stances and political agendas (Bardsley & Hugo, 2010; Barnett & Webber, 2009; Bates, 2002; Black et al., 2008; Castles, 2002; Massey et al., 2010). But if CM is read as a dislocation (Glynos & Howarth, 2007; Methmann, 2010; Torfing, 2005) in the discursive field of climate change, the ambiguities and inconsistencies in the debate can be seen as a consequence of the strains emerging in the concerned discourses when attempting to deal with the climate change-migration nexus, a set of elements that has proved hard to be accommodated into the existing discursive

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[31] For a similar argument on the convergence on climate refugees, see Paper II.

structures and has taken to the surface latent and novel fractures within the discourses that struggle to embody it.

Moreover, the popularity of narratives on climate refugees has not taken place in spite of the ambiguity of the concept, but probably thanks to it. Indeed, as shown in Paper II, the ambiguity of climate refugees renders the convergence of different discourses on the same narrative possible. Conflicting discourses can 'buy' the concept of climate refugees also because its indeterminacy allows it, as any floating signifier, to be mobilized, although with strains, by different discursive formations (Laclau, 1996, 36 ff).

Such remarks should do be misunderstood: discursive processes do matter, and come about together with material implications. For instance, the convergence of various discourses on a set of narratives can have tangible implication. The establishment of a convergence although contingent and not necessarily strategic, sets certain boundaries on how it is acceptable to speak about the topic[32]. Such convergences may structure a discursive space and render hegemonic a certain framing, with political and substantial (material) implications. As shown in the case of the convergence on climate refugees (see Paper I, II), it could favour xenophobic discourses that pathologize migration, if not draconian measures on CM. In the case of peak oil (see Paper IV), the red-green mobilization of peak oil can lead to a reinforcing of hegemonic relations and practices on energy. And in both cases, it can lead to a de-politicization of the matter.


# Climate (in)securities

As sketched earlier (and detailed throughout the papers), one of the ingredients that contributed to CM's salience has been the association of the climate-migration nexus to security. The endorsement of such a framing by a range of actors, discourses and contexts is no surprise. If we take the 'mobility' side of the nexus, there is an ample literature that highlights and explores both empirically and theoretically the ways in which migration issues have undergone processes of securitisation in the last decades (e.g. Bigo, 2002; Bigo & Guild, 2005; Cohen, 2006; Huysmans, 2006; Watson, 2009).

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[32] On this, see Hajer's discussion on what he defines 'discursive coalitions' (1995).

This work is primarily concerned with the association of CM to security via the second term of the nexus, i.e. climate change. As we have seen, CM is one of the most emblematic, intelligible and recurring storylines mobilized to illustrate how climate change will represent a security threat, and CM is discussed in such terms even at top international political levels (Council of the European Union, 2008; Norwegian Nobel Committee, 2007; Schwartz & Randall, 2003; Stern, 2007; United Nations General Assembly, 2009; WBGU, 2008). The logic behind such interventions is that the adverse impacts of global warming will cause environmental stresses and reduce available resources, thereby exacerbating existing tensions at various scales. Thus climate change is said to act as a threat multiplier that destabilises regions and international contexts. In the worst case, this is said to be capable of igniting or magnifying violent conflicts.

While the association of CM and of climate change to security has had a wide echo in policy and advocacy circuits, it has received limited credits in scholarly circles. The linkage of environmental/climatic stresses to resource scarcity and conflicts has been endorsed by a few scholars (Burke et al., 2009; Homer-Dixon, 1991, 1994; Reuveny, Maxwell et al., 2011; Zhang et al., 2007), also with reference to CM (Myers, 2002; Reuveny, 2007, 2008). Nonetheless, as shown by Salehyan's survey of the field (2008), there is no consensus on it. I would dare to say that the majority of academic interventions are critical to the association of climate change to security (e.g. Barnett, 2000; Dalby, 2009; Detraz & Betsill, 2009; Deudney, 1990; Hartmann, 1998; Nordås & Gleditsch, 2007; Raleigh, 2011; Scheffran, Brzoska, Brauch et al., 2012). In brief, the hypothesis that climate impacts will cause conflicts, is contested because of the patchy empirical evidence supporting it (Nordås & Gleditsch, 2007; Scheffran, Brzoska, Kominek et al., 2012), its methodological flaws (Baechler, 1998; O'Lear & Diehl, 2007), as well as normative assumptions and political implications (Barnett, 2000; Dalby, 2009; Hartmann, 2010; Smith, 2007; White, 2011).

A first question that emerges from such a picture is why the shaky scientific grounds of the association of CM and climate change to security has not prevented its spread in media, policy and advocacy circles. A detailed exploration of such a subject is beyond the scope of this work, but discourse theory and political ecology hint to a hypothesis which is plausible and explanatory, although not exhaustive. Indeed one can apply to securitising narratives the analytical lines that stand for narratives in general. As discussed above, the success of a narrative and the convergence on it by various discourses are not explainable against the adherence to scientific evidence.

What determines the success is rather the evocativeness, the resonance with the structure of various discourses and its ability to have a grip on them, and a series of other reasons that have more to do with its signification in a certain context than with its scientific solidity. In fact, the elusiveness or asymptotic emptiness of a concept or narrative often can be a fundamental ingredient of its success (see above, and papers I, II, III).

That said, there are whole scholarly fields concerned with explaining the nature, mechanisms and implications of (environmental and climate) security, also in the case of climate change (Balzacq, 2011; Corry, 2012; Methmann & Rothe, 2013; Oels, 2013; Trombetta, 2008; Wæver, 2011; Williams, 2003). I am familiar with such traditions, especially those related to political science and human geography, and they have furnished me with analytical instruments for understanding security. However, in this work I critically engage with them only to a narrow extent in the papers. This is to a certain extent a limitation, and a more explicit engagement with such traditions is a field for future research.

As anticipated in the introduction, the themes of main concern for this work, with regards to security, are basically two. First, the relationship between different forms of security and 'the political'. I see this theme as related to the question whether securitisation is conducive to a de- or hyper-politicization of a matter. A key for discussing this is to explore the relation between the fear and danger that mark security, and the moderate and mundane imaginaries and forms of governance connected to human security. Second, my work is concerned with the normative debate on whether security should have a negative connotation, as well as the connected widespread binary that separates a 'good' from a 'bad' form of security, which is widespread in the literature. For instance, in an influential article, Detraz and Betsill (2009) distinguish environmental conflict and environmental security discourses. The former is what I vulgarly called bad security: it represents traditional concerns over the violent conflicts that environmental stress could lead to, and focuses on the national or state-centred strategies for avoiding (or defending oneself from) such outcomes. The latter is good security: it focuses on the negative effects of environmental degradation on human well-being and is concerned with the protection of vulnerable populations from such harmful impacts (Detraz & Betsill, 2009). Understandably, they favour the environmental security: in their view, the conflict discourse is too contiguous to a militarization of climate change, which would not guarantee the protection of those most vulnerable but benefit already powerful groups (who are rarely among the most vulnerable to climate change). Although often defined in different labels and nuances,

much of the debate shares such an analytical assumption and normative orientation (cf. Barnett, 2011; Dalby, 2009; O'Brien & Leichenko, 2007; Roe, 2012; Warner et al., 2008).

My preliminary intuition is that both the binary and the positive connotation of human (good) security manifest substantial shortcomings in the CM case.

For exploring such an initial hypothesis, in my assessment of CM I combine two different theoretical streams: post-politicization theories and studies that draw on the Foucauldian concept of biopolitics.


# Security and (de)politicization

In order to discuss the political effects of climate security, it is necessary to illustrate the definition of 'the political' that underlies my work, and to spell out what I refer to with the concept of de-politicization, which is a central theme in various parts of this thesis.

I employ the term de-politicization for indicating processes that lead to an evacuation of 'the political' – which stands for the contentious 'spaces' in which established relations and systems of practices are challenged. Following Ranciere's formulation, the political is to be found where the existing partitions of the real are put into question (Dikeç, 2005; Ranciére, 2001). The political thus should not be understood as formal institutions and processes of governance. Crucial in this definition is dissensus, intended not as the mere cohabitation of contrasting perspectives, "but [as] a dispute over the situation itself, a dispute over what is visible as an element of a situation, over which visible elements belong to what is common, over the capacity of subjects to designate this common and argue for it" (Rancière, 2004, 6). De-politicization is thus a process by which the contentious kernel is removed from social and political interaction, and the existing definition of the issue at stake is taken for given. As discourse theory shows, de-politicization is a highly political process: the removal of the political results in a reaffirmation of the dominant relations and practices, and is a key mechanisms for the reaffirmation of an existing hegemony in a moment of dislocation, borrowing Laclau and Mouffe's terminology (Laclau & Mouffe, 2001).

This contributes to explain the critical attitude towards environmental determinism that permeates this study. Environmental determinism rejects the idea that the definition of environmental matters emerges through social

mediation. In such a view, 'environmental' refers to transparent emanations of natural and immutable laws out of the reach of human agency, or in other words free from the contingency that characterizes political processes. Thereby, the processes, phenomena and relations identified as 'environmental', become unquestionable data of reality, and they are assumed to determine and orient political and economic processes and relations. Thus, the struggle over the definition of what environmental matters are and how they should be looked upon, as we have seen an ultimately political matter, is bypassed. This inhibits a questioning of the 'rules' that govern the definition and approaches to an issue, be it CM or oil distribution and consumption. Once this happens, certain outcomes and solutions emerge as unavoidable 'datum of reality'. By inhibiting such a political kernel, environmental determinism inhibits the possibility to challenge hegemonic relations, and thereby risks reinforcing dominant discourses and regimes. The processes of de-politicisation explored in the various chapter are not seen as sporadic instances, but as reflexes of the neoliberal post-politicization[33] of environmental issues individuated by Swyngedouw (2009, 2010a, 2010b), an analytic that has profoundly influenced my work.

As detailed in Papers I, II and IV, such reflections provide a key for shedding light on the effects on 'the political' of the mobilisation of apocalyptic narratives and of security in discourses on CM. Trying to be as schematic as possible: the intuition followed in this work is that security, in its various articulations in the CM case, tends to be bound to de-politicising movements. To be clear, I do not claim that such a relationship is essential, general or necessary; such reflections are situated in the climate/environmental political landscapes, and specifically in the CM debate. Elsewhere, other configurations of the relationship security- political cannot of course be excluded by this work.

In any case, throughout the papers I will detail how the apocalyptic narratives stressing the catastrophic character of CM and its security dimension, in conjunction with the environmental determinism they embed, are conducive to a de-politicisation of the matter. The fear and injunction to act mobilised by apocalyptic narratives does not necessarily imply or foster

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[33] With de-politicisation, I refer to a general discursive mechanism, a move through which an hegemonic structuration or discourse is strengthened via the removal of the conditions for its radical contestations. Post-politicization, in my understanding, refers to a specific set of processes in present neoliberal environmental politics, which include de-politicization.

exceptional (either in a good or bad sense) action. As shown by Žižek (2010), apocalyptic narratives can also have the paradoxical effect of re-normalising an issue, which from being the 'horrible impossible' can quickly be inscribed in the frame of business-as-usual, thereby jeopardising the possibility of the questioning of the very terms in which the issue emerges and is problematized. Moreover, drawing here on Swyngedouw (2009, 2010b), apocalyptic imaginaries are an integral part of the presently dominant neoliberal relations. The political effect of the combination of apocalyptic narratives and determinism, which conjure up to a de-politicization of CM, can be that the impossible becomes the norm, perfectly in line with hegemonic political conformations[34]. The exceptionality of apocalyptic narratives on CM appears as unable to favour any questioning of unequal distributions of costs and 'benefits' of climate change, and counterproductive for more open politics on mobility.

# Biopolitics and human (in)securities

I draw on the Foucauldian concept of biopolitics as a tool for understanding the forms and strategies of governance in which different securities get embodied. In my work, this analytic has allowed me to approach the normative questions connected to security also starting from mundane practices and subjectivities, rather than only from a deconstruction of the ideological machinery that legitimises security and its exceptional import. To begin with, Foucault describes biopolitics as a historically situated style of government, whose referent objects (in other words, the questions that concern government) are population and the species; in this context, Foucault describes security as a dispositif – oversimplifying, as an assemblage through which government can be exercised (Foucault, 2007, 2008).

Against this background, I will draw on the work of scholars that explore the biopolitical articulation of security in relation to environmental matters, development and resilience (Dillon & Reid, 2009; Duffield, 2007; Duffield, 2001; Grove, 2010; Reid, 2010, 2012) as a basis for analysing the role of

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[34] On the positioning of apocalyptic narrative towards hegemonic discourses and political conformations, see also Paper IV.

(human) security in the policy and politics of CM. As Paper V will show, it proves useful especially for looking closer at the emerging narratives on climate migration as adaptation.

In particular, I will focus on four aspects. First, I look at the policies envisioned for dealing with CM by drawing on the idea that (human) security is a principle of formation, i.e. it has a role in "producing the 'humans' requiring securing and, at the same time, calling forth the state/non-state networks of aid, subjectivity and political practice necessary for that undertaking"(Duffield & Wadden, 2006, p. 2). Reid's analysis of the productive role of resilience and security in ecological discourses also proves useful for assessing the effects of (human) security in the production of the subjectivities (e.g. climate migrant) able to adapt to climate change, as understood in today's dominant discourses (2012). Such a vista highlights the productive and generative character of the governance mechanisms proposed for CM. This aspect is missing in large shares of the mainstream literature that consider policy-making and governance as ex-post responses to existing phenomena (instructing in this regard is the literaure on arrangements targetting both climate refugees and migrants, see e.g. Biermann & Boas, 2008; Brown, 2008a; Docherty & Giannini, 2009; Tacoli, 2009; Warner, 2010).

Second, I approach security as a *technology* functional to the government (or rather subjection) of those concerned, drawing on Duffield's analysis of the role of human security in the disciplining of those population becoming 'dangerous' in the wake of de-colonization (2007). I apply such a rationale to my study of the articulation of human security, adaptation and resilience in CM discourses, looking closer at how it functions as a mechanism for governing, combing and disciplining the movements of those vulnerable to the adverse impacts of climate change.

Third, biopolitical studies show that inherent in the fostering of certain subjects fit to the (biopolitical) rule and the implementation of governing mechanisms, is the combing, or 'triage' (Dillon & Reid, 2009) of those unfit, which are identified as sources of danger to be rendered innocuous. Indeed, for the CM case this implies considering how good and bad forms of mobility are constructed, but also fostered and/or curbed.

Fourth, the literature indicates that the triage or combing of the fit from the unfit, of the adaptable and resilient from those who are not so, can also imply the exercise of brute force and 'extraordinary' (in a liberal framework) measures (Dillon & Reid, 2009; Duffield, 2007; Grove, 2010).

Such elements of biopolitical studies contribute to exploring two of the main research foci of this work. To begin with, they question the normative assumption on the binary between good and bad security which I illustrated above. At least in the CM debate, in spite the very different tones with which they are advocated, security and human security are less heterogeneous than what one could expect. The binary good versus bad security appear as misplaced. When looking at the subjectivity (re)produced by different articulations of security on CM, it emerges that both narratives on waves of climate refugees and on migration as adaptation are biopolitical and are conducive to the reproduction of neoliberal subjectivities. In the former case, the triage is set in motion primarily by 'taking care' of those who, by being not resilient and adapted, underdeveloped, become the dangerous and pathologic sources of bad circulation. In the latter, the rhetoric on migration as adaptation rather targets the transformative adaptation of the vulnerable into subjects fit to the neoliberal relations – although this more positive emphasis does not imply the absence of coercion, exclusion and 'extreme' measures. In extreme synthesis, the two appear as the two sides of the same biopolitical coin.

In light of this, the biopolitical analytic casts a dark light on the prospect/promise that the more moderate tones emerging in the CM debate (its de-securitisation, some would say) can be conducive to more democratic approaches. Relatedly, it also questions the assumption, at least for the CM case, on the democratic character of the concept of human security.

Summing up, the concepts de-politicization and biopolitics structure my exploration of various discourses on CM and their articulations of security, by offering two different entry points to these matters. The former more concerned with the 'macro' political effects of security, the latter providing instruments for appreciating the impacts of CM discourses by starting from the policies and subjectivities they envision. However, the insights on CM obtained from these two analytics seem to somehow converge. The exceptionalism of security and the mundanity of governance appear to re-join in the de-politicization of CM. The very distinction between the exception and the rule, between security and human security, appears blurred. What appears at the horizon, both of narratives on climate refugees and on the mantra on migration as adaptation, is the biopolitical government of 'disordered' populations at the fringes of capital and development, exercised in a political landscape able to maintain under the surface any form of radical contestation..

# The research process

The word 'move' has a central role in this thesis. As we have seen, CM emerges when changing climates intersect with people's mobility. This thesis also looks closer at movements in and of the debate, and at the political moves which make CM into an object for government and governance. Moreover, my analysis considers the moving effects that CM has had on concerned actors and contexts, not least because of its symbolic weight.

This long list of 'things' in motion reveals that the very object of study is on the move. In order to assess the evolving socio-ecological relations and political struggles underlying the nexus climate-migration, I have not considered CM as a given, stable and transparent empirical object to shed light on. On the contrary, and in line with the analytical framework described above, I assess how CM is constructed into a topic of concern for research, politics and government (see the theoretical framework sketched above). Such an approach focuses on the construction of the forms of knowledge through which climate change and its impacts are signified and made into objects for political contention and government. In practical terms, this means exploring how CM is problematized within various discourses, drawing on what conceptualizations, explanations, imaginaries, narratives, are made governable through what policy recipes.

It is worth spelling out a few implications of this approach. To begin with – and quite obviously, at a certain moment there can be different problematizations of CMs, none of which can necessarily be proven 'better' than another. To a certain extent it might be so that one can be proven more accurate than another, but the non-factual meaning inscribed in any discourse renders their empirical testing a non-exhaustive form of evaluation, and an insufficient ground for normative/political critique (Glynos & Howarth, 2007; Laclau, 2005).

Such an approach configures a specific relation to the object of research: there is no given referent (no treasure) in search of which I dig in my 'empirical playground'. In this respect, my work follows lines similar to those traced by

Wendy Brown in her description of *local criticism*. In such a research strategy, the goal, when exploring a topic, is not:

> to "get to the bottom" of it. Rather, the point is to critically interrogate the framing and naming practices, challenge the dogmas […], and discern the constitutive powers shaping the problem at hand. Boundaries, naming practices, dogmas, and constitutive powers are among the objects of local criticism; interrogation, challenge, discernment, and displacement are among its actions.(Brown, 2005, 8)

These remarks also hint at the boundaries of this research enterprise. My goal is not to provide a cohesive picture, nor any grand answers to the pressing questions posed by CM, and even less (of) an articulated path. In my view, to develop a set of well-defined and precooked alternative approaches to CM would be an exercise with little, if any, added value. Providing a partial critique is more or less the most I expect from this piece of research.

If we now consider the methodological and argumentative movement that I follow throughout the thesis, some aspects of it can be illustrated by referring to a simplified version of the *retroductive circle* described by Glynos and Howath (2007, chapter 1). Such a circle consists of three moments: *problematization*, *retroductive explanation*, and *persuasion* (see Figure 3). The starting point is the encounter with a puzzling question that is problematized and made sense of through proto-explanations. An example of such a puzzling insight in this work is: why do red-green mobilize Malthusian logics of the
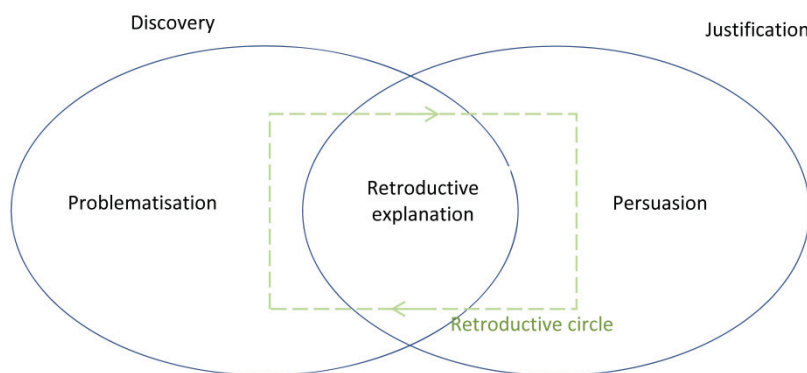


**Figure 3**
The retroductive circle. Source: adapted from Glynos and Howarth (2007, p. 33)

nexus climate-population, touching upon chords usually typical to the political right? The problematization phase leads to the development of hypotheses and theses, which are tested and refined in reference to empirical evidence and through existing theoretical analytics (on this, see also Ragin & Amoroso, 2011). The validity of the thesis and its explanatory potential are evaluated also in reference to the 'moment of persuasion'. This consists of the testing of the developed thesis and explanations in the context of the scholarly debates and in dialogues with the 'stakeholders' concerned by the research. In practical terms, in this work, this moment has taken place in various discussions of my 'findings' with other researchers at academic conferences and workshop. But it also involved a few moments of extra-academic 'encounters'. For instance, on a few occasions[35] I illustrated and questioned my research and approach in dialogue with red-green circles – to be sure, it has not proven easy to persuade climate activists of the problematic implications of their usage of the term climate refugees in their campaigns. I want to underscore that the persuasion moment is not a concession to often apologetic and for the most fuzzy 'participatory research' strategies. Rather, it is a necessary consequence of the situatedness of knowledge that is assumed in the ontological and epistemological grounds of this work. It is an emanation of the constructivist belief that no form of knowledge can be objectively evaluated without reference to the researcher articulating it and to the audience to which it is addressed (Glynos & Howarth, 2007).

Another aspect of the circle that characterises my work is that it configures an iterative process, since the forms of justification sketched above lead the process back to the explanatory and discovery moments, in which the inputs received and the related dislocations lead to a modification of the explanatory body and possibly to new problematizations.

The iterative character of the model and the permeability between the contexts of discovery and justification illustrate well the fact that the starting point for my research is not a set of questions to be answered. Rather, it is a series of proto-explanations (which could also be called arguments) through which I attempt to make sense of a series of issues that concern me on either scholarly or political grounds. Such proto-explanations are then articulated and theoretically structured, and iteratively modified. In blunt words, my research

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[35] I participated to a couple of workshops organised by activist groups, and discussed the issue of CM in a long interview in the Swedish magazine Mana (April 2010).

process does not start from a set of research questions to which the text offers answers. The articulation of the question is rather an organic and continuous endeavour during my research process, which brings my argument forward in the iterative process.

The 'empirical playground' of this work is an ample set of documents comprising academic publications, media and NGOs reports, working papers, legal and policy documents that all concern CM and other significant and related environmental issues. Most often, the documents that I looked closer at were chosen as 'paradigmatic cases' (Flyvbjerg 2001) highly representative of specific discourses or positions related to the issue at hand – as here on climate politics and/or CM. Examples of the relevant actors that are taken as representatives of various discourses are UNFCCC and IPCC, advocacy circles such as NGOs, national governments, international organizations (e.g. ADB, IOM, WB), and supra-national bodies (e.g. EU). The sampling strategies vary between the individual papers, where the choices are explained and justified. The materials are analysed in line with the theoretical framework and analytical methodology sketched in this chapter, and following the basic rules of qualitative social sciences (Flyvbjerg, 2001).

Before concluding, it is worth articulating some reflections upon the apparently mundane choice of how to structure this work. As anticipated, the thesis is structured as a collection of articles with an introductory section (in Swedish, *kappa*, a coat). This choice brings about both advantages and drawbacks. Compared to a monograph, it offers more freedom to perform the de-centred analysis. It allows a freer combination of theoretical tools and a choice of themes that would not necessarily be coherent enough for becoming part of the stringent plot that unifies a monograph.

To produce a collection of articles also gives the opportunity to reach a (relatively) broader audience, since I assume journal articles to be more accessible and easily circulated than a monograph. Moreover, the peer-review process to which articles are streamlined contributed to increase the quality and robustness of the text. Furthermore the formal rules of academic journals do not necessarily provide the optimal frame for creative writing, but certainly provided an 'incentive' to write stringently and succinctly (which can also add to the accessibility of the work). Last but not least, writing the thesis as a collection of articles allowed me to write parts of this work in collaboration with colleagues, which proved a challenging but very insightful and productive experience.

A risk with this form of dissertation is that it may appear as less cohesive than a monograph, and the coherence of the parts and their overall significance

or contribution have to be made explicit. That task is accomplished by these introductory chapters, which provide reflections on the scope of the work, and couch the papers in a broader thematic and theoretical frame. They also deal with the (dis)continuities among the main analytics employed in the thesis.

# Conclusions

One of the key drives that motivate this thesis is to de-naturalise CM. The reader, when reaching the conclusion of this work, should be convinced that I am pursuing this avenue not *in spite of* the saliency of the climate-migration nexus. On the contrary, it is *because* of its importance that I treat CM as a *construct* that reifies a series of phenomena into an issue to be researched and governed.

I see the growing political importance of climate-related migration as part (or, better said, a symptom) of broader epochal transformations, which entail both geopolitical and biopolitical relations and strategies. Regardless of whether these are connoted as globalisation (Global Commission on International Migration, 2005), the Anthropocene (Chakrabarty, 2009; Dalby, 2007), modernity (Bauman, 2004), urbanisation (Davis, 2006), or neoliberal development (Duffield & Wadden, 2006), one of their constituent components is the reconfiguration of socio-ecological spaces. A reconfiguration that imposes profound and often violent changes in the patterns of human settlement and mobility. In some cases by opening opportunities for people to move, in some by forcing them to stay put, in others by displacing them – more or less forcefully. Climate change enters this picture in at least two ways. On the one hand, it interacts with such transformations by modifying (most often negatively) ecological conditions. It increases the stresses to which those at the fringes of capitalist development are exposed, and thereby reduces their chance to decide whether, how and when to move or stay. On the other hand, climate change becomes a field in which the strategies for governing the populations affected by such transformations can be envisioned, tested and developed. Together, these two aspects configure climate change as a moment in the development of political strategies that discipline (or contest) the turbulent (re)configuration of socio-economic relations. Thus, while it is true that climate becomes politicized, one could also say that, extending Angela Oels' argument on the security (2012), politics becomes climatised. When recognising climate change as a moment of socio-ecological processes, it makes little sense to assess the imports, characteristics and effects of the

problematizations of CM by separating the economical/political from the ecological components of the matter. As this work shows, a constructivist frame and a de-naturalisation of CM are suitable instruments for tracing the contours of such socio-ecological ensembles and for creating the space for a political discussion of the concerned matters.

In the course of this research, the themes and questions dealt with change, following the retroductive iterative process described earlier, also in reason of the profound changes that the CM discourse and debate have undergone in the last years. The question/themes anticipated in the introduction to a certain extent coincide with the different phases of my work, although some themes (as the positioning of red-greens) have been central throughout the whole process.

The first part of this work has focused on a genealogy and deconstruction of early debates on CM. As we have seen, CM emerged in strong continuity with the environmentalist discourses of the 1970s, in which environmental degradation and the government of populations on the threshold of development were linked in a similar fashion as in today's discourse on climate change and CM.

More specifically, the CM debate sprouted from the milieus connected to environmentalist discourses, from them inherited a Malthusian imprint and environmental determinism. In both cases, the environment or climate becomes a moment in the creation (ideological, but often also practical) of surplus populations, unfit and/or dangerous. The naturalisation of the social relations and economic modes that produce such a surplus population is nothing new – as the brilliant critique by Marx (1983) on the same questions illustrates (cf. Harvey, 1974). All in all, these traits, spiced with mechanistic understandings of migration, precipitated in the figure of climate refugees, which reproduce post-colonial imaginaries, pathologise migration and de-subjectivise/other the concerned populations. While such critiques of the figure of the climate refugee and of dominant discourse on CM have (opportunely) become frequent in the literature, this work sheds light on another problematic dimension. Paper I and II look closer at the ingredients of crisis narratives on climate refugees, at the discursive interaction they create, and at the forms of knowledge in which they found legitimacy. What emerges is that the fear fomented by apocalyptic narratives on CM does not have as only possible outcome a securitisation and/or militarization of the matter, the pursuit of defensive geopolitical strategies or the inflation of anti-immigration attitudes. The fear as well as the sense of urgency and injunction to act that sustain crisis narratives are not necessarily followed by a passage à l'acte – at least not in the

most immediate sense. The apocalyptic narratives that animated the debate can also favour a re-normalization of CM. As manifest in the post-politicization drives emerging in environmental and climate politics, apocalyptic imaginaries (on mounting waves of climate refugees) and mild governance arrangements (to protect such destitute) coexist in the same (post-)political discourse. Such equilibrium, together with the de-politicization implied by the determinism embedded in the narratives on climate refugees, can be conducive to a de-politicization of CM, to its inscription in the frame of business-as-usual.

A further dimension of this work documents and analyses an on-going reconfiguration of the debate, which partly recast the questions that move this work. The apocalyptic narratives until recently predominant (which as we have seen mobilize a security lexicon and prefigure disruptive crises) have not (yet) lead to the implementation of what is usually defined as exceptional measures (Boas, 2012; Oels, 2012; Trombetta, 2008). To the contrary, the recent mainstreaming of CM has sanctioned a softening of tones. The more accurate analytical grounds long advocated by migration scholars are gaining currency and so is the idea that (governed) migration can be made into a successful adaptation strategy. Thereby, the concern shifts to human security and resilience, and CM is understood as an object for mundane policy-making. Paper V reads the articulation of human security, resilience and adaptation that underlie the recent shift, as well as the envisioned mechanisms of government, through the Foucauldian concept of biopolitics. Thereby, I argue that, although the emphasis on migration as adaptation may represent a step forward compared to anti-immigration attitudes, it is far from given that it is conducive to strategies and policies that increase the welfare as well as the socio-economic and political rights of (climate) migrants.

My analysis also casts doubts on the binary that opposes a good and a bad security. Although it should be clear by now that I have a markedly critical perspective on the apocalyptic imaginaries/narratives on climate refugees, my work also shows that, under the surface, the emerging narratives on migration as adaptation are not totally heterogeneous to the securitizing narratives on waves of climate refugees. Rather, narratives on climate refugees (and the related bad security) and on migration as adaptation (and the good, human security) appear as the two sides of the same coin. Climate refugee is a figure that primarily individuates the sources of danger, outbursts of undisciplined 'bad circulation', against (or for protecting) whom extraordinary measures are justified or justifiable. The emerging mantra of migration as adaptation targets the active fostering and creation of 'good circulation': it strives at forming adaptive and resilient self-entrepreneursr, docile subjectivities adapted to

market economy – thereby obtaining a pacification of unruly sectors of populations yet to be inscribed under the neoliberal rule. In this sense, the biopolitical character of the discourse on CM seems to move towards a political landscape in which the very distinction between bad and good security, between exception and rule, and between apocalypse and business-as-usual is blurred. A landscape more similar to the de-politicized, neoliberal climate populism, than to a democratised arena which can fulfil the humanitarian or humanistic promises of human security.

Finally, instead of policy recommendations, my work articulates a 'politics recommendation' addressed to radical political agendas, suggesting that the poverty of alternative narratives and imaginaries is a compelling challenge. As shown from various angles (see paper I, II, IV), red-greens, in their mobilization of the various discourses on CM, have not escaped the problematic logics and political effects highlighted above. For instance, when advocating in political statements and campaigns the duty of the international community to protect climate refugees, they also favour a reproduction of Malthusian rhetoric and of post-colonial relations and subjectivities. Moreover, the de-politicizing effects of apocalyptic narratives on climate refugees seriously jeopardise the red-greens' chances to envision pathways that punctuate dominant relations. The risk is to be confined in a marginal or residual position, which involuntarily reinforces hegemonic regimes – an argument to which the case of peak oil examined in paper IV adds ulterior weight. Human security has a high currency in liberal humanitarian, developmental, and sustainability circles. The rhetoric on migration as adaptation carves out a stronger (although neoliberal) agency for the vulnerable, which can be misinterpreted as empowering the concerned. There might be a risk for red-greens to be co-opted into such milder mainstream agendas – whose polite façade reinforces rather than destabilizes dominant relations.

It is not the goal of this work to propose alternative imaginaries for red-greens. This could be an interesting pathway, which would nonetheless require developing a series of reflections and engaging with political-philosophical questions which would have led this particular project astray – or more simply would have represented an overwhelming task at this stage. In the best case, this work served as training, helping me to develop the refined analytical and intellectual tools required for engaging with such an endeavour, which could be a challenging but stimulating goal of future work. Moreover, I do not formulate a deterministic analysis, foreseeing how the political struggles on CM and climate change are going to evolve. Such an exercise would be a form of hubris, intellectual arrogance and even worse of political naivety – the result

of political struggles/processes are not pre-determined, and even less shaped at a theoretical level. Nonetheless, in reason of the conclusions reached through this analysis, I would suggest that the struggles for fair climate politics and for the rights of migrants have greater chances to succeed if abstaining from engaging with current problematizations of CM, and from coalescing with the milieus and circles pushing them. This might be one of such cases in which it is better to be alone than in bad company.

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