

P48- Representing Climate Change

From 'fearing' to 'empowering' climate refugees: Governing climate-induced migration in the name of resilience

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Abstract The concept of resilience was born and grew up in the environmental sciences during the 1970s. After migrating into many other disciplines, resilience is now 'coming home' to the politics of the environment in the name of security. The field of climate change induced migration is investigated as a paradigmatic case of environmental security. On a theoretical level, resilience is studied as a governmentality, namely as a combination of governing through contingency and advanced liberalism. On an empirical level, a brief genealogy of environmental migration is presented with a focus on the latest discursive shift towards resilience. It is demonstrated that climate change induced migration was once represented as a pathology to be prevented, and more recently, as an issue of refugee rights. The shift towards resilience however has reframed the debate. Climate change induced migration is now presented as a rational strategy of adaptation to unavoidable levels of climate change and the relocation of millions of people is rendered acceptable and rational. The most drastic policy implication of this shift is that the space of the political is eliminated. Climate change is presented as a matter of fact rather than as a social problem that could still be tackled by significant emission reductions and lifestyle changes by residents in the major economies.

Keywords: resilience, governmentality, climate change, migration, climate refugees, discourse, security

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Introduction

Resilience is becoming the dominant mode of securing in the face of environmental dangers. It is therefore important to evaluate the policy implications of resilience and to understand which modes of governing it incites. Resilience spent its early years in the environmental sciences during the 1970s (Walker and Cooper 2011). Yet, as this special issue demonstrates, resilience quickly migrated into other disciplines (see also Bourbeau 2013). Most recently, it has arrived in the security sector, where it is welcomed as a means of preparing for 'unknown unknowns' such as terrorist attacks (Lundborg and Vaughan-Williams 2011; Duffield 2012). The call for resilience in the environmental sector originates from a changed construction of environmental dangers. Whereas in the 1990s and early 2000s, environmental problems were perceived as risks that need to be managed, the 2010s are more influenced by the notion of 'environmental terror' (Duffield 2011). The term terror implies sudden, irreversible and unpredictable changes in the earth system. Lenton et al. (2008), for instance, have argued that the climate is a non-linear complex system with tipping points that could lead to the sudden death of the Amazon forest or the breakdown of

the Gulf Stream. As it increasingly appears impossible to define safe thresholds for greenhouse gas concentrations in the atmosphere, a new strategy of governing climate change seeks to render at-risk populations resilient to the impacts of climate change. For example, the most authoritative institution in climate science, the Intergovernmental Panel on Climate Change (IPCC), adopted the concept of resilience for its 2012 special report. Resilience was defined as the

ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions. (Field et al. 2012: 5)

This shift in emphasis from risk management to resilience can be best illustrated for the case of climate change induced migration. Early science and policy documents from the 1980s and 1990s discussed 'climate refugees' as a pathology to be prevented. In the early 2000s, scientists and policy makers advocated the responsibility of Western emitters to 'save' climate refugees and offer them refugee status, without implementing any legal instruments to grant refugee rights. In the last five years, the debate has clearly shifted towards resilience. Science and policy papers now argue that the affected populations know best how to prepare for the unavoidable impacts of climate change. In the face of climate 'terror', at-risk populations are called upon to prepare themselves for disruptive shocks of various kinds. They are responsabilised to become resilient. Whereas other fields of environmental policy often stick to an adaptive understanding of resilience, we will show that the debate about climate-induced migration introduces a much more transformational perspective. This distinction becomes important as resilience remains a fuzzy concept, in both empirical and analytical terms (Manyena 2006; Bourbeau 2013; Kaufmann 2013). Some authors highlight that resilience has different meanings in different locations (Joseph 2013b). We advance this debate by offering a rich empirical case study and a theory-driven critique of resilience as a mode of governing. We analyse in detail which governmental rationalities are incited by resilience and assess the policy implications of this form of government.

The first part of this paper introduces Foucault's governmentality studies as the theoretical framework for this analysis. We agree with the existing literature (Chandler 2012; Joseph 2013a) that resilience governs through advanced liberal government, particularly by governing through contingency. We emphasize however, that sovereign power and the regulation of liberal biopower can still be incited within a regime of advanced liberal government and demonstrate this for our case study. Methodologically, we conduct a discourse analysis of key publications on environmentally-induced migration from 1985 until 2012. Informed by the strategy of theoretical sampling (Corbin and Strauss 2008) and Foucauldian genealogy, we start with the most prominent publications on climate-induced migration and follow the trail of the references with which these publications engage, back to the origins of the climate-induced migration discourse in the 1980s. We chose key publications by international organizations, non-governmental organizations, think tanks and scientists on the relationship between environmental change and migration. We analyse these documents according to how they problematize climate-induced

migration as a security issue: what are the subjects and objects of the problem, and what are the ways of thinking and acting on climate-induced migration?

In our discussion of the policy implications of this shift towards resilience, we conclude that the stakes include the elimination of the political. We base this claim on Foucault's notion of the political – 'nothing is political, everything could be politicized, everything may become political' (quoted in Sennelart 2007: 390). By accepting that dangerous levels of climate change are inevitable, resilience deprives us of our capacity to foster a more secure world in which climate change is tackled through the transformation of lifestyles and energy systems. Politics, to put it bluntly, is reduced to the decision between staying or going.

Resilience as governmentality

In this paper, we approach resilience as a governmentality of security (Oels 2013). Within the field of critical security studies, the concept of governmentality has been adopted to analyse 'representations of social problems, the means to remedy them and their effects on the construction of subjectivity' (Aradau and van Munster 2007: 291). The strength of the concept lies in its ability to investigate how objects are rendered governable in the name of security. Our analysis rests on ideal-types of governmental rationality – analytical abstractions that do not exist in reality (see for example Dean 2010). Although we focus on ideal types, we do not lose sight of how their elements are constantly reconfigured and recombined in particular instances of rendering an object-subject governable (as suggested by Collier 2009).

Building on the work of Michel Foucault and his followers, one can distinguish (at least) three ideal-typical rationalities of government (Dean 2010; Oels 2005): sovereign power, liberal biopower and advanced liberal government. Sovereign power uses the law to rationalize the exercise of power and sanctions non-compliance with violence (Dean 2010: 105). In this sense, the last resort of sovereign power is 'the right to take life and let live' (Foucault 1978: 138). Sovereignty is what most 'geopolitical' approaches refer to when they discuss (national) security (Dillon 2007a). In contrast, liberal biopolitics governs the population through freedom (Miller and Rose 2008). As this freedom is considered to be constantly under threat, government draws on apparatuses of security in order to protect the population (Foucault 2007: 108). Liberal biopolitics is inherently associated with the concept of risk that seeks to turn threats and danger into calculable and hence predictable probabilities (Aradau and Munster 2007; Dillon and Lobo-Guerrero 2008). These techniques allow the identification of particularly risk-prone groups and activities, which in turn make it possible to subject these to governmental regulation. Furthermore, insurance-based risk technologies were organized as institutions of the welfare state (Ewald 1991: 204). Advanced liberalism, by contrast, multiplies, individualizes and decentralizes risk management (Dean 2010: 166–69; Rose 1996a). According to a 'new prudentialism' (O'Malley 1992), individuals are made responsible for coping with risk by either avoiding dangerous activities or being willing to pay for appropriate private insurance against possible damages. Furthermore, instead of society, the new unit of responsibility becomes the community (Rose 1996b), whose solidarity and local expertise is harnessed. Instead of governing less, an advanced liberal governmentality of risk seeks to govern 'at a distance' (Miller and Rose 1992).

From risk to resilience

Resilience, in contrast, starts with the assumption that risk has undergone crucial transformations (Oels 2013). Risk has potentially catastrophic consequences, and is becoming increasingly uncertain and hence difficult to calculate (Ewald 2002). In response to this, the 'precautionary principle' (Aradau and Munster 2007) means that we should aim to minimize risk at all costs, as its consequences are potentially disastrous. At the other extreme lies a 'culture of preparedness' (Collier and Lakoff 2008). Given that efforts to eliminate risk entirely are likely to fail, we cannot rule out the worst-case scenario. It is therefore necessary to invest in preparedness so that social systems are able to cope with extreme social, economic or environmental shocks. This leads directly to the concept of resilience. Resilience has its roots in the ecological debates of the 1970s, and from there it has travelled to fields such as disaster research (Torry 1979), psychology (O'Malley 2010) and the social sciences (for a detailed review, see Bourbeau 2013). Resilience can now increasingly be found in the security field (Lundborg and Vaughan-Williams 2011; Walker and Cooper 2011; Adey and Anderson 2012; Neocleous 2012). In its original formulation,

[a] management approach based on resilience [...] would emphasize the need to keep options open [...] and the need to emphasize heterogeneity. Flowing from this would be not the presumption of sufficient knowledge, but the recognition of our ignorance: not the assumption that future events are expected, but that they will be unexpected. (Holling 1973: 21).

Resilience thus implies the ability of a social or ecological system to 'absorb changes [...] and still persist' (Holling 1973: 27). However, beyond this general consensus, resilience can refer to different conceptions. The 'father' of the resilience concept, C.S. Holling (1973), was eager to distinguish between two types: engineering resilience (or resilience as maintenance) and ecological resilience (or resilience as adaptation). Engineering resilience describes the degree of disturbance a system can endure and still return to its previous equilibrium. For ecological resilience, in contrast, the maintenance of equilibria is less important. For a system to be resilient, it is only necessary that its basic relations remain intact and that the system can still perform its basic functions. However, when resilience traveled to other disciplines (for the genealogy see Walker and Cooper 2011), a third understanding of resilience came into play: social-ecological or transformational resilience. From this perspective, resilience is not only about 'being robust to disturbance but also [...] about] the opportunities that emerge, in terms of self-reorganization, recombination and the emergence of new trajectories' (Bourbeau 2013: 8). Social-ecologically resilient systems are emergent, manage themselves and even develop new and improved properties. Building on Holling, our understanding of resilience ranges from maintenance via adaptive resilience to transformational resilience. While adaptive resilience (Holling's ecological resilience) expects ecosystems to adapt to a changing environment, transformational resilience refers to the emergent transformation of these very systems into something new. Resilience to rising sea levels may be achieved using three different strategies: First, a strategy of maintenance would consider the construction of levees around the settlement to be sufficient. Second, adaptive resilience might rebuild the houses on wood piles and use boots for mobility. Finally, transformational resilience might abandon the settlement and opt for migration to a new location. Of course, there is a certain

degree of overlap between these three conceptions. For example, migrant remittances may facilitate the rebuilding of houses or levees – in other words, transformation which enables adaptation. In this sense, the more encompassing notions of resilience can always imply the more conservative variants. Yet this analytical distinction enables us to signpost an important shift in climate-induced migration from maintenance to transformation.

The notion of social-ecological (or transformational) resilience is particularly important for our analysis of climate change induced migration. It resonates with the notions of ‘connectivity’ and ‘complexity’ in recent accounts of Western security discourses (Kaufmann 2013). According to this discourse, a complex networked society creates threats that cannot be calculated and predicted. Biopolitically speaking, resilience conceptualizes life as being radically contingent. This does not ‘simply mean uncertainty and unpredictability, nor mere luck or crude accident’ (Dillon and Reid 2009: 6). While governmentalities of risk and calculation have long attempted to tame the uncertainty associated with human life, the notions of radical contingency or radical uncertainty acknowledge that there are ‘unknown unknowns’ which cannot be calculated and predicted (Aradau and van Munster 2011: 7). Radical contingency thus introduces new – conjectural – modes of thinking (Aradau and van Munster 2011: 7-8) and new practices of government that revolve around resilience. While the ‘laws of becoming’ create the problem – liberal biopolitics being undermined by connectivity and complexity – they also provide the solution: ‘resilient adaptation, [...] compositional and behavioral restructuring, regeneration and re-modeling’ (Dillon and Reid 2009: 60). In this sense, the aim of resilience is not only to govern contingency, but also to ‘govern through contingency’ – harnessing the ‘adaptive emergence’ of people, communities, and societies (Dillon 2007b). Social-ecological resilience not only refers to the ability of societies to survive, it also wants them to thrive in the face of dramatic external change. This is because resilience ‘describes the ways in which life learns from catastrophes so that it can become more responsive to further catastrophes on the horizon’ (Evans and Reid 2013: 2). Resilience promotes the decentralization of governance, as well as favoring the self-organization of those exposed to endemic dangers (Kaufmann 2013: 60).

In this sense, security no longer means simply the ‘absence of danger’, but refers to a constant ‘process of adaptation, of dealing with insecurity’ (Kaufmann 2013: 68). Resilience is less interested in the sources of vulnerability (Evans and Reid 2013: 4). While a focus on resistance seeks to eliminate sources of vulnerability before the fact, resilience accepts vulnerability and seeks to remedy and even exploit it after disasters have taken place. As is demonstrated in the following analysis, the recent discourse about climate-induced migration expects adaptive resilience to fail and therefore seeks to replace it with transformational resilience.

From problem to solution: A genealogy of climate-induced migration

In this section, we outline a brief genealogy of the notion of climate refugees and analyse how they came to be governed in the name of security. We aim to show that climate-induced migration was initially discussed within a framework of national security – or, in Foucauldian terms, sovereign power – before it was articulated by liberal biopower as a threat to human security. It is important to bear in mind that we

do not understand these as successive distinct phases, but rather as overlapping layers, each describing the dominant rationality in a particular era.

Fearing climate refugees

Initially, climate refugees were articulated as a 'problem' that required urgent policy attention and which posed a threat to the national security of states. The end of the Cold War led large parts of the military establishment to wonder what their new role could be in a post-Cold-War world. As a result of this questioning, the conceptual space emerged for a wider and deeper interpretation of security. Environmental activists and concerned scientists, such as Jessica Tuchman Mathews (Tuchman Mathews 1989) or Norman Myers (Myers 1989), painted an apocalyptic picture of environmental degradation, predicting wars and migration triggered by environmental change. It is in this context that the issue of climate-induced migration came into existence. In 1985, a United Nations Environment Programme report introduced the notion of 'environmental refugees' (El-Hinnawi 1985), which stirred up a discussion within the scientific community about whether environmental change could indeed trigger migration (for an overview see Morrissey 2009). Jodi Jacobson published a widely acknowledged study for the Worldwatch Institute dramatizing the issue (Jacobson 1988). Most notably, Myers and Kent (1995) argued that climate change alone would uproot more than 180 million refugees by 2050. Even today, this number is cited time and again and informs much of the debate over climate-induced migration (Jakobeit and Methmann 2012). The terminology of 'environmental refugees' and 'climate refugees' became widely used despite the fact that no legal status exists for people displaced by environmental change and evidence that those people were unlikely to cross any border and would remain internally displaced.

The prominent study by Myers and Kent (1995) outlined the sovereign rationality of power that was dominant in these early days. Even the title of the study – 'Environmental Exodus' – indicates the territorial logic underlying the whole discourse. Methodologically, Myers and Kent supported their figures with a simple assertion: All those people projected to live in areas affected by serious climate change at a given time will become climate refugees and thus threaten the sovereign order of nation states. What is more, Myers and Kent linked population growth and environmental degradation to human mobility in a rather mono-causal and deterministic way. In effect, this discourse does not so much predict that all these refugees are coming North. Rather, the South is constructed as a 'wild zone' against which the North has to protect itself. Obviously written with the ambition of characterizing climate-induced migration as a national security issue, the study articulates it within a framework of sovereign power. The study relates this type of migration to territory and casts it as a threat to the persistence of statehood. Moreover, if unchecked, such migration might make military responses necessary (Hartmann 2010).

This articulation of climate refugees as a threat to national security is in line with the long-standing xenophobia and securitization of migration in Western liberal democracies in general (Huysmans 2006). All too often, these liberal democracies enable the use of sovereign power in the name of a threat to national security (Bigo 2008).

Saving climate refugees

The dominant discourse shifted during the 1990s (Morrissey 2009). This was due to three interrelated developments. Firstly, a growing number of scholars questioned the theoretical, methodological and empirical foundations of the discourse linking environmental change to violent conflict and migration. Migration and conflict were understood as multi-causal, depending on the adaptive capacity of affected populations, so that large-scale projections were judged to be implausible (Suhrke 1994; Barnett 2001; Peluso and Watts 2001). Secondly, the 1990s were a decade of 'humanitarian' military interventions. In such cases, the international community refused to be a witness to 'crimes against humanity' and declared itself responsible for the protection of victims of civil war. Consequently, 'sovereignty had to give way to intervention in order for a new world of global rights and global security to be enforced' (Chandler 2012: 214).

A third important influence was political campaigning for a redefinition of security in terms of human security. The motivation behind this move was the hope of freeing up substantial resources for development (which at that time were used for defense). In 1994, the United Nations Development Programme published a report entitled *New Dimensions of Human Security* (UNDP 1994). This report redefined security from the security of states to that of people. Human security successfully became the dominant discourse in development policy and was influential within the UN system, though often without the explicit use of the term (Chandler 2012). Environmental change soon became reconceptualized as a threat to human security (Barnett 2001; Dalby 2002). The growing importance of the concept of vulnerability was characteristic of this shift (Methmann and Oels 2014).

For proponents of a human security approach to environmental change, the main goal is to 'peacefully reduc[e] human vulnerability to human-induced environmental degradation by addressing the root causes of environmental degradation and human insecurity' (Barnett 2001: 229). Some more radical proponents of this approach relate vulnerability to Northern consumption, economic globalization, human rights and ecological interdependence (Dalby 2009). In any case, the concept allows for the precise location and mapping of those people who are most vulnerable to environmental change, and the initiation of interventions and management based on these predictions (O'Brien et al. 2004). In addition, vulnerability defines the umbrella under which environmentally and climate-induced migration are often discussed (Thow and de Blois 2008; Renaud et al. 2011).

Against this backdrop, climate change induced migration is represented as a threat to human security. As Duffield and Waddel have argued, human security defines 'the 'humans' requiring securing and, at the same time, call[s] forth the state/non-state networks of aid, subjectivity and political practice necessary for that undertaking' (Duffield and Waddel 2006: 2). In doing so, a space for intervention is created that Western governments may fill. A good case in point for this discourse is the UN Secretary-General's 2009 report on Climate change and its possible security implications (UN GA 2009). Foucault describes biopolitics as the identification and top-down intervention into pathogenic parts of the population. In line with this, the report suggests that '[a]dequately planning for and managing environmentally-

induced migration will be critical' (UN GA 2009: 17). The report mobilizes a legal discourse which focuses on the rights of affected populations:

Islands becoming uninhabitable or disappearing as a result of sea-level rise raise the issue of the legal status of the citizens and legal rights of these States, including over fisheries. [...] Legal and political arrangements may be necessary for the protection of affected populations. (UN GA 2009: 21)

This biopolitical discourse results in a call for a new legal climate refugee status that would grant protection to climate change induced migrants, including the right to non-refoulement and access to humanitarian aid. Most people displaced by climate change cannot be granted these rights under the Refugee Convention because the Convention requires political persecution as basis for offering protection. Moreover, most of those displaced by climate change are internally displaced and will not cross a national border. Still, they are conceptualised as in need of international support. It has been suggested that the Refugee Convention be extended to recognise 'environmental persecution' (Conisbee and Simms 2003: 33), or to create a new legal instrument either as a stand-alone convention (Docherty and Giannini 2009; Environmental Justice Foundation 2009) or as a protocol to the UN Framework Convention on Climate Change (WBGU 2007; Biermann and Boas 2010). As it is difficult to make individual decisions regarding eligibility for climate refugee status, Biermann and Boas propose declaring entire regions to be threatened by climate change, and suggest collectively resettling their populations in advance. When orderly management fails or comes too late, such discourse could mobilize humanitarian aid and humanitarian military intervention in the name of the human rights of affected populations. However, the use of such violent measures is not framed as overriding the sovereignty of affected states but as empowering partnerships with these governments (Chandler 2012: 225). This demonstrates how a sovereign economy of power can be mobilized in the name of human rights within a government based on liberal biopower.

A case in point is the response to Hurricane Katrina, which struck New Orleans in 2005. The media have often described the 'victims' of this hurricane as the first 'climate refugees' in industrialized countries (Oels and Carvalho 2012). The use of this label is remarkable as the vast majority were US citizens displaced within the USA. The US media portrayed New Orleans after Katrina as a 'snake-pit of anarchy' (Tierney et al. 2006: 68). In response to this and other influences, Governor Kathleen Blanco called on the thousands of armed forces deployed to New Orleans to restore public order. As a result, the pursuit of 'looters' took priority over saving lives (Tierney et al. 2006: 75). As all survivors were treated as potential looters or criminals, the US military's approach to rescue was one of body-searching and arresting survivors to make sure that they did not remain in unsafe buildings (Tierney et al. 2006: 70). Hurricane Katrina thus represents a case in point of the use of sovereign power in a regime of liberal biopower.

Empowering climate-induced migrants

In recent years, the term 'climate refugees' has almost disappeared from the scene. Instead, official documents now speak of 'climate change induced migration'. The liberal biopolitics of climate refugees has increasingly been replaced by a resilience discourse of climate-induced migration. Most notably, the Foresight Report on Migration and Global Environmental Change (Foresight 2011), published by the UK Government's Office for Science in 2011, clearly speaks the language of resilience. This report is regarded as the most authoritative collection of knowledge on climate-induced migration. It turns climate change induced migration from a problem into a solution. It is the process of migration itself that will render affected populations resilient to the impacts of climate change. This goes along with the emergence of resilience in many other areas of environmental policy (WRI 2008) and climate change (Field et al. 2012). The notion of resilience was already mentioned in earlier policy documents on climate change (for example UN GA 2009: 4), but has now become a leitmotif in discussing climate-induced migration. It goes along with the assumption that 'migration has always been one of the ways in which people have chosen to adapt to changing environments.' (Laczko and Aghazarm 2009: 5).

While the notion of resilience is spreading, its meaning remains diffuse. Different notions of resilience – as maintenance, adaptive and transformational – are all present in the debate about climate change. Resilience as maintenance is most clearly embodied in the well-known 2°C target. However, in the absence of effective mitigation measures, scientists and politicians are increasingly considering the impacts of 'dangerous' levels of climate change. By 2010, climate change was understood as an overarching danger that was often pictured using apocalyptic imagery (Swyngedouw 2010; Methmann and Rothe 2012). Scientists conceptualized the global climate as a non-linear system with tipping points that could lead to the collapse of the Gulf Stream and the death of the Amazon forest (e.g Lenton et al. 2008). As a result, climate change was considered increasingly unpredictable and hence radically contingent (Oels 2013; Methmann and Rothe 2012). 'People's livelihoods', concludes the World Bank in an evident reflection of the paradigm, 'need to function under conditions that will almost certainly change but cannot be predicted with certainty' (The World Bank 2010: 87). Resilience as adaptation, corresponding to the ecological discourse about resilience, is more clearly visible in the discourse about climate change. For example, the report by UN Secretary-General Ban Ki-Moon on Climate change and its possible security implications, connects it to 'securing livelihoods, [...] strengthening physical infrastructure to protect against extreme weather events' (UN GA 2009: 24). In a similar vein, the International Union for the Conservation of Nature and Natural Resources, an important environmental network of NGOs and governments, reduces the resilience concept to 'no regret' options for adaptation, 'such as for flood protection, water flow regulation in dry spells [and] wind breaks' (IUCN and Commission on Ecosystem Management 2010: 9). Although this statement does not necessarily imply the maintenance of the status quo, and emphasizes the double gain of such measures, it is clearly an example of adaptive resilience.

Climate-induced migration, in contrast, is associated with a truly transformational understanding of resilience. In line with the idea that climate change will have catastrophic or even apocalyptic consequences, it has to be expected that ecological resilience will fail – ecosystems won't be able to sustain livelihoods the way they once did. In the words of Mark Duffield (2011: 763), climate change has turned into

'environmental terror', 'where nothing can be taken for granted'; an 'environment that, operating through uncertainty and surprise, has itself become terroristic.' The Foresight report discusses the evidence for climate-induced migration and concludes that '[s]ome impacts of environmental change may give rise to significant permanent displacement of whole populations as a consequence of existing settlements being rendered uninhabitable' (Foresight 2011: 15, our emphasis). This not only points to the fact that equilibria are not maintained, but also highlights that ecosystems will not be able to support human settlements. Thus, 'no migration' is not an option in the context of future environmental change' (Foresight 2011: 16). This inverts earlier arguments: migration is turned from a problem into a solution, namely a 'normal' response to climate change. In line with Holling's assertion that previous equilibria need not be maintained, migration actually becomes a technique of resilience (Black et al. 2011). The idea that migration is a solution rather than a problem is not new in the debate about environmentally-induced migration (Suhrke 1994: 490). However, it is only recently that this position has been widely adopted in research and political discussions on climate-induced migration. Moreover, migration is not only re-conceptualized as an appropriate means of adaptation, and is also praised as a

'transformational' adaptation to environmental change [which]... in many cases will be an extremely effective way to build long-term resilience (Foresight 2011: 7).

Migration is now re-conceptualized as an 'opportunity', bringing many attractive co-benefits. The Asian Development Bank, a strong player in development policy and a pioneer in climate-induced migration, argues that

The countries of Asia and the Pacific can choose to turn the threat of climate-induced migration into an opportunity to improve lives, advance the development process, and adapt to long-term environmental change by altering development patterns, strengthening disaster risk management, investing in social protection, and facilitating the movement of labor (Asian Development Bank 2012: 7).

Resilience through migration is neither conservative, nor is it mere adaptation. Resilience becomes transformational. This perfectly illustrates the idea of governing through contingency which argues that 'catastrophic events are not just inevitable but also learning experiences from which we have to grow and prosper, collectively and individually' (Evans and Reid 2013: 2). Climate-induced migration appears as a means of improving livelihoods.

Networks of resilience

Compared to earlier governmentalities of climate-induced migration, the subjects and objects of governing are profoundly different under resilience. One prominent characteristic of this newer governmentality is empowerment. As Chandler has highlighted, the resilient subject is 'conceived only as an active agent, capable of achieving self-transformation' (Chandler 2012: 217). Making those vulnerable to climate change responsible for their own adaptation is a key strategy of governing climate-induced migration through resilience. Migration should not be avoided, but instead migrants are to become entrepreneurs who are actively encouraged to shape

their fate. As such, resilience aims to mobilize the vulnerable as agents of self-help. Climate-induced migration is thus no longer conceptualized as the 'forced' migration of passive victims, but as a conscious decision made by responsible subjects. This can be demonstrated by a quote from a pilot project by CARE International and the United Nations University, two major players in the field of climate-induced migration projects, which seeks to map the responses of households to decreasing rainfall:

The Where the Rain Falls study sheds light on the circumstances under which poor and vulnerable populations look to migration as a risk management strategy in response to threats to their livelihood and reveals the conditions that can facilitate or hinder their ability to make an informed, free choice to stay or to move. (Care International 2012)

Here, the decision to migrate in the face of destructive climate change is re-conceptualized as a 'free choice', an interpretation which is clearly in line with advanced liberal government. Risk is individualized and technologies of agency incite 'responsible' subjects who are capable of adapting and coping. The entrepreneurial subject is rendered responsible for its self-optimization and pursuing its interests in the global labour market (Barnett and Webber 2009). The labour market – not a state actor – is proposed as the facility capable of offering a new livelihood for those impacted by climate change. The World Bank even seeks to support their 'their entrepreneurial abilities and technical skills' (World Bank 2010: 130–31). This corresponds directly to the observation made by Evans and Reid (2013: 11-12) that 'the idea of social responsibility [is] replaced by a neoliberalized care of the self'. International organizations can finance pilot programs and feasibility studies, thereby offering guidance for those encouraged to help themselves. In this sense, the subjects of resilience in climate-induced migration discourse are clearly those affected by climate change. While the adaptive notion of resilience focuses on making people resilient by creating dams or providing new sorts of crops, the transformative variant demonstrated by the World Bank quote is about becoming resilient.

Holling (1973) and a large part of the literature talk about resilience in terms of the resilience of social or ecological systems. Throughout the discourse, though, it is individuals and households that are thought to become resilient through climate-induced migration. How do these two understandings come together? Flowing from the advanced liberal understanding of resilience dominant here, responsibility is decentralized towards the lowest possible level. However, it is not only the resilient subject that is supposed to become resilient. Through its decision to migrate, the subject has to make its community resilient. The subject-object of resilience in climate-induced migration assumes network-like properties. Resilience as such is closely related to the idea of network and connectivity (Kaufmann 2013). This is reflected in the image painted of the resilient household or community. For example, the World Bank promotes the preparation for contingencies by establishing radio networks among communities in danger (The World Bank 2010: 100). Moreover, the World Bank expects that 'the most common responses by individuals and communities is to intensify labour migration patterns' (Raleigh et al. 2008: iv), where only part of a household migrates for 'diversifying income streams' (ibd.). From this perspective, circular and temporary migration are important strategies for income diversification in times of drought or flood. A number of recent studies highlight the

role of remittances in building social resilience (Black et al. 2011: 449; Deshingkar 2012). Scheffran et al. (2012) also draw attention to the growing role of diasporas in financing adaptation to climate change by enabling those who stay behind to survive in endangered sites. Here, those migrating and those staying form a resilient network into which the subject becomes embedded. The responsible individual secures itself systemically. This is indeed a truly transformative understanding of resilience in the face of climate change.

Non-resilient types of climate-induced migration

However, not all types of climate-induced migration can be classified as acts of transformative resilience. Climate-induced migration may in fact increase the vulnerability of affected populations when the end point of their journey is a slum:

Vulnerability will be increased if migration occurs in unplanned ways, or migrants end up in areas of high environmental risk, such as low-lying urban areas in mega-deltas or slums in water-insecure expanding cities. (Foresight 2011: 67)

The Foresight Report clearly acknowledges that there are limits to the advanced liberal government of climate-induced migration, mostly because not everybody has the means to engage in timely migration, as 'migration (especially international migration) is selective by economic status' (Foresight 2011: 10). As a result, poor populations in particular may end up being 'trapped' (Foresight 2011: 10). The Asian Development Bank problematizes this as the threat of 'maladaptation':

[I]f migration is not carefully planned and assisted, there is a serious risk that it can turn into maladaptation, i.e. leave people more vulnerable to environmental changes. Therefore, any adaptation scheme or migration policy has to be planned carefully (Asian Development Bank 2012, 47).

This statement signifies the return of liberal biopower, which takes care of at-risk populations. The government is held responsible for the relocation and planned resettlement of affected populations. The vulnerable are to be contained and managed 'to produce a docile population that will not threaten the vital circulations of liberal order' (Grove 2013). The global system of nation states and ordered populations should not be disturbed by the consequences of climate-induced migration. Where it is too late for preventive measures, military interventions may be enabled to uphold public order after a climate-induced disaster. The use of force may appear legitimate when 'spontaneous' adaptation processes – such as uncontrolled mass migration – threaten to disrupt global circulation:

Whenever migration becomes large or rapid, or sensitive international boundaries are crossed, then geopolitical challenges may follow. For example, destination areas may face challenges relating to economic integration, social cohesion and increased tension/ conflict. (Foresight 2011: 15)

This implies that the vulnerable must be monitored because they are conceptualized as being permanently on the brink of becoming a danger to global circulation. Thus, sovereign power remains enabled in a regime of advanced liberal biopower. Even the Foresight Report, the frontrunner of resilience, resorts to measures such as a 'conflict early-warning system' because 'large-scale migrations in the future could contribute to regional and international security problems' (Foresight 2011: 199).

The political implications of governing climate change induced migration in the name of resilience

In the previous section, we saw how resilience captured the agenda of climate-induced migration. Although resilience now permeates the whole climate change discourse, we have argued that climate-induced migration exposes a particularly transformational understanding of resilience. Resilience is not only a means to re-adapt human-ecological systems to a new equilibrium, by providing new infrastructure, new livelihood models or diversifying sources of income. It also displays the ambition to radically reorganize communities and households as resilient networks in which migration and mobility, including remittances and support through diasporas, become the main sources of resilience. This has at least three important political implications, which we explore in this section.

First of all, resilience deprives subjects of their rights. The receiving regions of climate change induced migration – mostly in developing countries - are usually ill-prepared for the inflow of people which need to be integrated into social, economic and political systems. In the absence of a legal framework for climate change induced migration, cross-border migrants lack a legal status and are therefore highly vulnerable to exploitation and violence. While earlier academic and political reports on climate change and migration used the term 'climate refugee' and advocated granting refugee status to affected populations (for example Biermann and Boas 2010; Docherty and Giannini 2009), recent policy documents from international organizations obviously avoid the term 'refugee' and promote governing what is now called 'climate-induced migration' through resilience (Asian Development Bank 2012; Foresight 2011; Laczko and Aghazarm 2009; The World Bank 2010). Rather than emphasizing that agents possess an 'inalienable right', resilience 'promotes adaptability so that life may go on living despite the fact that elements of our living systems may be destroyed' (Evans and Reid 2013: 9). The resilience discourse couches loss and vulnerability in the language of progress and transformation. Resilience centers on 'sheer survivability' (Evans and Reid 2013: 9). Yet it covers this destruction, the loss and violence triggered by climate change, with an emphasis on 'new paths of developments' and the 'opportunities' offered by 'climate-smart' development.

Keeping in mind the basic definition of resilience as 'a measure of the ability of [...] systems to absorb changes and still persist' (Holling 1973: 17), this immediately begs the question: How much transformation can a system endure and still remain the same? Is a resilient remittances network that connects labour migrants in Australia with households trapped in Kiribati still the same island community it was before? And what about the relocation of entire nation states to a new territory, as planned by the Maldives? Is this still transformational resilience or something entirely new? How much choice is actually left for the supposedly free individual that migrates, when

migration is the only option that is left? Is the discourse of resilience in such a case not simply a euphemism for the loss and damage that occurs to vulnerable populations?

These questions are all the more important against the backdrop of international climate negotiations. In 2013, the UNFCCC COP 19 in Warsaw, Poland, was dominated by the issue of loss and damage, influenced by the tremendous destruction that the storm 'Hayan' had caused in the Philippines shortly before the conference. In an emotional and widely-applauded speech, Philippine ambassador Yeb Sano emphasized that

[w]e refuse, as a nation, to accept a future where super typhoons like Hayan become a fact of life. We refuse to accept that running away from storms, evacuating our families, suffering the devastation and misery, having to count our dead, become a way of life. We simply refuse to. [...] We can stop this madness. Right now. (Sano 2013)

Yeb Sano even pledged to fast during the COP until meaningful progress was made regarding 'the establishment of a loss and damage mechanism' and 'real ambition on stabilizing greenhouse gas concentrations' (ibd.) Without directly referring to it, this statement exposes what is at stake in the debate about climate-induced migration. While those countries affected by climate change demand compensation for the loss and damage caused by climate change, industrialized nations are more than reluctant to actually grant sufficient sums of money to compensate for the enormous losses. In this context, climate-induced migration appears as a discourse that completely sidesteps these issues. Under the banner of transformational resilience, the loss and damage caused by global warming is redefined as an opportunity for affected countries. Politics here means: the decision to migrate or not migrate; to live or to die. This is the only political question left in climate-induced migration under the banner of resilience.

Secondly, the discourse of resilience facilitates a shift of responsibility from the North to the South. It makes populations that will potentially be affected by the impacts of climate change responsible for securing themselves. In fact, most climate change induced migrants will be internally displaced, within the borders of their nation state. If they do cross a border, this is usually to enter another developing country. International migration to the industrialised countries requires significant resources which most climate change induced migrants lack. Therefore, unplanned cross-border migration is more of an issue between developing countries. However, such movement may disrupt global resources flows and is therefore subject to careful monitoring by industrialised countries. Affected populations are now reconceptualized as being capable of determining their own future. This tendency resonates with a general shift towards post-interventionism in global politics (Chandler 2012: 213). As a result, 'the West no longer has the responsibility to secure, to democratize or to develop the non-Western world' (Chandler 2012: 224). This is clearly expressed by the World Bank which in the context of climate change adaptation calls for 'helping people to help themselves' (World Bank 2010: 87). In climate-induced migration, the focus is thus no longer on actively assisting affected populations, but instead on mobilizing them to take care of themselves. This means that development assistance is now offered more for facilitative activities. Overall, this approach could lead to

lower levels of development assistance being transferred to the South, as climate-induced migration turns out to generate sufficient remittances to allow those staying at home to adapt to a changing climate.

Thirdly, governing climate-induced migration through resilience presupposes that climate change is an unavoidable reality and fact that needs to be lived with. The climate-induced migration of millions of people is rendered as a 'normal', rational and therefore acceptable response to changing environments, which are presented as beyond human control. As the World Bank puts it, '[m]igration will often be an effective response to climate change—and unfortunately the only response in some cases' (World Bank 2010: 130–31). In this perspective, climate change is no longer presented as a social problem that can still be tackled by significant emission reductions and lifestyle changes by residents in the major economies. Instead, climate change is naturalized and de-politicized. The political space for addressing the root causes of global warming is eliminated. McNamara and Gibson demonstrate how this dominant discursive construction silences demands often raised by small Pacific island states (and non-governmental organizations) that 'industrialized countries must act to contain and reduce greenhouse gases' (2009: 482). Of course, it has to be acknowledged that all reports cited in our analysis still advocate climate mitigation and conceptualize adaptation through migration as a complementary strategy (Black et al. 2011: 449). However, we can observe that the focus is shifting from mitigation to adaptation, and that all observers are aware of the lack of mitigation actions. Recognizing this leads to resignation and a sense of futility regarding the human ability to mitigate or prevent climate change.

Conclusion

Resilience has emerged as a new mode of rendering policy issues governable. In this paper, we discussed the case of climate-induced migration in order to reveal the practices and discourses upon which governing in the name of resilience is based. Drawing on the growing literature of governmentality studies, we suggested that resilience can be conceptualized as advanced liberal government based on governing through contingency. Resilience facilitates the adaptive emergence of life in response to ever-present shocks. We have shown that for the case of climate change induced migration, the rise of resilience has led to a discursive reversal. While early discourse presented 'climate refugees' as a pathology to be prevented, recent discourse treats 'climate-induced migration' as a rational strategy of adaptation to unavoidable levels of climate change. Compared to other areas of climate and environmental policy, climate-induced migration thus provides a particularly clear example of the transformational dimension of resilience.

We outlined three grounds for resisting the politics of resilience in the case of climate change induced migration. First, a governmentality of resilience couches loss and damage in the language of progress and transformation. It avoids all rights-based language and thereby excludes conceptual grounds from which a right to compensation or a right to mobility might be claimed. Second, the responsibility for resilience is placed on the potential victims of climate change impacts. This might in fact enable Western industrialized countries to withdraw their direct financial assistance to affected populations. Third, and most importantly, the strategy of resilience naturalizes climate change as an inevitable fate that people must endure.

On this basis, we argue that the greatest concern with the rise of resilience as a strategy of government is its tendency to eliminate the political dimension. Resilience is sold as a strategy of empowerment as it offers affected populations the 'free choice' of whether or not to migrate. However, resilience simultaneously denies them any choice about the reality of climate change itself, it hides the policy option of emission reductions, and robs people of the vision of a world in which they would be secure from the impacts of climate change. In the debate about climate-induced migration, the space of the political is reduced to the question of 'to stay or to go'; to live or to die. As Ambassador Sano of the Philippines argued, we must refuse to live dangerously. By refusing to accept dangerous levels of climate change as 'normal' and 'inevitable', the truly emancipatory power to change the world may be re-appropriated.

The best way to achieve this would be to avoid the terminology of climate-induced migration altogether. In fact, all three discourses on climate-induced migration (or climate refugees) are based on the implicit assumption that dangerous levels of climate change cannot be avoided. All three discourses map a future in which the populations of low-lying coastal areas have already lost their homes. Yet the history of the climate migrant/refugee still is entirely written in the 'future-conditional tense' (Baldwin 2012: 226). As McNamara and Gibson (2009) have rightly remarked, the discursive struggle is one about alternative geopolitical futures: one where the low-lying island states are still on the map and one where they are not. A different kind of problematization is needed that renders the presumed inevitability of dangerous levels of climate change contestable and questionable. A different future is still possible – a world of low carbon emissions and transformed lifestyles – even if it does not seem very likely given current emission trends. Climate mitigation and the right to claim adequate compensation for losses endured need to return to the top of the agenda.

References

- Adey P and Anderson B (2012) Anticipating Emergencies: Technologies of Preparedness and the Matter of Security. *Security Dialogue* 43(2): 99–117.
- Aradau C and van Munster R (2007) Governing Terrorism Through Risk: Taking Precautions, (Un)Knowing the Future. *European Journal of International Relations* 13(1): 89–115.
- Aradau C and van Munster R (2011) *Politics of Catastrophe: Genealogies of the Unknown*. London, New York: Routledge.
- Asian Development Bank (2012) *Addressing Climate Change and Migration in Asia and the Pacific*. Manila: ADB.
- Barnett J (2001) *The Meaning of Environmental Security: Ecological Politics and Policy in the New Security Era*. New York: Zed Books.
- Barnett J and Webber M (2009) *Accommodating Migration to Promote Adaptation to Climate Change*. Stockholm: Commission on Climate Change and Development.
- Biermann F and Boas I (2010) Preparing for a Warmer World. *Towards a Global Governance System to Protect Climate Refugees*. *Global Environmental Politics* 10(1): 60–88.
- Bigo D (2008) Globalized (in)Security: the Field and the Ban-Opticon. In Bigo D and Tsoukala A (ed.) *Terror, Insecurity and Liberty: Illiberal Practices of Liberal Regimes After 9/11*. London, New York: Routledge, 10-48.
- Black R, Bennett S R G, Thomas S M, Beddington J R (2011) Climate change: Migration as adaptation. *Nature* 478: 447-449.
- Bourbeau P (2013) Resiliencism: Premises and Promises in Securitisation Research. *Resilience* 1(1): 3–17.

- Care International (2012) *Where the Rain Falls: Advocacy*, available at <http://wheretherainfalls.org/the-study/> (accessed 14 August 2013).
- Chandler D (2012) Resilience and Human Security: the Post-Interventionist Paradigm. *Security Dialogue* 43(3): 213–229.
- Christian Aid (2009) *Human Tide. the Real Migration Crisis*. London: Christian Aid.
- Collier S J (2009) Topologies of Power. *Theory, Culture & Society* 26(6): 78–108.
- Collier S J and Lakoff A (2008) Distributed Preparedness: the Spatial Logic of Domestic Security in the United States. *Environment and Planning D* 26(1): 7–28.
- Conisbee M and Simms A (2003) *Environmental Refugees: The Case for Recognition*. London: New Economics Foundation.
- Corbin J and Strauss A (2008) *Basics of Qualitative Research. Techniques and Procedures for Developing Grounded Theory*. Los Angeles: Sage.
- Dalby S (2009) *Security and Environmental Change*. Cambridge: Polity Press.
- Dean M (2010) *Governmentality. Power and Rule in Modern Society*. 2nd ed. London, Thousand Oaks, New Delhi: SAGE.
- Deshingkar P (2012) Environmental Risk, Resilience and Migration: Implications for Natural Resource Management and Agriculture. *Environmental Research Letters* 7: 015603.
- Dillon M (2007a) Governing Terror: the State of Emergency of Biopolitical Emergence. *International Political Sociology* 1(1): 7–28.
- Dillon M (2007b) Governing Through Contingency: the Security of Biopolitical Governance. *Political Geography* 26(1): 41–47.
- Dillon M and Reid J (2009) *The Liberal Way of War: Killing to Make Life Live*. London, New York: Routledge.
- Dillon M and Lobo-Guerrero L (2008) Biopolitics of Security in the 21st Century: an Introduction. *Review of International Studies* 34(2): 265–292.
- Docherty B and Giannini T (2009) Confronting a Rising Tide: a Proposal for a Convention on Climate Change Refugees. *Harvard Environmental Law Review* 33: 349–403.
- Duffield M (2012) Challenging Environments: Danger, Resilience and the Aid Industry. *Security Dialogue* 43(5): 475–492.
- Duffield M (2011) Total War as Environmental Terror: Linking Liberalism, Resilience, and the Bunker. *South Atlantic Quarterly* 110(3): 757.
- Duffield M and Waddell N (2006) Securing Humans in a Dangerous World. *International Politics* 43(1): 1-23.
- El-Hinnawi E (1985) *Environmental Refugees*. Nairobi: UNEP.
- Environmental Justice Foundation (2008) *No Place Like Home*. London: EJF.
- Evans B and Reid J (2013) Dangerously Exposed: the Life and Death of the Resilient Subject. *Resilience* 1(1): 1-16.
- Ewald F (1991) Insurance and Risk. In Burchell G, Gordon C and Miller P (ed.) *The Foucault Effect: Studies in Governmentality*. University of Chicago Press, 197-210.
- Ewald F (2002) The Return of Descartes' Malicious Demon: an Outline of a Philosophy of Precaution. In Baker J and Simon J (ed.) *Embracing Risk: the Changing Culture of Insurance and Responsibility*, Chicago: Chicago University Press, 273-302.
- Field C B, Barros V, Stocker T F, Dahe Q, Dokken D, Ebi K, Mastrandrea M D, and Mach K J (2012) *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*. Cambridge: Cambridge University Press.
- Foresight (2011) *Migration and Global Environmental Change*. London: The Government Office for Science.
- Foucault M (2007) *Security, Territory, Population. Lectures at the Collège De France 1977–78*. New York: Picador.
- Foucault M (1978) *The History of Sexuality. An Introduction. Vol. I*. New York: Vintage.
- Grove K (2013) Biopolitics. In Death C (ed.) *Critical Environmental Politics*. London: Taylor & Francis, 22-30.
- Hartmann B (2010) Rethinking Climate Refugees and Climate Conflict: Rhetoric, Reality and the Politics of Policy Discourse. *Journal of International Development* 22 (2): 233-46.

- Holling C S (1973) Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics* 4: 1–23.
- Huysmans J (2006) *The Politics of Insecurity: Fear, Migration and Asylum in the EU*. London, New York: Routledge.
- IUCN and CEM (2010) *Building Resilience to Climate Change. Ecosystem-based Adaptation and Lessons From the Field*. Gland: IUCN.
- Jacobson J L (1988) *Environmental Refugees. a Yardstick of Habitability*. Washington: Worldwatch Institute.
- Jakobeit C and Methmann C (2012) 'Climate Refugees' as a Dawning Catastrophe? a Critique of the Dominant Quest for Numbers. In Scheffran J, Link P M and Schilling J (ed.) *Climate Change, Human Security and Violent Conflict. Challenges for Societal Stability*. Berlin, Heidelberg: Springer, 301-14.
- Joseph J (2013a) Resilience as Embedded Neoliberalism: a Governmentality Approach. *Resilience* 1(1): 38–52.
- Joseph J (2013b) Resilience in UK and French Security Strategy: an Anglo-Saxon Bias? *Politics* 33(4): 253-64.
- Kaufmann M (2013) Emergent Self-Organisation in Emergencies: Resilience Rationales in Interconnected Societies. *Resilience* 1(1): 53–68.
- Laczko F and Aghazarm C (2009) *Migration, Environment and Climate Change*. Geneva: International Organization for Migration.
- Lenton T M, Held H, Kriegler E, Hall J W, Lucht W, Rahmstorf S, and Schellnhuber H J (2008) Tipping Elements in the Earth's Climate System. *Proceedings of the National Academy of Sciences* 105(6): 1786–1793.
- Lundborg T and Vaughan-Williams N (2011) Resilience, Critical Infrastructure, and Molecular Security: the Excess of 'Life' in Biopolitics. *International Political Sociology* 5(4): 367–383.
- Manyena S B (2006) The Concept of Resilience Revisited. *Disasters* 30(4): 434–450.
- McNamara K E, and Gibson C (2009) 'We Do Not Want to Leave Our Land': Pacific Ambassadors at the United Nations Resist the Category of 'Climate Refugees'. *Geoforum* 40(3): 475–483.
- Methmann, C, and Oels A (2014) Vulnerability. In: Death C (ed.) *Critical Environmental Politics*. London: Routledge Intervention Series, 277-286.
- Methmann C and Rothe D (2012) Politics for the Day After Tomorrow: the Logic of Apocalypse in Global Climate Politics. *Security Dialogue* 43(4): 323–344.
- Miller P and Rose N S (2008) *Governing the Present*. Cambridge, Malden: Polity Press.
- Morrissey J (2009) *Environmental Change and Forced Migration. A State of the Art Review*. Oxford: Refugee Studies Centre.
- Myers N (1989) Environment and Security. *Foreign Policy* 74: 23–41.
- Myers N and Kent J (1995) *Environmental Exodus. An Emergent Crisis in the Global Arena*. Washington: Climate Institute.
- Neocleous M (2012) 'Don't Be Scared, Be Prepared' Trauma-Anxiety-Resilience. *Alternatives* 37(3): 188-198.
- O'Brien K, Leichenko R, Kelkar U, Venema H, Aandahl G, Tompkins H, Javed A, Bhadwal S, Barg S, and Nygaard L (2004) Mapping Vulnerability to Multiple Stressors: Climate Change and Globalization in India. *Global Environmental Change* 14: 303–313.
- Oels A (2005) Rendering climate change governable: From biopower to advanced liberal government? *Journal of Environmental Policy and Planning* 7 (3): 185-208.
- Oels A, and Carvalho A (2012) Wer hat Angst vor ‚Klimaflüchtlingen‘? Wie die mediale und politische Konstruktion des Klimawandels den politischen Handlungsspielraum strukturiert In: Irene Neverla und Mike S. Schäfer (eds) *Klimawandel in den Medien: Kommunikationswissenschaftliche Perspektiven*. Wiesbaden: VS-Verlag, 253-276.
- Oels, A (2013) Rendering Climate Change Governable by Risk: From probability to contingency. *GEOFORUM*, themed issue on Natures of Risk, 45 (March 2013): 17-29.
- O'Malley P (1992) Risk, Power and Crime Prevention. *Economy and Society* 21(3): 252–275.

- O'Malley P (2010) Resilient Subjects: Uncertainty, Warfare and Liberalism. *Economy and Society* 39(4): 488-509.
- Pelling M (2011) *Adaptation to Climate Change: From resilience to transformation*. London: Routledge.
- Peluso N L and Watts M (2001) *Violent Environments*. Ithaca, NY: Cornell University Press.
- Raleigh C, Jordan L and Saleyhan I (2008). *Assessing the Impact of Climate Change on Migration and Conflict*. Washington: World Bank.
- Renaud F, Dun O, Warner K, and Bogardi J (2011) A Decision Framework for Environmentally Induced Migration. *International Migration* 49(S1): 5–29.
- Rose N (1996a) The Death of the Social? Re-Figuring the Territory of Government. *Economy and Society* 25(3): 327–356.
- Rose N (1996b) Governing Advanced Liberal Democracies. In Barry A, Osborne T, and Rose N (ed.) *Foucault and Political Reason*. London: UCL Press, 37-64.
- Sano Y (2013) Typhoon Haiyan: we cannot afford to procrastinate on climate action, available at <http://www.theguardian.com/world/2013/nov/11/typhoon-haiyan-philippines-climate-change> (accessed June 27, 2014).
- Scheffran J, Marmer E and Snow P (2012) Migration as a contribution to resilience and innovation in climate adaptation: Social networks and co-development in Northwest Africa. *Applied Geography* 33: 119-127.
- Sennelart, M (2007) Course Context. In *Security, Territory, Population. Lectures at the Collège de France 1977-78*, edited by Michel Foucault, 369-401.
- Suhrke A (1994) Environmental Degradation and Population Flows. *Journal of International Affairs* 47(2): 473–496.
- Swyngedouw E (2010) Apocalypse Forever? Post-Political Populism and the Spectre of Climate Change. *Theory, Culture & Society* 27(2-3): 213–232.
- The World Bank (2010) *Development and Climate Change. World Development Report 2010*. Washington: World Bank.
- Thow A and de Blois M (2008) *Climate Change and Human Vulnerability. Mapping Emerging Trends and Risk Hotspots for Humanitarian Actors*. Bath: Maplecroft.
- Tierney K, Bevc C, and Kuligowski E (2006) Metaphors Matter: Disaster Myths, Media Frames, and Their Consequences in Hurricane Katrina. *The Annals of the American Academy of Political and Social Science* 604(1): 57–81.
- Torry W I (1979) Intelligence, Resilience and Change in Complex Social Systems: Famine Administration in India. *Mass Emergencies* 4(2): 71–85.
- Tuchman Mathews J (1989) Redefining Security. *Foreign Affairs* 68: 162–177.
- UNDP (1994) *New Dimensions of Human Security*. New York: UNDP.
- United Nations General Assembly (2009): *Climate change and its possible security implications. Report of the Secretary-General, A/64/350 (2009)*, New York.
- Walker J and Cooper M (2011) Genealogies of Resilience From Systems Ecology to the Political Economy of Crisis Adaptation. *Security Dialogue* 42(2): 143–160.
- WBGU (2007) *World in Transition. Climate Change as a Security Risk*. Berlin, Heidelberg: Springer.
- WRI (2008) *Roots of Resilience. Growing the Wealth of the Poor*. Washington: WRI. (For more examples, please refer to Chicago author-date style at <http://www.chicagomanualofstyle.org/>)