The London School of Economics and Political Science

Migration in a Warming World:

On the Responsibility and Obligations of States towards Climate Change Immigrants

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A thesis submitted to the Department of Government of the
London School of Economics for the degree of Doctor of Philosophy,
London, April 2017

Declaration

I certify that the thesis I have presented for examination for the MPhil/PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

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Abstract

People across the globe are on the move due to environmental disruption and degradation, causing them to travel and find their future in new locations. Climate change will increase the number of people seeking to escape environmental pressures. What should be the appropriate response to this increase of migrating people, driven away from their homes as a result of climate change effects? From the perspective of normative political philosophy, it is more precise to ask two interrelated questions: *what* are the obligations in the context of climate change migration and to *who* should assign them. Previous research in normative political philosophy has focused on the high-profile case of small island states that can be submerged by the rising levels of the oceans, overlooking the wider ways in which human mobility will be induced by climate change effects. The thesis, then, fills this gap in the literature and provides a nuanced account that combines insights from political philosophy and writing on climate change and immigration. My dissertation answers the two above-mentioned questions, dedicating the first part to the 'who' question and taking up the 'what' question in the second part. The overall argument shows that states creating hazardous climate change incur obligations towards those adversely affected by it, including those relocating across international borders. And these states ought to amend or supplement their immigration policy in a way that advances the capacity of vulnerable individuals to cope with climate change. In the first part of the thesis, I establish state responsibility for the adverse effects of climate change, primarily focusing on its relation with duties towards climate change adaptation. I work with a backward-looking principle of responsibility, responsibility for causing bad outcomes, and explore its application to the case of climate change in the face of some conceptual and empirical challenges. I further develop a notion of responsibility for creating risk that can capture the collective adverse outcome states bring about by emitting greenhouse gases. I explicate the moral significance of imposing risks on others and the obligations that it gives rise to. Building on this theoretical groundwork, the second part of the thesis dives into the complex nexus of climate change and human mobility. I focus on a particular pattern of immigration—international movement due to gradual environmental changes associated with climate change that significantly restrict people's life prospects. I defend a view that perceives such migratory scenarios as a way to cope with climate change, a form of adaptation. I argue that the obligations of states include providing admission to climate immigrants. However, they are part of a wider set of actions and policies to advance the adaptation capacity of all individuals vulnerable to climate change hazards: immigrants themselves, but also the immobile. This part of thesis shows that the adaptation duty of states is a complex balancing act between providing admission and supporting local adaptation. The last chapter elaborates on this challenge. Drawing on the research on climate immigration, I highlight the aspects of this movement that must be considered in a morally informed immigration policy. In addition, I put forward the possibility that states can allocate among themselves their obligations so some will do more in terms of admitting immigrants and some will do more in terms of supporting local adaptation.

Acknowledgments

Some people see academics as soloists; working alone to push forward the boundaries of human knowledge. This romantic image, however, is far from how it works and how it worked for me. Though sitting long nights by myself trying to type my ideas was fairly routine, from the start of my PhD and up to its completion I was privileged to get the best support, of any kind, one can wish for. So, there is nothing more natural and right to start the dissertation than to give thanks to those who made this research project possible.

I am grateful to Kai Spiekermann for his supervision and guidance during these last couple of years. Kai was a constant source of support, always patient and attentive, even when the ideas I presented to him were far from the standards of clarity and accuracy he preaches. In our meetings, Kai would always find the most constructive way to provide his feedback, making the harshest critique look simply like sound advice. More than once did I enter his office full of doubts regarding my work and came out encouraged and with renewed confident in my project. I would also like to express gratitude to my advisor Lea Ypi, who pushed me to rethink my arguments and improve them with her penetrative comments at crucial junctures of the thesis.

One of the privileges of doing a PhD in political philosophy at LSE is being part of POTY (the Political Theory Group) and presenting in its workshop each year. This is an extraordinary, though highly intense, experience that made my arguments (and myself!) stronger. Chandran Kukathas, Christian List, Leigh Jenco, Sarah Goff, Katrin Flikschuh, David Axelsen, Johan Olsthoom, and Anne Phillips—thank you for your time and feedback. A special thanks is owed to Laura Valentini for her thorough and well-structured feedback each time.

In London, it is sometimes feels that everyone is a traveller passing by for a period before they move on. It seems truest regarding PhD students, coming from across the globe and being placed next to each other in a medium size shared office space. Naturally, unique and wonderful friendships emerge, and they stimulate the mind and bring joy and comfort to the soul. I want to thank my student colleagues and friends—Carlo Argenton, David Jenkins, Mollie Gerver, Jakob Huber, Diana Popescu, and Alex Marcoci, Paola Romero, Anahi wiedenbrug, Kaveh Pourvand and Fergus Green—for all of the lunches, pints and talks. I would like to extend my gratitude to

Maud Gauthier-Chung and Marta Wojciechowska for their insightful comments on some of the chapters. And of course to thank my small community at the PhD room—Takuya Onada, Izabela Correa, Flavia Donadelli, Meor Alif and Anastasia Nosova—for being a second family in London.

Beyond LSE's walls, I am leading an ongoing conversation about my work (as well as on political philosophy, ethics and life more generally) with two of my best friends—Tomer Perry and Merav Kaddar. A conversation that started in our first year as undergraduate students will hopefully continue over our entire academic careers. I cherish every opportunity I had to discuss this work with them; they are the people I most love to disagree with. Lastly, I want to thank Yanit Geva for helping in solving some design issues with some of the illustrations I use in this work.

I was fortunate to have the support of generous institutions that allowed me to pursue a PhD at such a prestigious university and to live in such an expensive city. I am most grateful to the Karten Scholarship of the Anglo-Jewish Association; the Kenneth Lindsay Scholarship of the Anglo-Israel Association; the B'nai B'rith Leo Baeck Lodge Scholarship; The British Friends of the Hebrew University scholarship award and the London School of Economics and its Department of Government. I would like to extend my gratitude to Zebra Housing Association that gave me and my family a taste of living in central London; an experience of a life-time.

The work on the dissertation was a long journey, and not only in the metaphorical sense. It started with relocating to London from Israel, and ended with resettling back in Israel. At both ends, I experienced the disorientation and estrangement known so well to any immigrant. Then and now, I was with Ruty Geva, my wife and friend. I am a person who is deeply rooted in the country and city I grew up in, which I consider as my home. For more than ten years now, Ruty set root in my heart, and with her I realized that any place we lived in will be a home, our home. Her boundless encouragement, patient and love are the cornerstones on which this research project is built upon. I wish to conclude my acknowledgments with another special person in my life. Two and a half years ago we were blessed to have the most amazing addition to our family—Yonatan, our son. I dare to guess that the completion of the PhD would have come sooner if it wasn't for him. But everything about it (as almost anything else since his birth) would have been far less meaningful.

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List of Abbreviations

APP	Ability to Pay Principle
BPP	Beneficiary Pays Principle
BRIC	Brazil, Russia, India, and China
CBDR	Common But Different Responsibilities
COP	Conference of the Parties
EU	European Union
GHGs	Greenhouse Gases
INDCs	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
5AR WG I/II	Fifth Assessment report, Working Group I/II
SYR	Synthesis Report
SPM	Summary for Policy Makers
TS	Technical Summary
L&D	Loss and Damage
OECD	Organisation for Economic Cooperation and Development
PPP	Polluter Pays Principle
RS	Responsible State
SIDS	Small Island Development States
UN	United Nations
UNHCR	United Nations High Commissioner for Human Rights
UNFCCC	The United Nations Framework Convention on Climate Change
US	United States
WIM	The Warsaw International Mechanism

Introduction

Berlin, 1995. The first conference of the parties (COP) for the United Nations Framework Convention on Climate Change (UNFCC) is held. This is a cornerstone and the start of a long, on-going process of international negotiation as part of a collective global effort to combat climate change. Speaking of his country's vulnerability to climate change and depicting the divides and injustices it forces on the developed countries, Atiq Rahman of the Bangladesh Centre for Advanced Studies, says: "If climate change makes our country uninhabitable, we will march with our wet feet into your living rooms" (cited in Timmons and Parks 2007, 2). More than ten years later, ahead of COP 15 in Copenhagen, Abdul Muhith, Bangladesh's finance minister, reiterates similar concerns in calling wealthy countries to open their borders to millions of displaced people. Commenting on this, reporters from the Guardian newspaper write: "Tens of thousands of people in Bangladesh and other low-lying areas of Asia are leaving their communities as their homes and land become inundated. But this is the first time that a senior politician from a developing country has openly proposed that those countries considered responsible for climate change should take physical responsibility for the refugees created" (Grant, Randerson and Vidal 2009).

In the same news piece, there is an interview with Rajendra Pachauri, the chairman of the Intergovernmental Panel on Climate Change (IPCC).[1] His words echo the abovementioned statement:

> If you accept that those countries that have really not been responsible for causing the problem, and have a legitimate basis for help from the developed countries, then one form of help would certainly be facilitation of immigration from these countries to the developed world. […] If you had 30 or 40 million migrating to other parts of the world, that's a sizable problem for which we have to prepare. And if it requires changes to immigration laws and facilitating people settling down and working in the developed countries, then I suppose this will require legislative action in the developed world. (cited in: Grant, Randerson and Vidal 2009)

These statements inspire the normative philosophical inquiry presented here. Acknowledging the link between climate change and human mobility, I ask: *What kind of responsibility and what obligations do developed states have towards those relocating due to climate change effects?*

[1] The leading scientific committee assessing the existing scientific research on climate change.

The possibility of mass migration as a consequence of climate change burst into public awareness in recent years, and received wide-spread news coverage. Mobility due to climate change is on the agenda of a range of actors: political leaders in states that are vulnerable to climate change, activist groups, civil society organizations, research centres and academics specialising in migration or international law. In normative political philosophy, immigration induced by climate change has so far received little attention, with a few exceptions.[2] In this thesis, I wish to fill this gap in the literature.

Where, then, should a dissertation in political philosophy focusing on human mobility under climate change begin? I suggest starting with the words of Abdul Muhith and Rajendra Pachauri cited above. For this thesis, their proclamations are important as they reflect a crucial normative argument. The argument can be summarised as follows:

(i) The states causing climate change, predominantly by increasing the concentration of Greenhouses Gases (GHGs) in the atmosphere, are responsible for its adverse effects.

(ii) As a consequence of this responsibility, they incur obligations towards climate change migrants. These obligations include admitting and resettling those who relocate due to climate change effects.

I explore these propositions throughout the dissertation, which consists of two corresponding thematic parts. The first part (Chapters 1, 2, and most of 3) of the dissertation is dedicated to responsibility, where I develop a plausible account of the backward-looking responsibility of emitting states. The second part (the rest of Chapter 3, Chapters 4 and 5) focuses on the derivative obligations pertinent to international movement in the context of climate change. My work substantiates and gives normative grounding to claims demanding that developed states act on climate migration. With this normative inquiry, I wish to contribute to the on-going conversation on the international response to climate change's impact on human mobility. Firstly, to that in political philosophy, by knitting another thread into the complex tapestry of climate change, immigration, and global justice. Second, to the public discourse from which the claim I set to defend in fact emerged.

[2] Later in this introduction, I situate my work within the political philosophy literature and mention papers that do address the issue. A list of these papers can be found in footnote 9.

In this prelude, I set the scene for the rest of the dissertation. Here I present a synopsis of the thesis, and a brief commentary. In the sections ahead, alongside an overview of the content of the thesis, I explain its methodology and approach taken therein. In the first section, I situate my inquiry and argument within existing political philosophy literature, and spell out my contribution to the literature on climate change immigration. In the following section, I present my approach and the method I use for the analysis. I then dedicate a section to clarifying the assumptions I will work with, to point to a few topics I exclude from my discussion, and to clarify the terminology I will employ. The closing section provides an outline of the thesis, making the structure of the argument more transparent, drawing links between different parts, and emphasising the main contributions of this research project.

Climate change and immigration: a brief summary

"Like all inquiries, this one starts in the middle" (Raz 1998, 288). Though it is probably an abuse of Raz's words, taking this quote out of context imbues it with a general meaning that I sense is true for many research projects. Therefore, together with a road-map for the philosophical journey that this thesis represents, it is also instructive to provide readers with a prefatory explanation of how we got to its starting point. This section situates my argument within two main discussions in political philosophy: climate change justice and immigration ethics.[3] Both topics are relatively new within political philosophy literature. Despite this, the literature on both topics is growing fast, in terms of volume as well as scope, as scholars continuously bring new subject matters under normative scrutiny. Climate immigration is one of them.

Climate change

Some claim that work on climate change in political philosophy is one of the biggest challenges to normative theorizing of our time. It is not only a mammoth political challenge; it also confronts us with questions that stretch traditional ethical frames of thought (Gardiner 2006; Jamieson 2015). Today, those writing on climate change address diverse issues, ranging from internal topics such as geoengineering (Gardiner 2010b; Heyward 2014) to meta-discussions on 'how to do climate change justice'

[3] I use these two titles, though following David Miller (2016, Chapter 1: Introduction), I consider immigration to be at its core a topic of political philosophy and not merely applied ethics.

(Caney 2012, 2014; Mollendorf 2016). Yet the core of the literature is concerned with responsibility and how to distribute the duties involved in combating climate change. Philosophers discuss and argue about who should shoulder such obligations, what their content might be, and how to distribute them fairly. I shall not detail these debates here.[4] Instead, I will point out how my own argument is motivated and tied to a main concern of the climate justice literature.

At the centre of my inquiry is the question of responsibility and its derivative obligations. The reasons for which agents ought to act on climate change is debated in the literature. Here I adopt and defend a variant of a strong stand that holds responsible those agents that created the harms associated with climate change.[5] It is a responsibility-based argument. Responsibility is a loaded term, which I unpack, define more precisely, and develop in the first thematic part of the thesis. In a nutshell, the argument endorses the intuitive idea that agents can be held responsible for the bad outcomes they bring about.

Recently, Simon Caney (2014) has offered two perspectives for thinking about responsibility and obligations in the context of climate change; or more broadly about climate justice. From the potential victims' side, we can focus on how to avert or minimize the harmful consequences of climate change. Caney labels this perspective Harm Avoidance Justice. Alternatively, one can focus on the duty-bearers and ask what would be a fair distribution of the obligations and burdens associated with combating climate change. Caney calls this perspective Burden-Sharing Justice. Both perspectives are interconnected and can overlap, but are conceptually distinct and can come apart on some practical issues. My work focuses on settling the moral account related to climate change responsibility and obligations *cum* human mobility. As such, it takes the Burden-Sharing Justice perspective.

Immigration

It is customary to start with John Rawls as a point of reference for contemporary political philosophy debates. Indeed, Rawls mentions the topic of immigration and

[4] There is a long list of papers and books that undertake this task. For some overview, see the following collections and recent works: Caney forthcoming; Gardiner et al. 2010; Heyward and Roser 2016. For a few of the more influential works in the field: Caney 2005, Gardiner 2010a, Jamieson 2010; Neumayer 2000; Shue 1993; Vanderheiden 2009.

[5] For some papers using, emphasising, or defending a similar stand, see: McKinnon 2009; Meyer and Roser 2010; Neumayer 2010; Zellentin 2015b.

defends the right of states to regulate their borders in a 'realistic utopia' as part of his theory of global justice (Rawls 1999). However, it would be more appropriate to mention Michael Walzer here. One of the first issues Walzer engages in his book, *Spheres of Justice* (1983, Chapter 2), is the question of membership in a political community, the question of whom we stand in relations of distributive justice with. This question of membership concerns who is in and who is out, and therefore places immigration at the heart of contemporary normative political philosophy. Though Walzer's own view on the state's right to exclude non-members is not something all liberal philosophers agree on, it is often seen as the first contemporary philosophical defence of the position dubbed as 'closed borders'. Basically, this position argues that states have a prerogative right to decide their own admission and immigration policies. It did not take long for opposition to this position to emerge, most notably in the voice of Joseph Carens (1987), the best-known advocate of the individual right to international freedom of movement. Carens' work on immigration is multi-layered, but his own principled position questions not only the existing practice of border control but also, and most profoundly, the justification of any sort of restrictions on human movement across borders. As such, he is a pioneer and representative of what is often dubbed the 'open borders' position.

Though these early publications on immigration were published in the late 1980s, it took a few more years for immigration to really gain traction in contemporary political philosophy. Since 2000, scholarly interest in the topic has increased. To an extent, the literature is still divided into two opposing camps. On one side, there are those who justify the principled authority of states over their borders. On the other side are those who claim that our moral principles can only justify minimal constraints on international movement. Again, I will not go into the debate here—there are already many papers and book chapters dedicated to this task.[6] Instead, I will make a few preliminary remarks on the relation of my argument to this literature.[7]

[6] Here are a few I recommend: Fine 2013; Fine and Sangiovani 2014; Seglow 2005; Wellman 2015. For positions defending the state's discretionary control over its borders policy, see: Blake 2013a, 2014; Ferracioli 2012; Miller 2005, 2016; Pevnick 2011; Walzer 1983. For a few prominent and interesting works that question this working assumption, see: Abizadeh 2008; Carens, 1987, 2013; Fine 2010; Kukathas 2005, 2012; forthcoming; Shachar 2011. Also, see Christopher Heath Wellman and Phillip Cole's (2011), which is organized as a debate between the two opposing positions. For a new direction for the ethics of migration from Republicanism perspective, see Fine 2014.

[7] At the end of Chapter 4, I return to discuss the relation of my argument to the debates over immigration in the political philosophy literature.

I will argue from a position that defends the state's right to decide on its own border policy. I start with the assumption that there is a plausible justification for this internationally accepted norm and will examine what (if any) limitations it might face in terms of scope or power in the context of human mobility under climate change. Even among proponents of the state's right to exclude, no one argues that it is unassailable. For example, in the case of refugees, there is a broad agreement that states have a principled moral duty to provide asylum that can override its general admissions policy.[8] As will become clear later in this piece, I will not focus on the migratory movement of refugees. Nonetheless, I will follow the general idea that there are moral commitments that can push the boundaries of states, weaken their philosophical defence and the immigration policies it warrants. It is possible to think of my position on admission and immigration as a middle-ground stance. Though I start with those defending the right of states to decide their own border policies, by exploring the moral demands of climate change justice I take some steps in the direction of those questioning this right.

Climate change and immigration

Here I should say something about the political philosophy literature dedicated to climate change immigration as such. I provide a more nuanced discussion in the dissertation itself, but only in Chapter 4, which is a long way from here. And since this is a work on climate change immigration, it will help the reader to have a brief glance at the landscape, which will also provide a partial explanation for the delayed overview of the relevant literature.[9] Few political philosophers have written specifically on this topic. Derek Bell's 'Environmental Refugees: What rights? Which Duties?' (2004) was perhaps the first paper published. Even though papers dedicated to this subject-matter address the different moral challenges that human mobility under climate change presents, they predominantly focus on one pattern of movement: refugees. Though those forced out of their territories due to climate change effects are not considered refugees

[8] For example, two known proponents of the closed-borders view—David Miller (2016) and Michael Walzer (1983)—accept and defend this duty.

[9] Publications on climate change immigration include: Bell 2004; Bradley 2011; Byravan and Rajan 2006; 2010; de-Shalit 2011; Eckersley 2015; Hayward and Ödalen 2013; Johnson 2012; Kolers 2012; Lister 2014; Nawrotzki 2014; Nine 2010; Ödalen 2014; Penz 2010; Risse 2009; Vaha 2015; Wyman 2013; Zellentin 2010, 2015a. Two additional papers (Mayer 2012; Neuteleers 2011) make distinctions, provide terminology for different forms of movement, and suggest normative sources that can ground the duties of states.

according to international law, philosophers (as well as others) take such forms of displacement to be morally equivalent in the following sense: people cannot continue to live safely within the jurisdiction of a state and ought to receive a safe haven in another state. More specifically, political philosophers writing on climate change migration take as the exemplary case low-lying small island states in the Pacific Ocean, such as Tuvalu, which are expected to be submerged by the rising ocean under some future climate scenarios.

This is an understandable focus. Though there have been cases of communities forced to relocate from their native homelands, a climate exodus of entire national communities like this is unique and challenges international policies that require normative scrutiny. While those who write on the topic typically advance progressive proposals regarding admission policies, the discussion remains rather parochial. It captures a very limited range of what human mobility under climate change will be about. The projected impact of climate change on population movement is not restricted to refugee-like situations. The effect of climate immigration is expected to be wider and the moral account we put forward ought to match it. My thesis attempts to fill this gap in the political philosophy literature. As stated, it takes a specific position on climate change justice regarding the responsibility of states and their derivative obligations. I consider such obligations in tandem with the prerogative of states to decide on their own admission and immigration policies. My thesis is based on these two established discussions in political philosophy but it puts forward an original argument for the overlooked case of climate change immigration.

As it is situated within the nexus of climate change and immigration, my topic is also connected to wider positions on justice and global justice. Following another suggestion by Simon Caney (2014), there are two ways to think of climate change justice in relation to such broader theories and positions. One possibility is to conduct normative research on climate change in *isolation* from other broader areas of inquiry, namely global justice. Alternatively, it can be done in a way of *integration*, embedding the analysis and the argument in a comprehensive position on global justice. I have sympathy with the latter approach. Nonetheless, Alexa Zellentin (2015c) correctly points out that when it comes to such complex subject-matters some division of labour is sensible. A single-issue research project is still highly valuable as part of the endeavour to develop a comprehensive account of climate justice—one that should be

integrated into a broader standpoint on global justice. To an extent, my work contributes to this perspective, bringing the case of climate immigration closer to the general conversation on immigration and global justice in political philosophy.

I hope to have moved from simply situating my research project within the existing literature towards a presentation of my research approach, bearing in mind the existing political philosophy literature and the specific topic I shall explore. The next section is dedicated to methodological matters.

Approach and method

An introduction is a good place to reflect on exactly what this dissertation does and how it is done. First, this thesis is a work in political philosophy, or to be more precise, in normative analytical political philosophy. Ways of theorising in this tradition can broadly be described as follows: "[we] start from some fixed points about which we can be relatively confident (some accepted principles, on the one hand; some clear-cut intuitions on the other) and reason clearly and consistently from there" (Cripps 2013, 18–9).[10] I will say more about fixed points as part of my elaboration of the approach and method of this thesis. But before I start, some statement about what this research project is *not* will help to clarify its nature.

First, this is not a grand theory type of work. It is more akin to what Jules Coleman calls 'middle-level theory',[11] where "the theorist immerses herself in the practice itself and asks if it can be usefully organized in ways that reflect a commitment to one or more plausible principles. This approach seeks to identify the principles that are candidates and those aspects of the practice that reflect them" (1992, 8). I should note, however, that this thesis is not merely a conceptual analysis of some normative concepts pertinent to the issues of climate change and migration. A great deal of conceptual work is undertaken in this dissertation, but it is in the service of a normative argument about the responsibility and obligations of states. Second, this thesis is not a briefing for policy makers, where researchers explain an issue and make policy recommendations. It focuses on a specific issue and it is policy oriented, but at its core it is a piece of research in normative philosophy and not public policy.

[10] See also McDermott 2008.
[11] However, this is not strictly speaking a theory. It is a complex and lengthy argument. Nonetheless, Coleman's description captures the nature of the research project nicely.

I would thus say the thesis is a piece of *non-ideal*, *applied*, *practical,* and *informed* research in normative political philosophy. In this section, I unpack these labels and associate my work with some widely-acknowledged ways of doing political philosophy in this school of thought.

Non-ideal

Without taking sides in the debate on whether political philosophy should be about ideal theory or non-ideal theory, I simply state that this research project is of the non-ideal theory type.[12] A work in political philosophy can be classified as a non-ideal theory on different grounds.[13] In the case of this research project, it is first about taking some facts about the world as the starting point for normative philosophising. Second, the aim is not to design perfectly just political institutions; rather I make suggestions about what will make our world more just in the face of the challenge human mobility under climate change presents. There is a third facet to non-ideal theory: partial-compliance. I bracket this type of consideration in my work, but I will briefly address the matter here.

The argument I develop in this thesis does not neatly fall into the binary distinction of full or partial compliance with the demands of justice. First, the reality of climate change and the normative questions we face are in part the result of a failure on the part of agents to uphold their moral obligations. In an ideal world, we would not face the challenges and difficult decisions we have to tackle today. We would have changed our economies and societies so that the harms of climate change would be far less severe. So on a common-sense view, developing a normative argument for the *here and now* mean that we are already operating within circumstances inviting non-ideal theorising. Second, and more specifically, I acknowledge that we face the prospect of harmful anthropogenic climate change and ask about states' responsibility and obligations, considering that they have not acted in accordance with what we think (or what our best theories on climate justice say) their moral duties are. That said, these points are considerations I take on board in my argument and not an independent topic for

[12] Nothing in this self-description denies the viability and place of ideal-theory in the field of political philosophy. I have the impression that at this stage of the debate things are far more conciliatory than when it started, with many accepting the different roles each has to play (cf. Swift and White 2008, 59-60).

[13] For example: (1) full/partial compliance; (2) utopian/realistic; (3) end-state/transitional (Valentini 2012); or (1) full/partial compliance; (2) level of idealization; (3) fact sensitivity/insensitivity; (4) perfect justice/local improvements (Hamlin and Stemplowska 2012).

discussion. In other words, I do not address the main question typically asked about partial-compliance: What are the obligations of agents when others do not comply with their duties? Third, in the second thematic part of the dissertation the argument implicitly assumes full compliance. In Chapters 4 and 5, I explicate my view on the obligations states have towards climate change immigrants and how they can discharge them. In a way, I theorise as if states were morally motivated and willing to act according to the obligations I ascribe to them. Therefore, on the compliance front, at this stage of the dissertation, my work is closer to ideal theory.

Not writing on partial-compliance limits the scope of my work. Who exactly should 'take up the slack' might be a relevant question for my analysis, which can impact what or how much we should demand from states in the case of climate immigration. There are two main possible responses to agent's non-compliance (and to the question above).[14] The first is to leave unchanged the degree of obligations states have as identified on the idealised level of analysis; at this stage we assume that each and every agent will carry out these obligations in full. [15] The second is to shift some obligations onto the shoulders of other agents—that is, to say that other agents ought to 'take up the slack'.[16] I incline towards the second response. However, I do not have a fully developed defence for this view that can be applied to my argument. Moreover, I wish to remain ecumenical with respect to this issue. So, I leave the reader to decide for herself which response to non-compliance is warranted.

Now let us go back to the other aspects of non-ideal theory. I endorse a pragmatic approach regarding how idealized or realistic our normative work ought to be. Following Laura Valentini, I see the two as opposite poles of a continuum; and I thus think that "[t]he key to a successful theory would be to make sure that its factual input is in some sense 'appropriate' to the particular question it aims to answer" (Valentini 2012, 660).[17] I am interested in a specific real-world phenomenon and how we should address it within an existing institutional set-up. For this reason, my starting point and the closure of my thesis will not be too removed from the world we live in.

[14] Simon Caney (2016) recently identified *six* different possible responses in the case of climate change.
[15] A good example of this position can be found in David Miller's work; as a general position (2013, Chapter 9), or in particular in the case of climate change and the admission of refugees (2008a; 2016, Chapter 5).
[16] For an example of this position in climate justice, see: Hohl and Roser 2011. For an example of this position in the case of refugees, see: Owen 2016.
[17] More on the distinction and debates over fact-sensitive and fact-insensitive debate can be found in: Hamlin and Stemplowska 2012, 51; Valentini 2009, 334-7; Ypi 2012, Chapter 2.

Complementary to this position, I also think of this thesis as making some progress towards justice and not as setting up what would be perfectly just institutions concerning climate immigration.[18] In other words, my argument does not outline institutional arrangements that can guarantee perfect justice when it comes to the regulation of international movement in the face of a hazardous level of climate change.

That said, this work is not free from idealization. In the following sections, I explain which facts about the world I take as my starting points and how I move from them to more abstract moral principles and back. Here I want to respond to a potential worry regarding this more 'realistic' mode of normative theorising. The grievance goes something like this: this kind of non-ideal normative work, which tries to stay 'close to the ground' and in the real-world, runs the risk of being too biased towards the *status quo*, which the theorist herself typically wish to criticise.[19] Staying at the level of an interpretive analysis of existing institutions and practices may be futile, because it cannot supply the resources for criticising such institutions and for prescribing progressive solutions to current injustices. As an antidote to this pitfall, it is possible to include reflection on normative principles and concepts that help us take the necessary critical distance from 'the world as it is'. Insights from theorising performed at higher levels of abstraction should not be incorporated carelessly. The principles and concepts should be suitable to the subject under investigation. In the end, we aim to land back in the real world with our conclusions, and they should not be too alien to it. This is not a cop-out; it does not mean that we will land back in the same spot from which we took off, or at least we should aim not to do so. As David Miller writes on the need for principles of justice to speak to those that ought to follow them:

> This doesn't mean that the principles must be accepted immediately they are laid out. They may be unfamiliar, or they may be resisted simply because they impose sacrifices that many citizens are initially unwilling to make. Political philosophy should be in the business of changing political attitudes, of showing people what their convictions mean when applied consistently to political questions. (2008b, 47)

To sum up, by appealing to another high authority on the matter, my approach has an affinity with Rawlsian 'realistic utopia', the idea that "political philosophy […]

[18] I am not fully committed, however, to the all-encompassing view presented by Amartya Sen (2009, 15-8), which is associated with this approach. Sen suggests seeing normative philosophical work as a comparative project that analyses possible, more or less just alternatives. This view is opposed to the kind of normative theorising that designs the best institutions, which are, alas, far removed from our world. As for myself, I think we might need both ways of doing political philosophy and they may be interdependent (cf. Valentini 2012, 660-2).

[19] See in James 2005; Valentini 2012, 659-60; Ypi 2012, Chapter 2.

extends what are ordinarily thought to be the limits of practicable political possibility and, in so doing, reconciles us to our political and social condition" (1999, 11).[20]

Practical and applied

This type of non-ideal theory is undertaken in a manner that is both *practical* and *applied*. But let me state what I mean by *practical* and *applied*. In this thesis, I focus on specific practices and institutions in conjunction with an actual problem that requires normative analysis. The analysis is motivated by the challenges invoked by the problem at hand; it emanates from the relevant institutions and practices and sets them as the target of the argument's conclusions. This is the sense in which I take my normative research to be practical. It is an applied type of theorising in a more traditional sense. I apply theories, concepts, and arguments from moral and political philosophy to my analysis of human mobility under climate change. But this is not a straightforward top-down, one-way, applied work, as with arguments that start from a favourite theory of justice or the main contemporary contenders and test them against a given case.[21] The theoretical moves I make are not only from moral concepts or first principles to rules of regulation (to borrow some common terminology from the ideal and non-ideal literature). For example, in my work on responsibility, I identify challenges that lead me to revise and expand the scope of the conception I start with. This is all a bit abstract, so let me say a few more words on how I do what I claim to do.

The analysis is inspired by methods in political philosophy such as Ronald Dworkin's (1986, Chapter 2) interpretivism and Andrea Sangiovanni's (2008) fact-dependency approach. I start with the institutional set-up most relevant to climate change and immigration. My analysis does not extract the underlying normative principles from existing practices; rather I start with the existing internationally acknowledged norms that ground them. This means that instead of digging out the implicit organising or justifying principles of a practice, I simply collect the explicit norms from the surface. In my case, these norms are the goal of stabilizing the earth's climate and the principle of *Common But Differentiated Responsibility* of states (United Nations 1992). With respect to immigration, it is the principled authority of the state to regulate their borders as an expression of their sovereignty (Aleinikoff 2002, 15;

[20] Rawls' theory of international justice is a self-proclaimed ideal theory that starts with the world as it is. This is typically seen to be the way non-ideal theory proceeds (see James 2005, 282-6).
[21] For such work on climate immigration, see Bell 2004.

Bosniak 1991, 742-4). However, such international norms are open to interpretation, as their meaning and applications are not a fixed matter. Then, I move on to analyse these norms in light of the best normative principles, concepts, or theories suited to the task. This theoretical move goes beyond a descriptive analysis; it involves critical scrutiny that also takes a stand in current philosophical debates. In other words, the analysis is normative through and through. The next theoretical move is to reflect on the problem at hand using the conclusions of this analysis. In my case, this means exploring the implications of the argument for responsibility and obligations in the contexts of climate change and immigration. I shall discuss this process in more detail as I unfold the outline of the thesis.

To sum up, from the methodological point of view, I start by extrapolating the norms of relevant institutions and practices pertinent to climate change. This is a fairly 'superficial' analysis, as I start from the existing international acknowledged norms as they are.[22] I then move to an interpretive stage, in which I chose the conception of responsibility I will henceforth use. This is followed by an analysis of the chosen conception and the challenges of applying it to the case of climate change. To face these challenges, I engage in another round of theorising at a higher level of abstraction, discussing philosophical work that can meet these challenges in order to develop a defensible account of responsibility. This includes some development, namely extending the notion of responsibility to cover risks, and then exploring the repercussions of such an analysis for climate change. The outcome of this process is then brought to the field of immigration under climate change, where I explore what progressive demands could be made against states, even when we assume the existing international norm that gives states the right to decide their own admission policy.

Informed

This research project in political philosophy is also *informed* by the research of other disciplines. Some claim that political philosophers should also be 'social scientists' to the extent that they wish their conclusions to be applicable to individuals, institutions, or public policy *here* and *now* (Miller 2008b, 47; Swift and White 2008, 56-7). Scientific research can inform and be used in a normative analysis in different ways. To start with,

[22] For a recent defence of such 'superficial' methods in the context of climate justice, see: Moellendorf 2016.

"[s]ometimes reading social science, or engaging directly in empirical research of one's own, can change the focus for political theorists, bringing to their attention perspectives and insights that might otherwise go unseen and untheorized" (Swift and White 2008, 61). This is the case with the present work. My work is motivated by an unaddressed challenge in political philosophy—climate immigration—which emerges from an empirical study of environmental migration. But the topic of the investigation is not the only thing taken from scientific work performed outside political philosophy. Research undertaken in different fields of science can also point to limitations in the application of normative concepts and principles. We can perceive such limitations as challenges that normative theory has to face, some of which are taken up in the discussion I subsequently develop. For example, climate science suggests challenges to the conception of responsibility I employ, which brings me to revise and develop it.[23] On another front, the study of climate migration introduces many new considerations when it comes to the obligations states have and how such obligations should be carried out.

In short, research in other disciplines is used throughout the thesis for different purposes. It has a *motivational* role, in providing a problem worth investigating. It has a *developmental* role in pushing us to improve our normative tools. It has an *instructive* role, in raising important considerations for the application of the principles and conceptions we develop.

I also use research in other disciplines, mainly research into climate migration, as an argumentative device. For instance, I use testimonies, reports, and scientific evidence to engage the reader and to draw attention to the reality to which my analysis speaks. This is partly a rhetorical tool and partly an attempt to pay my respects to the actual problem, which I investigate in a fairly abstract manner. In addition, I construct some of my examples out of existing research. These examples are on a different level of abstraction. A more stylized example (Drylandia/Coastalia, in Chapter 4) is used in a similar way to intuition pumps or thought experiments in moral and political philosophy. They are a tool used to sharpen or test an intuition, a judgment, or the implication of a principle, assisting in making the claim put forward clearer. Last, I use empirical research and case studies explored in the literature for the relatively more mundane purpose of illustrating the relevance of my claims to the phenomenon to which it applies.

[23] The challenges are analysed in Chapter 1, revised in Chapter 2, and developed in Chapter 3.

Some additional clarifications

This section gathers together two separate topics. The first presents a few issues that I exclude from discussion. The second presents and explains some terms I employ in the dissertation. What binds them together is the need to clarify and clear away some points that otherwise might hinder the reading, making it unnecessarily painstaking.

Subjects left out

This dissertation attempts to cover a lot of ground, as it touches upon abstract concepts such as responsibility and risk as well as dealing with real-world challenges pertaining to climate change and human mobility. However, like any other work, there are many things it leaves out. There are a few topics that have a direct link to my argument, but I set them aside in order to focus on the core claim I wish to develop. It is not uncommon for a political theorist to simplify cases, to focus on the relevant element of a situation in order to establish an argument.[24] My bracketing of some issues or considerations, therefore, should not come as a surprise and is of course necessary to achieve a workable-sized territory to explore. Nonetheless, anyone familiar with the political philosophy literature with which I engage will notice this absence, so in anticipation of criticism I offer some explanations here.

Intergenerational justice. One main feature of climate change is the time-scale of the phenomenon. Changes in our climate will persist over decades and centuries. Human actions over the last few decades and those to come will determine the environment that future generations will live in. This is true for any big transformation and not only climate change, but the global scope and some irreversible consequences make this a prominent aspect of the subject matter and put the question of intergenerational justice at its core. This has not gone unnoticed by political philosophers, who identify intergenerational justice as one of the normative and theoretical challenges that come with climate change.[25]

[24] For example: "What this illustrates is that a sensible contractualism, like most other plausible views, will involve a holism about moral justification: in assessing one principle we must hold many other fixed. This does not mean that these other principles are beyond question, but that they are not being questioned at this moment" (Scanlon 1998, 214).

[25] A few notable examples are: Broome 2012, 59-68, Chapter 8; Caney 2009b, Gardiner 2006, 402-7; McKinnon 2012, mainly Chapter 4; Moellendorf 2014, mainly Chapter 4.

My argument is relevant to the prolonged effects of climate change, and I even present this as a challenge to the responsibility-based account I put forward. Nonetheless, I bracket intergenerational justice considerations in this research project. This is mainly for reasons of space and scope in relation to writing a PhD thesis. I think my argument could be compatible with one or more of the promising accounts of intergenerational justice out there. That said, a large part of my argument is relevant to justice claims regardless of any intergenerational considerations. Much of what I argue can relates to adaptation—the way we face the effects of climate change, prepare for them, and cope with them.[26] The expected adverse impact of climate change determines the way we prepare for it and protect against it *today*. A large part of adaptation, therefore, is an intra-generational issue. My conclusions on the obligations of states towards immigration are linked with adaptation. For that reason, my argument is not only relevant to what states may owe to victims of climate change in the far future, it is also about what states should start to do now with respect to the adaptation needed by those vulnerable to such future calamities.

The non-identity problem.[27] One of the thorniest theoretical challenges associated with future generations and justice is the 'non-identity problem'. This is a well-known concern in moral and political philosophy, mainly associated with the work of Derek Parfit (1984). In a nutshell, the problem (with respect to its application to climate change justice) is about the intractability of harming others when it comes to future persons. Assuming that our moral account is about adversely affecting others, making them worse off, it is not clear how to apply it to cases where the consequences stretch to the future and to unborn individuals.

The policies required to combat climate change will have a worldwide, pervasive effect on the lives of individuals. Such impact will change the interactions between individuals, including their intimate relations, and as a result the identity of those being brought to the world will be different than it would be in the absence of such policies. Therefore, whether or not we act on climate change results in two different sets of future persons. Presumably, life prospects are better in a world with a stable climate than one with many of the expected harmful effects of climate change. But a wretched life under extreme climate change is still better than no existence at all. And so, it can be argued

[26] A definition of 'adaptation', based on the Intergovernmental Panel on Climate Change (IPCC) report, will be provided in Chapter 1.
[27] For a short explanation (but more elaborate than this one), see Cripps (2013, Introduction). For a general discussion of the topic, see Roberts 2015.

that not acting on climate change cannot harm the set of population that will be born under this scenario, since if we do act, we will bring about a world with better living standards, but for *different* persons. Those brought into existence under the 'do nothing' scenario are not made worse-off, as doing otherwise will result in their not being born at all. And so, we are left with the awkward conclusion that we do not harm future persons by failing to combat climate change.

Since I bracket issues concerning intergenerational justice, the challenge of the non-identity problem is less of a concern for this work. Similarly to what I stated above on intergenerational justice, much of the original challenge fades away when the discussion turns to current adverse impacts in terms of the adaptation costs that existing persons are burdened with today. Nonetheless, intergenerational concerns are still relevant to my argument, and therefore the non-identity problem is as well. There are several solutions and escape routes in the literature, and I assume that either they are sufficient to resolve its implications for climate change justice or that more promising solutions can be provided.[28]

A few words on words

Like any research project in a narrow academic sub-field, I faced widespread use of a particular jargon. Readers of this work will not be strangers to the terminology I use throughout, but some words may require some preliminary remarks. Some of them will receive fuller treatment in the text itself, but since they play such an important role in the thesis it is worth briefly commenting on them here.

Responsibility. I will say much more on this concept and in Chapter 1 I provide a definition for the specific conception I will work with. In general, there are three usages of the term that are relevant for my argument: (1) responsibility as production—an agent produces an outcome (this usage is not in fact limited to agents); (2) the reason why an agent has to act in a certain way (has an obligation to do X); and (3) what moral judgments (like praise or blame) an agent's conduct deserves. To an extent, the three are

[28] Here are a few examples: one option is to accept that we can do wrong in an impersonal way; that is, we can act wrongly, even if we cannot say that a person was made worse-off through our actions. Another possibility is to insist that we can harm a person even if we do not make her worse-off; but this requires going beyond an intuitive understanding of harming. A third option is to deny that a person can have an interest in coming into existence *per-se*. This is a partial list; for more possible suggestions and further discussion, see: Cripps 2013, Introduction; Roberts 2015.

connected and my argument will touch upon all of them, but with special emphasis on (2).

Obligations. 'Obligation' is often used interchangeably with 'duty'. To an extent, I follow this convention in the text. However, obligation is one of the main terms I use in my work. I do not have a theoretically deep account that distinguishes between duty and obligation, but for pragmatic reasons, in this thesis, I will use them to express different things. I reserve use of the word 'duty' or 'duties' for general types of climate justice duties: duties of mitigation, adaptation, or compensation (or Loss and Damages). I reserve the word 'obligation' for the more specific actions that fall under a specific duty. For example, curbing GHGs emissions and technology transfer are obligations associated with mitigation duty. And more pertinent to my argument: the obligation to admit immigrants will be part of the adaptation duties state have. A duty here is either an umbrella term for a set of actions (obligations), or a general moral reason an agent has to act in a specific area (for example, adaptation), while obligations specify what the agent should do in a certain context (transfer funds to a global adaptation fund, for instance).

Climate migration. I will define the term more specifically and briefly review its short history in Chapter 4. But there is some way to go until then, and since I use it in the chapters preceding the discussion in Chapter 4, I here give a capacious working definition, to be narrowed down later. *Climate migration* is:

> [h]uman […] movement over a significant distance and duration […] where environmental risks or environmental change plays a significant role in influencing the migration decision and destination. Migration may involve distinct categories such as direct, involuntary, and temporary displacement due to weather-related disasters; voluntary relocation as settlements and economies become less viable; or planned resettlement encouraged by government actions or incentives. (IPCC Glossary)[29]

I also use the following conventional terminological distinctions: I will mostly use *migration* as the general term for the broad phenomenon, *im*migration for emphasising the relocation into a different country, and in some places, *e*migration to emphasise outwards movement from a location.

[29] This was originally a definition of *environmental migration*, which is wider in scope and includes drivers of movement that have nothing to do with climate change (for example, displacement due to an earthquake). Nonetheless, it still holds as a definition for the narrower environmental effects associated with climate change.

Abbreviations. I use some abbreviations, most of which are widely used acronyms (for example, GHGs, IPCC, UN). There is one acronym I introduce for the purpose of this work, to avoid long titles. The term RSs will stand for Responsible States; a term I introduce and explain at the end of Chapter 2. A list of abbreviations can be found after the Contents to help the reader when needed. In this list the reader can also find a specific abbreviations I devised for citing from the Intergovernmental Panel on Climate Change (IPCC) assessment report. The IPCC report is a lengthy document consisting of different parts and chapters, a product of the collaborated effort of many researchers. I wanted to explicitly show that I rely on this document, as it is the main point of reference for academics, politicians, and other political actors. To orient the reader in this immense document, I include reference to the specific parts I used, presented in an abbreviated form in order to condense all the information into a manageable size for in-text references.

Thesis outline

This thesis explores the nexus of climate change and human mobility and establishes the responsibility and obligations of states in this context. However, I do not start with climate change immigration. Rather, I begin with climate change and responsibility, then move to discuss a sub-set of the obligations such responsibility entails, and only later apply this to immigration. In other words, there is a detour through discussions on climate change justice and responsibility before I investigate the more specific issue the dissertation sets out to tackle. Though it comes in later parts of the dissertation, the analysis is designed and structured in the service of its main topic of inquiry: the obligations of states towards climate migration. In this outline, I unfold the movement from responsibility for climate change to obligations towards climate immigrants and how these obligations should be dealt with. The outline provides readers with a map of the thesis, making navigation easier. In addition, the following exposition of the structure of my argument sheds light on its underlying rationale.

Part I: Climate change, responsibility and obligations

The first three chapters set the grounds for my discussion of moral obligations towards climate immigrants, by working out an account of responsibility and its derivative obligations.

Chapter 1 starts with some preliminaries. First, I explain the choice of states as the unit of analysis: the agents I wish to hold responsible for climate change effects. Second, I present and interpret existing international norms regarding climate change: the Common But Differentiated Responsibilities (CBDR) and the duties of mitigation, adaptation, and loss and damages (L&D).[30] My suggested interpretation of the CBDR emphasises historical or backwards-looking responsibility and I tie it to a widely used principle in the context of climate change: the Polluter Pays Principle (PPP). From this initial interpretive stage, I move to analyse the concept of responsibility. I draw on David Miller's notion of *outcome responsibility*, explain how it differs from adjacent conceptions (causal, moral, and legal responsibility), describe its relation to corrective justice, and present the conditions for its application (the ability to foresee and avoid the outcome).

After setting down these theoretical foundations, I return to climate change and analyse challenges to the notion of responsibility I endorse. The concept of responsibility for bad outcomes requires some underlying causal account. I focus on the different difficulties faced in establishing the relevant causality (which I discuss later in the thesis). In brief, global warming is something all states bring about together, which will be discussed in Chapter 2 under the title 'shared responsibility'. By increasing the temperature of the earth, states mostly generate a higher risk of adverse environmental effects. Therefore, in Chapter 3, I develop the conception of responsibility for risk. An additional issue is the multi-causality of migration: the fact that there are different interrelated drivers that induce human movement. I explain in the same chapter why this is less of a concern for the type of normative investigation I engage with, and the direction my argument takes from Chapter 4 onwards helps to dissolve it further.

The contribution of Chapter 1 is predominantly internal to the thesis' argument. It provides us with a few cornerstones of my argument. I explain my choice of the state as

[30] A short definition of these terms is included in the first chapter. For now, let us say that *mitigation* is about avoiding the actions (or processes) that bring about climate change; *adaptation* is about preventing the adverse impacts of climate change; and *L&D* is about compensating those adversely affected by climate change.

the relevant agent as well as the notion of responsibility I advance and its relation to existing international norms. The analysis of the underlying causal account of climate immigration delineates the challenges defining much of this research project.

Chapter 2 starts by going deeper into one of the challenges identified in Chapter 1. I introduce the term 'shared responsibility' to account for the responsibility of each state for the collective outcome, climate change, they bring about by emitting GHGs. There are many theoretical pitfalls in situations where many agents are held responsible for the same outcome. In addressing them, I appeal once more to abstract theoretical analysis. I interpret existing theoretical work and use it to overcome difficulties for responsibility attribution in cases of collective outcomes—when numerous agents bring about an outcome together.[31] I argue for a differentiated responsibility attribution based on the contribution each state makes to the collective bad outcome. I then apply the two conditions for holding states responsible defined in Chapter 1: the ability to foresee the outcome of your actions and the ability to act otherwise. I maintain that to an extent they both hold in the case of responsibility for climate change's adverse impact.

These two sections—on shared responsibility and on the conditions of responsibility—discuss the application of responsibility to the case of climate change. However, the mode of operation in each section is quite different. When analysing the shared responsibility of states for hazardous climate change, I move back and forth from the level of application to the level of theory. With this back-and-forth movement, I explain the challenges of responsibility attribution as well as of finding ways to overcome them. When testing whether the conditions for responsibility attribution are met, the discussion is more of a traditional top-down movement from the theory to an analysis of the case study. In Chapter 2, I emphasise the common interest of the different parts—identifying the responsible states—by returning to a particular theme. I present the different possible claims a state can raise in order to exempt itself from responsibility and reply to each attempt. While I generally reject the claims for exemption discussed in the section on shared responsibility, I partially accept the claims for exemption I present in the section on the conditions for responsibility attribution. As a result, we are left with some limitation of scope for my responsibility-based account. The conception of responsibility I employ cannot cover all the adverse impacts climate

[31] Often in the moral and political philosophy literature, such cases are titled 'collective harms' or 'many-hands' problems.

change will bring about, and therefore should be supplemented with other normative sources that can fill this gap.

The third section of Chapter 2 makes the first move from responsibility to obligations. It also starts narrowing down the scope of my analysis, focusing on the duty of adaptation, the focal point of my argument. There I add another normative assumption and engage in some more conceptual distinctions. I assume that each state has duties to its own members, which include protecting and preparing for the adverse impact of climate change. In other words, each state will firstly carry out its adaptation duties in its own jurisdiction. Then, I distinguish between the following cases. First, when a state faces more adaptation needs than it has adaptation duties. Second, when a state should shoulder greater adaptation duties than the adaptation needs it faces. States of the second kind should assist in filling the deficit of adaptation needs for states of the first kind. In other words, states of the second kind have global duties of adaptation; they have duties to the adaptation needs of vulnerable individuals that are not members of their own society. Here, this group of states will be known as the Responsible States: states that have relevant obligation towards climate immigrants.

This analysis aids us in addressing a further challenge that emerges from my focus on adaptation. Recent and expected pattern of GHGs emissions suggests that, on my account, fast growing developing states will be responsible for the adverse impacts of climate change, and hence should be burdened with a great deal of global adaptation duties. This seems unfair to some. I represent this concern as another variant of the claim for exemption from responsibility and accept it. However, based on the theoretical analysis described above, I show why my argument does not necessarily lead us to overburdening such developing states.

Chapter 2 depicts the responsible agents. First, it shows how we can infer each state's level of responsibility based on its contribution to climate change. Second, it studies the scope of such responsibility by testing the conditions for holding agent's to be outcome responsible. Third, it identifies the group of states that ought to bear global duties of adaptation. Together, the chapter answers the question: Who are the main states that ought to shoulder the obligations pertinent to climate migration? In addition, together with Chapter 1, it brings forth two important components of my argument. First, as those bringing about the impact of climate change, responsible states incur a special moral obligation towards those adversely affected by them, including those

compelled to relocate under the threat of climate change effects. They owe them some form of reparation. Second, the obligations of responsible states are not limited to acute deprivations or some fundamental human rights violations that every capable agent should attempt to remedy. Lesser, but not trivial, adverse impacts that responsible states have brought upon others can ground their obligation of redress. These two components are relevant to the pattern of migration I focus on here. Such migratory scenarios do not have to emerge from humanitarian catastrophes, but can still generate relevant obligations in the states that have contributed to the underlying reason for such movement.

Chapter 3 explores an extension of the notion of responsibility I work with in this thesis. By emitting GHGs, states do not cause harm directly; they increase the risk of harm. It will be a long time before such risks materialise into actual harm and it will be difficult to tackle such harms to the emitting actions that triggered them. Therefore, it is tricky to assign responsibility to states for the harmful effects of climate change. To address this challenge, I suggest treating risk itself as an outcome states bring about and can be held responsible for. I then develop an account of responsibility for creating risk, explore its derivative obligations, and apply it to the case of climate change. As the first step of this theoretical development, I discuss the moral significance of imposing a risk on others. I show that risk is morally bad because it can be a form of harm by itself as well as a form of wrongful treatment. Risk as a harm (risk-harm) imposes the costs of avoiding and protecting against it. Risk can also inflict psychological suffering, but I put this point aside. Risk as a wrong way of treating others (risk-wrong) may reflect a failure to respect the moral status of others. Some actions that expose individuals to higher levels of risk take advantage of their vulnerable position for the benefit of the agent producing the risk. This is true for the emissions of the responsible states and therefore they are also involved in this form of wrongdoing.

I associate three types of obligations of redress with responsibility for risk imposition. (i) The obligation to reimburse the cost the risk creates to those exposed to it. (ii) The obligation to restore those subjected to the risk to their prior situation. (iii) Finally, the obligation to repair relations between those who create the risk and those subjected to it. These are conceptual distinctions and in many cases, climate change included, a responsible agent incurs a mixture of the three. From this more conceptual

level of analysis, I move to discuss the content of these obligations in the context of climate change adaptation.

Chapter 3 completes the conceptual move from responsibility to obligations. The connection between responsibility for climate change effects and adaptation duties is specified through my conception of responsibility for a dangerous climate change. The first innovative step is taken on a theoretical level, explicating the morally bad outcomes associated with creating risk and the obligations those who bring them about incur. The second step applies this argument to climate change adaptation. These steps in part make up the original contribution of this thesis to the political philosophy literature. I offer the first account of responsibility for creating risk, which in turn leads us to a new outlook on the harms and wrongs of climate change. The chapter concludes the first part of the dissertation on responsibility and obligations and prepares the theoretical ground for the normative analysis of the following part, which is dedicated to climate change migration.

Part II: Obligations towards climate change immigrants

Chapter 4 begins with a description of the phenomenon I explore. I start with terminology and categorisation, defining different types of human mobility under climate change, explaining and justifying my focus on one of them: Climate-induced migration. *Climate-induced migration* is the movement of individuals or communities from their regions, due to gradual environmental changes (associated with climate change) that, coupled with other factors, significantly restrict their life prospects where they reside. I distinguish this from more extreme displacement scenarios that we may see as refugee-like cases. I show in this part of the thesis how current literature on this topic tends to focus on more extreme migratory scenarios. The argument developed in this thesis fills this gap in the literature.

After explaining what climate-induced migration is, I discuss how we should perceive it, and the obligations states have to redress the adverse impacts of the dangerous climate they create. In this context, we need to ask if immigration is a way of redressing the risks of climate change, or if it is one of the bad consequences of higher exposure to climate change risks? We can express this question in the following way: Is migration a failure to adapt to climate change, or a successful adaptation strategy? The migration–adaptation nexus is at the centre of the scholarly work on climate migration,

which in recent years has emphasised the positive role immigration plays in adaptation. Drawing on insights from such studies, I argue that we should perceive climate migration in light of the overall duties states have when it comes to adaptation. To illustrate the merits of my suggested view, which I call 'Migration-for-Adaptation', I explore two opposing views. The first takes migration to be a failure to adapt to climate change (Migration-as-Maladaptation); the second considers migration as a highly successful way of adapting (Migration-as-Adaptation). From the shortcoming of these two views, I construct a more nuanced account that accommodates the advantages of each view as well as recognises the pitfalls they warn us about. Migration-for-Adaptation, then, is a view that highlights the positive contribution relocation can make to adaptation, both to the way immigrants adapt as well as to vulnerable individuals from their sending society.[32] At the same time, this view also acknowledges that moving away from home has some significant negative effects, especially when it is not an entirely voluntary decision. In short, it does not ignore the considerable loss involved in relocating to another place in an attempt to avoid the worst consequences of climate change.

With this perspective on climate migration in hand, I move to discuss the obligations of redress presented in the previous chapter. I focus on international movement and work under the assumption that states have a principled justification for deciding who they let into their territories. I argue that admission can be a good way to carry out the obligation to restore safe options to potential climate immigrants. By making entrance possible for immigrants, the state can reduce the level of climate risk immigrants are exposed to in their country of origin. In addition, the remittances climate immigrants send can improve the capacity to cope with climate change hazards in their sending societies. But relocation cannot fully restore the situation *ex-ante*, because such a form of adaptation takes immigrants miles away from home and away from their former lives. Therefore, immigration policies should also compensate such unavoidable loss. I suggest states can redress this kind of loss by offering *a good quality immigration package*. States should offer access to the full range of the socio-economic advantages in their societies or tailor their policies to fit the specific needs of climate immigrants.

[32] In the literature on migration it is common to refer to migrants' place of origin as their 'sending country/ state/society. The International Organization for Migration (IOM) Glossary (2004) defines 'sending country' as: "A country from which people leave to settle abroad permanently or temporarily." Despite the active tone of the term, it does not mean that the society or state of origin must have an active role in the departure of people.

Providing immigrants with opportunities, beyond the required minimum set by the obligation to restore their prior conditions, may show that states try to make amends for the wrongful way they have treated those they put under climate risk.

In summary, Chapter 4 offers the first account in political philosophy literature that focuses on this pattern of immigration. The more general obligations in the context of risk and climate adaptation discussed in the previous chapter are here filled with more specific content pertinent to immigration. The chapter presents and justifies my focus on a specific pattern of movement: Climate-induced migration. I also explain in this chapter how such migratory scenarios should be understood as one way of adapting to climate change. By moving, individuals not only cope with the threat of climate-change effects, they also support the local adaptation efforts of sending societies. The chapter provides a nuanced view on human mobility under climate change and the relevant obligations of responsible states. It suggests that admission is part of how responsible states can and should carry out their obligations. At the same time, the discussion suggests that admission and immigration policies must be part of a broader agenda that aims at advancing the prospect of adaptation for immigrants as well as for those who stay put.

Chapter 5 takes off from the last issue raised in Chapter 4, namely how to balance the complex duties of adaptation that consist in admitting climate immigrants and supporting local adaptation in vulnerable locations. More broadly, the chapter deals with how states should carry out their obligations in the context of climate immigration and adaptation. I first present what aspects of climate migration each state should include in its internal deliberation regarding how to balance these two components of its duty. I then discuss how states may balance these two components together with other states.

Drawing on insights from research into climate and environmental migration, I highlight several considerations for an immigration policy that adopts the migration-for-adaptation view I suggest. I explain why the precise identification of newcomers as *bona fide* climate immigrants may not always be necessary, as the overall positive impact immigration can have on the ability to adapt to climate change is what should guide the state's policy-making. I claim that to secure such benign impact, states may facilitate the flow of remittances to the sending society. In addition, they should be wary of the negative effects out-movement may have on the adaptation capacity of sending

societies. I then move on to discuss how states can carry out their obligations by cooperating and agreeing that one state will do more in terms of admission and another will do more in terms of supporting local adaptation in vulnerable locations. I frame this as a trade of obligations, where states exchange obligations pertinent to admission against obligations related to local adaptation. Allowing states to fulfil their obligations in this differentiated fashion has, in principle, the benefit of more efficient allocation; each state can do more of the actions that fit better their capacities and circumstances. But this external balance between admission and local adaptation is not free of complications. Introducing market-like mechanisms to areas that seem to be governed by a different rationale can raise some moral concerns, for example. I explore such worries as raised by political philosophers, contextualised to my case study. From this I construct some considerations and qualifications for exchanging admission and local adaptation obligations.

In this chapter, I also examine a further way in which responsible states can discharge their obligations towards climate immigrants outside of their own territories. The discussion on obligation-trading focused on exchange among responsible states. At the end of the chapter I extend this focus. I discuss the plausible scenario of the movement of climate immigrants across the borders of states that are not responsible states. I argue that responsible states can discharge some of their obligations by supporting the resettlement of climate immigrants in states that do not have any obligation to admit climate immigrants. My analysis shows that there are some reasons to consider such arrangement morally desirable, but also enough reasons to be sceptical. As a normative guideline for policy we should in many circumstances advise against it. It can lead to unfair burdens for states that are already struggling to support their own public. Moreover, it is highly likely that such states can offer weaker protection and fewer opportunities to climate immigrants, that is, less than immigrants deserve from their destination states.

Chapter 5 completes my exploration of the two leading questions of my research project. It focuses on *who* should act on climate change migration and *what* form this action should take. In some sense, the discussion in this chapter brings us back to the ‘who’ question that I started with. I again discuss which states should take action. But now, after specifying the relevant obligations, I do not explain why states incur them; rather, I analyse modes of putting them into action. Read this way, the chapter is a step

towards applying the conclusions of my normative analysis. The chapter establishes what I suggest calling a framework for policy-making. The conclusions I put forward are not policy recommendations, but rather a set of considerations that should guide policymaking efforts in the area of climate change mobility. It does not account for the necessary details that each context must incorporate, and nor does it include all the trade-offs that will have to be made. Nonetheless, when we move from the level of the general argument to the level of implementation, such a framework is a useful and important tool for normatively informed policy-making.

A few last words before I end the introduction. The thesis starts off with claims emerging from the political discourse around immigration and climate change. Across many pages, it develops a plausible account that substantiates the claim that developed states should do more for those on the move because of climate change. In the conclusion, I return to these academic and political discourses, and relate my analysis to current trends and political developments. The argument I unfold in this thesis fits the claims and suggestions of many political and civil society actors as well as migration experts. What this thesis adds is a robust normative argument regarding who the responsible states are and the nature and scope of their obligations. It also highlights and explicates the moral significance of climate migration characteristics found in other research disciplines. The thesis, then, contributes first to the political philosophy literature by introducing a new argument on obligations towards climate immigrants—an argument that should interest both those who primarily focus on climate change justice and those who primarily write on immigration (and of course the small group of those writing at the intersection). But the argument should also be of interest to non-philosophers—migration scholars, political activists, and policy-makers—engaged with the issue.

Part I:

Climate Change, Responsibility and Obligations

1. Climate Change, Human Mobility, and the Challenge of Responsibility

> *The emerging risks and vulnerabilities associated with climate change […are] a consequence of human actions and choices. […] When people in an American city turn on the airconditioning or people in Europe drive their cars, their actions have consequences. Those consequences link them to rural communities in Bangladesh, farmers in Ethiopia and slum dwellers in Haiti. With these human connections come moral responsibilities*
>
> — United Nations Development Programme (2007, 3)

> *The ascription of causal responsibility for an outcome represents […] the conclusion of a moral argument, not the premise of one.*
>
> — Goodin (1985, 126)

1.1 Introduction

In 2011 another drought struck Gambia, causing massive crop failure. Such devastation did not spare Karamo Krubally's family, a small rice and groundnut farmer.

> Hunger started creeping into my family like an eagle scavenging for a carcass. […] Because of the drought, we had to cut down our daily food intake from three times a day to two times a day and we had to eat smaller portions. My health deteriorated and I was most of the time feeling dizzy when standing. […] The poor rainfall of that year had also affected the natural vegetation around the village where we graze our livestock. Almost all the grass was dry, and finding drinking water for the livestock was a challenge, as all the ponds around our farms that served as drinking points for the livestock dried out. (cited in Warner et al. 2012, 49)

The hardship caused by the drought led many to search for new sources of livelihood, away from their lands.

In recent years, 22.5 million is the annual average number of people displaced due to climate or weather-related disasters (Internal Displacement Monitoring Centre 2015, 19). The 2011 drought in the Sahel region in Africa, for example, led to a food shortage affecting 11 million people. Hindu Oumarou Ibrahim from Chad describes this grave reality: "Migration has now become an inevitable method of adaptation for us. […] As a means of survival for us and our animals, we are forced to continuously migrate despite all the risks involved" (In Randall, Salsbury and White 2014). In the last century, it is estimated that droughts across the globe affected around 1.8 billion people, resulting in approximately 12 million deaths. Droughts impact the livelihood of agrarian communities and shape migration patterns; they increase and change established habits of movements as people struggle to support their families (McLeman 2014, 146, 159-

63). Changes in the surrounding environment have always been a cause for humans to move from one location to another. Our livelihood and living conditions are sensitive to environmental disruption and degradation. People across the globe are on the move due to such stressors, having to travel and find their futures in new locations. Climate change will make this migratory reality more widespread (IPCC 5AR WGII, 12.4.1.3).

What is the appropriate response to this increase in migration, as people are driven away from their homes due to climate change effects? My task, in the following chapters, will be to analyse the complex normative challenges underlying this question, to propose how we should think of human mobility in the context of climate change, and how we ought to address it. To put it simply, we want to know what the obligations in the context of climate migration are and who should bear them. Climate change action also involves costs. For example, in the context of migration, there will be some costs for relocation from vulnerable regions, admitting immigrants and facilitating safe journeys. The goal of my work is to explain how to assign the responsibility, obligations, and associated burdens in addressing climate migration.

In determining who should take action on climate change we face two separate questions. First, we need to know which type or category of agent we want to assign responsibility to: individuals, or a corporate agent? Second, we want to know what normative principle to use in assigning obligations to these agents. I will address these two questions by defending the claim that developed states have obligations towards the victims of climate migration, as those states created the underlying cause of such migratory movements. In other words, they are responsible for the hardships they bring upon others.

This is a common position to take; one that we often hear in the media and our everyday discussions and debates on climate change. However, justifying this claim is more difficult than it may initially appear. Climate change and human mobility are complex phenomena that raise challenges to this kind of responsibility attribution. One of the main challenges is establishing the underlying causal mechanism that links human activities with human mobility *via* climate change. In this chapter, I explain this challenge and show how to overcome it. I presume, for the sake of this chapter, that

being forced to migrate from your home can be considered a loss,[1] and focus on responsibility for the predicted bad outcomes induced by climate change.

I dedicate section 1.2 of this chapter to defending my choice of states as the appropriate agent for responsibility attribution. In section 1.3, I introduce the concept of responsibility I utilise in this thesis. The current climate change governance regime rests on a foundational normative commitment: maintaining a stable climate. I suggest that taking responsibility for bringing about a bad outcome is a principal part of this commitment. I then define and analyse this conception of responsibility in section 1.4. Section 1.5 portrays the causal chain from greenhouse gas (GHG) emissions to people's movement and discusses the challenges that causality poses in this context. I conclude that assigning responsibility to the emitting agents has some specific consequences: namely that the responsibility born by emitting states is essentially shared and needs to be understood in terms of risk creation. The nature and extent of this claim will depend on the meaning we attach to these features and in part on the way we understand the outcome agents bring about (here, migration). I end the chapter by mapping these open questions onto the different chapters of this dissertation, explaining where and how I plan to address them.

1.2 Who are the responsible agents?

Before going over the causal chain of climate migration I would like to settle a substantive as well as a methodological question: what kind of agent should be considered the potential bearer of responsibility? There are several potential candidates here: individuals, firms, sub-level authorities (such as cities and states within federations), and nation states (or 'states' for short). Here, I will take states to be the category of agents responsible for migration induced by climate change. I will assume that the emissions of other categories of agents can be accounted for through my chosen category: states.[2]

Another approach suggested in the climate justice literature is to take all of the emitters as a collective agent responsible for bringing about climate change's harmful

[1] A more in-depth discussion of this intricate matter can be found in Chapter 4.
[2] It will not always be easy to represent the emissions of other categories of agents at the state-level. For example, international firms' contributions to GHG-concentration may be harder to pin down to specific individual states. Nonetheless, I assume that we can introduce methods of measurement and assessment that can overcome this challenge.

effects. This view collapses all other categories of agents into an all-encompassing group, a collective agent of 'all emitters'.[3] Elizabeth Cripps (2011) considers such a putative collective to be the proper subject for responsibility attribution, by the mere fact of them causing harm together.[4] In the background of this view lies the thought that under certain circumstances a collection of agents can be assigned collective responsibility without being a well-defined group (Held 1970, 471-481; May 1992, Chapter 6). Facing the hazardous impact of climate change, a random collection of individuals ought to work together to obviate the severe damage their aggregated actions will induce. I accept that in some cases an unorganized collection of agents can have such an obligation and therefore be held responsible for an outcome they caused or failed to prevent. However, in the context of global warming and climate change, this view faces serious difficulties.

I claim that 'all emitters' is not a helpful category. The two main reasons why I object to it rest on points I will make later in this work. So, I beg the reader to be patient as a fuller explanation will come. I will briefly say that 'all' is not really a detectable unit that we can take as collective agent (Miller 2008a, 120). It lacks the attributes of agency that can ground responsibility assignment of the kind I want to establish. I will soon present these conditions when I defend the idea that states are agents that can possess them. Moreover, it is not clear who is actually assigned with the task of combating climate change in the amorphous group 'all'. Since there is no established manner in which the world population as a group regulates itself, who should do so? If the answer is any individual member of the group, that is, every person living on Earth, then it seems to be too burdensome a task to expect every individual to perform (May 1992, 110-12).[5] I will later define the conception of responsibility I employ in my argument, and one of its conditions will be the ability to avoid an outcome. It seems that

[3] To a degree, McKinnon (2012) takes this view in her book, where the current generation is the primary responsible agent. One of her main concerns is intergenerational justice, and the structure of her argument revolves around this—so it is an understandable choice, though I still find it unsatisfactory for responsibility attribution, for the reason I give here.

[4] She does not commit herself to any specific type of collective, but she does not rule out and accepts that it is applicable to the collection of all emitters. In her book (Cripps 2013), Cripps suggests three main (to some extent overlapping) collectives: The Young, The Able, and The Polluters. Notice that this is different to positions that claim that the 'world's rich people' or those with 'carbon-intense lifestyles' are responsible. These positions do not consider such terms as a collective agent, but rather as a way to refer to all individuals *qua* individuals that are the responsible agents.

[5] Some think that under such circumstances individuals have a duty to bring about such a supra-national collective agent that can act on this collective responsibility (Ronzoni 2009). This is different to assuming that as individuals they assume collective-level responsibly before the creation of the collective agent itself.

this condition cannot be met for each individual *qua* individual charged with this extraordinary task. Such coordination, however, can be achieved by states, who are the primary enforcer of any decision taken at international level. Neither by staying on the abstract collective level (all emitters) nor by moving downwards to the level of individuals, do we come to a reasonable path of action that avoids the creation of climate change. My suggestion is that we should look for a more conceptually solid collective—states.[6]

This choice does not mean that there is no room in my argument for assigning climate change obligations to other actors. My argument focuses on a specific conception of responsibility as the source of obligation—namely, responsibility for bringing about the hazardous impact of climate change, which I assign to states. My argument, however, does not exclude the possibility of other self-standing normative sources of obligations that can apply to other kinds of agents, such as individuals, civil-society groups, political leaders, and international organizations. For example, the prevention of a calamitous level of climate change is such an urgent matter that it can generate an obligation to act in each type of agent according to her, his, or its specific role and capacities (Jamieson 2015, 38-41).[7]

By taking states as the relevant unit of analysis, we account for the emissions of other actors when we theorise about the just distribution of climate-change-associated obligations. And we have compelling reasons to work with states as the main agent for responsibility attribution, which is a fairly common choice in work in political philosophy on climate change.[8] Nonetheless, any attempt to work with one type of actor

[6] I use the word 'states' and not 'countries' in this thesis, despite the fact that the latter is more commonly used by others. There are of course countries that are not synonyms of states, namely federations, but I will use the term 'states' for them as well, for the sake of consistency and simplicity. The word 'state' captures something that the word 'country' does not convey. I use the term 'state' not only to describe the ruling administration of a political entity, typically a government, but also to denote its relation to the members of the polity as a collective, that is, its public or people. The state, as an institution, is a collective agent that represents its members, the public, and acts and speaks in their name both in domestic affairs and in the international arena (Pettit 2007, 199-200). The state's regulative power and its symbolic representational property express a complex relation to the public, which allows for talking about the responsibility of the state in juxtaposition to the responsibility of its individual members. Throughout this work, I use the term 'states' in the knowledge that it stands for a more complex reality.

[7] This is compatible with Simon Caney's (2014) Harm Avoidance Justice view, which focuses on what should be done and by whom in order to prevent the calamitous consequences of climate change (I presented this view in the Introduction).

[8] For some examples, see: Grasso 2009; Hohl and Roser 2011; Neumayer 2000; Page 1999; Shue 1999, 2015a, Singer 2002; Zellentin 2015b.

will face some challenges.[9] Below I provide some brief reasons for my choice; and in most of this chapter (and the following one) I discuss the specific challenges of this choice.

First, states are central actors in the political arena. They negotiate international climate change policies as well as implementing relevant changes at the domestic level (Kutz 2015, 345).[10] Second, states have another special role to play. States are the pertinent actor when borders and immigration policies are at the centre of the discussion. A third reason is discussed in the literature: states are also collectives that usually persist over time. Some scholars use the perseverance in time of states to resolve the question of who ought to bear the cost of far-past emissions as well as who should bear the cost of the most disastrous possible effects of climate change that will only unfold in the far future. I think that these reasons make the choice of states a good one, even an essential one, for such work.

While these are compelling reasons for choosing states as the unit of normative analysis, one might want to object to this choice on the grounds that states are not the right sort of entity for responsibility attribution. Responsibility and moral obligations are assigned to persons and not to artificial constructs. Fortunately, the literature on collective agency provides support for the basic idea of applying these sorts of normative attributes to entities like states. A state as a collective agent has the ability to form belief and desire systems and to pursue ends that are consistent with them.[11] It also has a reflexive capacity that enables it to make judgments about the world and its own activity, including abstract judgments such as 'this is good' or 'that is just'. This capacity is what makes it sensitive to moral reasons. A state also has the required

[9] The political philosophy literature mainly focuses on states and individuals. There is now a considerable volume of work dealing with the challenges of individual responsibility, mainly on the debate about whether we can hold individuals responsible for their contribution to climate change in virtue of their emissions. For more on this debate, see: Baatz 2014; Banks 2013; Barry and Overland Forthcoming; Broome 2012, Chapter 5; Galvin and Harris 2014; Garvey 2011; Hourdequin 2011; Hiller 2011; Johnson 2011; Lawford-Smith 2016; Morgan-Knapp and Goodman 2015; Nolt 2011; 2013; Odenbaugh 2011; Peeters et al. 2015; Sandler 2011; Sinnott-Armstrong 2005.

[10] Christopher L. Kutz (2015) gives three more reasons for his choice of states as the relevant agent: the fact that GHG is typically a product of large-scale joint projects; the importance of collective motivations; that such motives can lead the way in improving the climate regime.

[11] List and Pettit (2011) use the term 'group agent' and not 'collective agent'. There is no difference in meaning in my account, though I use the prefix 'collective' here, as it is more common. David Miller has a different description (though there are many parallels) based on two types of collectives: the like-minded group and the cooperative practice group (Miller 2007, 114–20). Applying these explanations for collective agents to states is seen to be problematic by some (Ulaș 2011). I am not putting much on this account and I am satisfied with List and Pettit's broader definition of group agency. However, this is another way to formulate a similar claim.

control over the relevant actions it executes through its members.[12] The basic conditions for moral agency are met, and therefore we can consider states as collective moral agents.[13]

As such moral agents, my argument will assign them responsibility and obligations in the context of climate change immigration. The obligations states have are owed to individuals, namely those affected by the adverse impact of climate change. I point this out here in order to explain why on one side of the moral equation I have collective agents and on the other side individuals. First, we should note that this is very common. We talk and philosophise in this fashion. We discuss the claims that individuals, citizens or non-citizens, have against states in different areas: as recipients of services and benefits, as claimants of rights, or as victims of transgressions. Duties, rights, and responsibilities do not require symmetry between the kinds of agents such moral constructions hold in relation to one another. Individuals can be responsible for collective aspects of their community life, they can harm corporate agents such as firms, and have duties to the state in which they reside. And the reverse is true as well. A state can be responsible for inflicting harm on an individual, which gives the state a duty to redress the harm and grounds a right to such redress on the part of the harmed individual.

Here it seems more useful to consider individuals to be those who are owed something by the responsible states, for two reasons. First, I am interested in obligations towards immigrants. It would be unnecessarily cumbersome and potentially misleading to derive such obligations from what responsible states may owe to another state. Second, as will become clearer later, states will not be held responsible for bad outcomes to the state as representative of a people. I do not deny that some climate change effects may comprise and harm values and interests at the collective-level, but

[12] These criteria can be found in the works of List and Pettit 2011, 32; Mathiesen 2006, 243-55; Pettit 2007, 77-8, 188-92 (Pettit also has additional conditions of autonomy: the collective agents must be described in a way that is not entirely reducible to its individual members. States fulfil this condition as well (Pettit 2007, 180–4, 199–200)); Schwenkenbecher 2011; Stilz 2011, 191-3, 195-6. For a general review of the literature on collective agency, see: Smiley 2011. There are some stronger positions on collective agency and responsibility; very well-known ones are Karl Jaspers (1961), Hannah Arendt (1994), and more recently Margaret Gilbert (2006).

[13] In addition, under international law states are considered to be a corporate entity to which it is customary to assign legal responsibility and associated obligations such as reparation and compensation (Stilz, 2011, 190). This is another indication that seeing states as collective agents is common in existing discourse and practices.

this is not my focus here.[14] Therefore, here it will not only be more sensible to take individuals as the recipients of the obligations of responsible states, it will also be more accurate.

1.3 The international norms of the climate regime

The United Nations Framework Convention on Climate Change (UNFCCC), signed in 1992, is the core document of a complex set of international negotiations, agreements, and institutions that make up the current climate regime. It serves as the background for any current and future agreements on climate change policy (Rajamani 2000, 124). As a product of a political deliberation between many parties with different interests and powers, this document lays down normative commitments that have at least declaratively been agreed upon.[15] In this respect the UNFCCC constitutes a useful starting point for a normative investigation that aims to stay close to existing discourse. It is part of the normative background for a discussion on climate change justice and human mobility. I will thus follow in the footsteps of those who take the UNFCC as their starting point and build a principled argument on its embedded norms (Butt 2013; Eckersley 2015; Moellendorf 2016).[16]

Article 3 on principles and article 4 on commitments are the main source for extrapolating normative principles. For our purposes here, Article 3.1 is the most relevant part of the convention, as it addresses the responsibilities of the relevant parties. It states that parties should act on climate change "on the basis of equity and in accordance with their *common but differentiated responsibilities and respective capabilities*. […] developed country Parties should take the lead in combating climate change and the adverse effects thereof for acting in equity on climate change" (United Nations 1992, 3.1, my emphasis).[17] We are provided with principles for assigning

[14] In Chapter 4, I mention cases where an entire national people may lose their territory due to climate change. In such a case their national-self-determination is at peril. This is an example of such state-level harms in the context of climate change migration.
[15] For example, Article 2.2 of the agreement that was the product of the last round of negotiations in Paris (UFCCC 2015) echoes the UNFCCC (United Nations 1992) article 3.1—the one I will focus on here.
[16] Others also refer to the UNFCCC to more generally emphasize the importance of normative concepts, such as fairness and responsibility for the climate change regime (see in Miller 2008, 138; Caney 2005, 772–4).
[17] The Common But Different Responsibility principle was introduced in principle 7 of the Rio Declaration on Environment and Development and was later implemented in the Kyoto Protocol in the division between groups of states—one with obligations to curbs emissions and others with an exemption period from such obligations (Harris 1999; Rajamani 2000; Honkonen 2009).

responsibility, as well as a crude result of such responsibility assignment; we know who are the responsible states that ought to take action on climate change.

The principle of Common But Differentiated Responsibilities (hereafter CBDR) places the greater portion of responsibility on developed states. In one interpretation, the differentiation is based on historical responsibility for creating the problem of climate change. Each state's level of contribution to the amount of GHGs in the atmosphere should be a factor in determining their degree of responsibility (Lucia 2012).[18] This is how some international actors understand this source of differentiation in responsibility, notably developing states (Eckersley 2015, 485; Harris 1999; Honkonen 2009, 262-6).[19]

Normative political philosophy literature examining climate change's detrimental impact on human lives answers the question of who should bear climate change responsibility in different ways. But despite these differences, they typically converge on an answer similar to that given by the UNFCCC: developed and rich states have a special responsibility to act on climate change and ought to do most of what needs to be done to combat climate change. Three main principles for assigning responsibility are discussed: the Polluter Pays Principle (PPP), the Ability to Pay Principle (APP), and the Beneficiary Principle Pays (BPP).[20]

The PPP is often discussed in relation to the interpretation of the UNFCCC text I mentioned above (Rajamani 2000, 122; Butt 2013, 758). The PPP is an established principle of environmental policy and law that is recognized, adopted, or recommended by different international actors, such as the OECD and the EU (Caney 2005, 752-3; Eckersley 2015, 485).[21] The underlying idea of this principle is that "the polluter is liable for the costs of pollution that have been externalised onto third parties" (Eckersley 2015, 485); or to put it bluntly, "those who have caused the problem (such as pollution) should foot the bill" (Caney 2005, 752).

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[18] Lucia includes other sources of differentiation but emphasizes that grounding the historical responsibility of states on to their contribution to the environmental problem is the CBDR's novelty.
[19] There is a divide between developed states and developing states; each group emphasizes a different element of the CBDR principle. Basically, developing states emphasise the historical responsibilities of developed states, while developed states (mainly the US) stress that all parties to the agreement should bear obligations (Rajamani 2000, 129).
[20] Often these principles are given as principles of distribution of the burdens of climate change. However, this is just another way of asking who is responsible for taking action (which involves such burdens) and addressing the harmful effects of climate change.
[21] Note that Eckersley distinguishes between historical responsibilities and the PPP. For her, the latter refers to present GHG emissions, while the first refers to the accumulation of past emission in the atmosphere. This matters when it comes to the attitudes of the main actors in the international arena towards these principles. I take both of them to be entailed by applying the PPP.

The UNFCCC text refers to another normative principle—'respective capabilities'—as an additional consideration of equity. This addition seems to correspond with the APP. The APP is a simple principle stating that those in a better position and with greater capacity to remedy the situation should shoulder more of the relevant obligations.[22] The way the text is written suggests that CBDR and 'respective capabilities' are to be combined in some way to bring us to the conclusion that developed states ought to take the lead on climate change. So it seems that according to the UNFCCC, a fuller picture of a state's responsibility and its derivative climate change obligations is given through this integrated account. I will say a bit more about combining these principles in the next chapter.

The 1992 UNFCCC agreement and the texts that came after it, up to the agreement reached in Paris 2015, and in all likelihood also those that will follow, are open to different readings. For example, some may place less emphasis on the PPP as a reason for differentiated levels of responsibility, instead taking different forms of the APP as the chief way to assign responsibility and obligations in the context of climate change. The way responsibility is understood and assigned is part of what is negotiated in high-level international meetings on climate change. I hold that the contribution of states (to some extent past emissions, as well as present emissions) to global warming and climate change are important. I try to justify this reading when it comes to different documents related to the climate regime. In what follows I not only present a conception that can ground the embedded norm in the UNFCCC, I also develop it into a defensible principle of responsibility that we can use within the context of climate change and immigration. I will justify this choice further after explaining the notion of responsibility I will use in what follows.

What duties do states have under the climate regime? There are three primary duties: mitigation, adaptation, and duties arising from loss and damages.[23] The IPCC report defines *mitigation* as a "human intervention to reduce the sources or enhance the sinks of greenhouse gases […and] to reduce the sources of other substances which may contribute directly or indirectly to limiting climate change' (IPCC 5AR SYR, Annex II,

[22] A justification for this principle can be found in Caney 2010a, 213-7. For some examples of scholars that discuss or utilise it, see: Cripps 2013; Jamieson 2015; Miller 2008 (for a specific variant); Shue 1999.
[23] I write primary duties because the state may also have secondary duties to make sure that relevant agents act in accordance with their responsibility and duties (no matter here how we understand and justify them)—for example, with respect to their own citizens or firms under their jurisdiction (cf. Caney 2014, 134-41). In addition, I take them to be primary duties, as nested under each one is a range of more specific obligations that 'operationalise' them (e.g. an obligation to share clean energy technology as part of a mitigation duty).

125).[24] *Adaptation* stands for "[t]he process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities" (IPCC 5AR SYR, Annex II, 118). Or in other words, the effort to cope with those effects in ways that will prevent or moderate their harmful impact on people's lives. *Loss and Damages* (hereafter L&D) addresses the "permanent loss or repairable damage caused by the manifestations of climate change. […] It can also refer to economic or noneconomic harm, such as loss of life, livelihoods, ecosystems, or cultural heritage" (Taraska 2015, 1).

L&D is a relatively new and in fact controversial segment of the climate regime. It is still not clear what obligations it entails. For now, it mainly refers to enhancing sharing knowledge, as well as coordinating around risk prevention (such as implementing early warning systems against natural disasters).[25] Developed states oppose any attempts to attach anything akin to legal liability to L&D, which would suggest that the perpetrator ought to restore the victims' situation in some way. I will support this objection in only one sense here. We should not conflate principles of responsibility with the content of the obligations associated with them. So, L&D should have independent meaning, separate from how we think responsibility ought to be assigned. I, of course, disagree with the substance of such objections on the part of developed states. I think their obligations *can* and *ought* to be grounded in responsibility for creating harm. But I leave the argument for this substantive position for the following sections. For now, a simple understanding of L&D and the type of obligations involved will suffice. So, following Simon Caney (2012, 258), I understand L&D as a compensatory duty relating to any adverse impact that people experience, regardless of what states do in terms of mitigation and adaptation.

My focus here is on adaptation duty. This is the most relevant duty for human mobility in the context of climate change, where people move as a consequence of the adverse impact climate change has on their lives. Climate migration is connected to mitigation and L&D as well, and I will explain how in due course. For now, I proceed with the knowledge that the reader now has a general picture of the responsibility and duties of states under the climate change regime. The main message is that states have

[24] The international negotiations and agreements tend to adopt the IPCC definitions and terminology. My own account takes this broader definition on board, but focuses on the more direct and known 'GHGs' for the sake of brevity and style.

[25] UNFCCC 2015, Article 8. For a brief yet illuminating report on the meaning of L&D within climate negotiations, see: Tarska 2015. For political philosophy papers analysing the topic, see: Page and Heyward 2016; Wallimann-Helmer 2015.

different degrees of responsibility under the climate regime, related to these three types of duties.

1.4 Responsibility for bad outcomes

Responsibility is a somewhat evasive term as it can be used to describe many different relations between agents and between agents and events.[26] My main interest is the obligations towards climate migrants that agents incur due to their contribution to creating climate change. In other words, my interest is in grounding their obligations in a logic akin to the PPP. As we shall see, it is no simple task to establish the connection between agents' actions, human mobility, and hence their responsibility and obligations. But it is possible, and we need to use the appropriate notion of responsibility from the plethora available to us to get the argument off the ground.

Backward-looking and forward-looking responsibility

I will start with two main distinctions that will help in focusing the discussion. There are forward-looking notions of responsibility and backward-looking ones. The first could be seen as a future-oriented, task or duty-based responsibility. Agents have such responsibility based on an existing commitment they have undertaken, agreed to, or incurred for different reasons. For example, if I have a contractual obligation, I have the responsibility to respect it and carry it out. If there is a universal duty to alleviate the suffering of others living in dire poverty, it is my, as well as others', responsibility to act on it. The backward-looking type of responsibility is a historically-oriented account that looks into the relation of agents to the sequence of events that lead to the situation under examination. Based on this account, we form a certain judgment about those agents; about their causal contribution, their moral character, what they ought to do, and so on. In a sense, the relations between responsibility and obligation go in opposite directions in each type of responsibility. For forward-looking types, the obligations agents incur lead to the relevant responsibility. For backward-looking accounts, the obligations are grounded in the responsibility attributed to the agents; that is, in virtue of their

[26] In his book, *National Responsibilities and Global Justice*, Miller (2007, 82) cites a short paragraph from Hart that describes one case while using the word 'responsibility' nine times with at least six different meanings. For a brief historical review of responsibility in Western thought (the focus of the entry is on moral responsibility), see the *Stanford Encyclopedia of Philosophy*'s entry on 'Moral Responsibility' (Eshleman 2014).

responsibility they incur an obligation. It is the second type of responsibility that I will focus on here, primarily responsibility accounts of the obligation-grounding sort.

The underlying rationale for responsibility attribution is simple: if you were the one who caused a bad situation, you are the one responsible for putting things right. So responsibility is closely linked to obligation in a similar way to how we understand accountability or liability.[27] Making others worse-off makes an agent responsible for the others' losses and typically grounds claims for restitution. In this case, the obligation an agent has towards others derives from the fact that the agent is the one who made the situation worse for those others than it would have been without the consequences of the agent's actions. For example, say that during a lively conversation during a cocktail party at your house, I make a sweeping gesture with my hand, and in so doing knock over an expensive vase. On the face of it, I am responsible for breaking the vase and I should put things right: apologise, pay for the damage, or buy you a new vase.

It is clear that this sort of responsibility belongs to the backward-looking family: it looks at a chain of past events in order to identify the agent that ought to recover the losses incurred, based on her contribution to bringing them about. Nonetheless, the relation with the forward-looking class is more dialectical. Responsibility for bad outcomes is premised on some sort of a duty of non-interference. We assume that the doer has changed a state of affairs in an unacceptable way. This is implicit in my use of the term 'bad outcome'. As such, her responsibility for the worsened situation of others explains and grounds her obligation to make it right.

Outcome responsibility (and other kindred conceptions)

An influential conception of responsibility that fits this description (and on which I will draw) is David Miller's *outcome responsibility*.[28] Outcome responsibility, as Miller describes it, is the justified eligibility for 'ownership' over the costs or benefits associated with the outcome an agent produces (Miller 2007, 83-4).[29] Its distributive

[27] Kutz (2015) has a similar understanding of this kind of responsibility as accountability.
[28] My own notion of responsibility for bad outcomes is somewhat stronger than Miller's original outcome responsibility, as will soon become clear. David Miller develops his account from Anthony Honoré's (1999) concept of 'outcome responsibility.
[29] The reasons we care about responsibility for outcomes rests on the place of agency and autonomy in liberal thought. Responsibility depends on the idea of choice and control over actions and their consequences and therefore is closely linked with accountability, answerability, and liability (Miller 2007, 87). A similar concern drives another influential account by Thomas M. Scanlon (1998, 256-67), though

aim is to shift burdens from the individual who suffers from the outcome to the individual who caused the outcome (Coleman 1992, 229). In the case at hand, the outcome is the harm associated with climate change that emitters bring about.[30]

In his book, Miller is interested in the duties of states towards global justice, and for him, finding out who the responsible parties are will tell us who ought to correct injustices at an international level. Outcome responsibility is for Miller only one of six (not mutually exclusive) ways of distributing obligations, which comes under a broader notion of responsibility—*remedial responsibility.* Remedial responsibility can be defined as having "a special responsibility, either individually or along with others, to remedy the position of the deprived or suffering people, one that is not equally shared with all agents" (Miller 2007, 98-9). Miller focuses on situations of great suffering and fundamental human rights violations or deprivations that everyone ought to be concerned about. He frames the discussion of outcome responsibility as a matter of distributive justice. First, we have a common duty regarding the morally undesired outcome, and responsibility is simply the normative way of deciding how we should allocate the relevant remedial obligations.

It is important to distinguish outcome responsibility from three other notions of backward-looking responsibility that are similar in this respect. The first is simply responsibility as production or *causal responsibility*. It uses responsibility to describe cause-and-effect relations—for example, 'GHG emissions is responsible for the warming of the climate'. The second is *moral responsibility,* which relates to the blameworthiness or praiseworthiness of an action or some conduct. Moral responsibility

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Scanlon's parallel term—'substantive responsibility'—is wider than the one I discuss here because it is connected to any moral principle that governs social life—what we owe to each other.

[30] The words 'a harm and harming' echo the well-known 'harm principle'. The harm principle is typically associated with John Stuart Mill's famous essay 'On Liberty', where he presents protection from harming others as the core justification for curtailing individual freedom (Mill 1982). The 'harm principle' underpins much of my responsibility-based argument and its stands in close relation to the Polluter Pays Principle—a central principle for the allocation of responsibility and obligation in the context of climate change (for a brief and to-the-point connection between the harm principle and the Polluter Pays Principle, see Zellentin 2015c). Many words have been written on this principle, as well as on its insufficient specification (mainly with respect to the definition of 'harm') and scope (see: Brink 2016, §3.6). Here I just want to point to its intuitive appeal. First, it is *prima facie* wrong to harm others. Or at least it is wrong when it is avoidable without sacrificing significant interests. When it is possible to prevent harm, we ought to do our best to protect from harm, and when we actually inflict harm we owe compensation to the victims of our doing. There are, of course, limitations to the scope and demands of these three respective duties I associate with the harm principle, but I think many will accept that this is the principle moral core. Put simply, the principle entails that "I have a moral duty to refrain from pushing a large boulder so that it rolls down a hill towards you. If I have pushed it, I have a duty to attempt to prevent you from being crushed (perhaps by yelling at you to move). If I do neither, and you are seriously injured, I have compensatory duties to attempt to make it up to you" (Cripps 2013, 13).

explains the attitudes and judgments (primarily appraisal or censure) we may form regarding the behaviour of others in matters of morality—for example, 'Danny was wrong to cheat on the exam, he should not have done that.' The fuller meaning of this concept is contested, but it is connected to breaches of moral principles or transgressions from justified expectations of behaviour for individuals (when it has ethical implications). The primary concern of this notion of responsibility is the moral character of the agent. The third similar notion of backward-looking responsibility is *legal responsibility*, which holds agents responsible based on existing laws. Some justifications of legal responsibility overlap with other notions of responsibility, but it rests on the instrumental value of ordering society based on reasonable expectations created by the system of law.[31]

For most of us, it might seem as if these different ways of using responsibility collapse into one another, and often they are all relevant to a specific case. Nonetheless, they are distinct principles. My interest in responsibility stems from its role in identifying whom obligations resulting from the harm caused by climate change and climate migration fall upon. It is true that, after establishing the responsibility for a bad outcome that an individual has brought about, as well as what the relevant obligations are, failure to uphold these obligations might provoke moral-responsibility attribution. This is a failure to respect forward-looking types of responsibility, that is, the responsibility to follow a moral duty an agent has. This is an important aspect of the dialectical relationship between backward-looking and forward-looking types of responsibility. However, determining the appropriate attitudes towards the responsible agents (such as indignation and shame), which is essentially the role of moral responsibility, is not my main concern here.

Outcome responsibility focuses on the *doing* and not on the *doer*. We are not looking for a failure in the agent's character, but for a failure in her actions with respect to some normative standard (Coleman 1992, 217-9). Outcome responsibility is not concerned with the intentions of the doer, though we will later see that other mental dispositions do matter when it comes to establishing the degree of ownership over the

[31] For example, H. L. A. Hart sees the role of laws in regulating society as providing reasons for people to act responsibly knowingly the expected costs of choosing otherwise (Hart 1968, Chapter 2). This position is mainly about punishment under criminal law. For an interesting position on tort law, see Coleman (1992). I use insights from Coleman's work as his analysis displays commonalities with how I understand the rationale of outcome responsibility. For a different position in philosophy of law, see Kornhauser 2015.

outcome. This frees us from searching for ill-intent in activities that emit GHGs and contribute to global warming and climate change. We do not need to assign blame to such actions in order to establish responsibility (McKinnon 2012, 93; Jubb 2012, 738-9; Zellentin 2015b, n. 14). In this sense, outcome responsibility is less demanding than moral responsibility. In addition, we utilise the notion of outcome responsibility to demand that agents address the results of their doings. It tells us what the agent's obligations are, not what sort of reactive attitude we should take towards her.[32]

Neither will I examine legal responsibility, even though some states have a legal responsibility, to some extent based on international agreements and domestic laws and regulations.[33] The Kyoto Protocol enumerates specific reduction targets for some states that have a legally binding status.[34] The agreement made in Paris in 2015 has binding commitments regarding transparent reporting and review (Waskow and Morgan 2015). Such legal obligations may concur with what outcome responsibility recommends, but may stand as an independent normative source for the responsibility to act on climate change (Moellendorf 2016). I think that it is more interesting and important for political philosophy to find and establish the normative foundations of justice claims in the context of climate change. This type of work can help clarify and interpret some existing legal obligations as well as push for their amendment or point to the need for new legally binding norms.

Corrective justice and responsibility

Perhaps my argument takes Miller's outcome responsibility further than he intended. While I am of the same mind as Miller with regard to the content of the concept, I apply it to a different project; and here we might part ways. The function of outcome responsibility is different here than in Miller's text. For Miller, it is used to ground remedial responsibilities as part of his global justice account. I take outcome responsibility not to be merely a principle of distributive justice, but a matter of

[32] For similar views on this distinction see Jubb 2012, n. 2 and Pasternak 2010, 189. The term 'reactive attitudes' refers and comes from the seminal work of Peter Strawson (1962) on moral responsibility.
[33] See Crawford (2006) for a short description of states' responsibility under international law. Here I will just mention that in practice there have been cases where citizens have taken legal action against their government for not fulfilling their responsibility for combating climate change. The most famous is the lawsuit of 886 citizens of the Netherlands against their government; the court ruled in their favour (Neslen 2015). More recently, another lawsuit made headlines. Twenty-one children from across the United States are suing the federal government for their energy policies, which allegedly violate their constitutional rights (Our children Trust website: http://www.ourchildrenstrust.org/).
[34] See in UNFCCC website.

corrective justice. This does not reflect how Miller uses outcome responsibility in his work, and I do not know if he will agree to the way I use it here. Nonetheless, I take it to be consistent with the content of the concept. Corrective justice is also about distribution, the redistribution of costs from the individual suffering harm to those responsible for the causing it. But there are important differences.[35] Drawing on Jules Coleman's view, Catriona McKinnon (1999, 261) provides three claims of corrective justice, which help to distinguish its claim from other justice claims, which are mainly distributive: (i) the harm caused can be traced back to human agency; (ii) the agents causing the harm can be held responsible for it;[36] (iii) the responsible agent owes the harmed agents an obligation of redress.

One important difference from the distributive justice rationale is that corrective justice is not bound to the entitlements of individuals (which are decided according to a specific theory of distributive justice). If a harmed individual is below or above where she ought to be, given a distributive theory X, as a matter of principle this does not change her claim against the harming agent. The person responsible for her situation owes her something, regardless of how she fares on theory X's distributional matrix (Weinrib 2002, 351-2). "[U]nder corrective justice, Bill Gates can be just as deserving of recovery as Mother Teresa" (McKinnon 2009, 261).[37] We therefore do not have to rely on a controversial theory of justice in establishing the obligations of states towards climate migration. We only need to accept a few minimal assumptions about the individual's entitlement over what she had before the intervention that made her worse off, and also that such external interference is wrongful. In other words, we need to establish the responsibility of agents for climate migration as an outcome they bring about wrongfully. In addition, while duties of mitigation are first and foremost a distributive issue, duties of adaptation and L&D can also be a matter of corrective

[35] On the difference between distributive justice and corrective justice, see Weinrib 2002. For challenges to this distinction, see: Coleman, Hershovitz and Mendlow 2015.
[36] Note that the way an agent can be held responsible is undefined here. All of the different notions of responsibility I have discussed (causal, outcome, and moral) can be used within a corrective justice account.
[37] I write as a matter of principle, because there will be countervailing reasons from distributive justice, for example. Though a very rich person may be owed compensation from a very poor person, we might think that we should not demand it. In some situations, corrective justice and distributive justice will clash, and we might prefer to give the distributive goals more weight in our decision (McKinnon 2009, 262).

justice.[38] In the next chapter, I explain how responsibility for bad outcomes plays a role in deciding how to allocate mitigation and adaptation duties.

Another important insight imported from corrective justice is a concern about how we ought to treat each other (McKinnon 2009, 263-4). This is not unique to corrective justice *per se*—some take it to be important for distributive justice as well (Anderson 1999). By harming someone we not only make her worse off in terms of material welfare, we also treat her wrongly. In the liberal tradition, we assume the fundamental equality of the moral status of persons. This widely shared normative commitment diverges into numerous conclusions. Despite this diversity, it is common among contemporary liberal egalitarians to hold that we ought to treat people with equal respect (Dworkin 1985, 188-91; Kelly 2005, 7-8).

I want to mention two additional aspects I take from the corrective justice outlook. The first emphasises that concern for how we treat others is relevant to the notion of responsibility for bad outcomes. In general, making others worse off can be a way of treating them wrongfully, if it reflects inadequate concern for their interest. The lack of adequate care about the consequences my actions have for others suggests such moral failure. Therefore, bringing about bad outcomes for others can say something about how we treat them and how our actions distort the moral relations we have with them (Radzik 2004). The second aspect I draw on is the sort of redress owed to victims under a corrective justice view. In ethics and in the normative literature on historical injustices we often find the claim that reparation should aim at making the victim 'whole'. In international relations one form of reparative obligation applying to the injurer is called 'satisfaction': forms of expressive actions and gestures acknowledging the wrong and a repenting of it (International Law Commission 2001, Article 37). This form of repair is often discussed in relation to apologies (Lazar 2008, 359-60). In the context of climate change and obligations towards climate migrants, I have a different take on the issue: I tie the symbolic aspect of satisfaction to more material compensation. But these points will have to wait their turn—they will be fully explained in Chapter 3.

[38] Some may relate moral responsibility to mitigation in the following way: knowingly and without good excuse, to impose a tragic mitigation option—either to restrict emissions and suffer or to emit and harm others—is wrong (Gardiner 2011).

The conditions for outcome responsibility

Setting this aside for now, my focus in this chapter is the relation between causal responsibility and outcome responsibility, in order to provide a satisfactory account of obligations resulting from climate change harms *vis-à-vis* responsibility. Causal responsibility is a necessary but not sufficient condition for outcome responsibility.[39] In other words, causal attribution is a way to identify the candidate for outcome responsibility, but it is not enough to claim that the relevant agent is outcome-responsible (Miller 2007, 83-4).[40] The concept of outcome responsibility is tied to the idea of agency and goes beyond mere causal efficacy; it is about deciding on and choosing to take a course of action and having some control of the subsequent results.[41] Therefore, in order to hold someone responsible for an outcome she brings about, two criteria must be met beyond causation: the ability to foresee the outcome and the ability to avoid it.[42]

The ability to foresee may constrain the degree of responsibility one may have for an outcome. I will refer to this as the 'foreseeability condition'. If the agent cannot reasonably foresee the final outcome of a course of action, then we should not expect her to bear the same costs as in cases with a conceivable ending. Note that it is not required that the agent actually obtains this knowledge, but rather that, in the context of her actions, she should have taken the possible outcomes into consideration.

The ability to avoid the action or its outcomes is also relevant for evaluating the agent's responsibility, because asking her to bear the full costs of her actions when she could not have done otherwise is unfair. I will refer to this as the 'avoidability condition'. The concept of responsibility derives from the idea of agency, which is undermined when control over deciding and choosing the course of action is

[39] Interestingly, causation is a sufficient but not necessary for all types of responsibility for bad outcomes. Some notions of responsibility will place the liability for costs with agents, as well as the need to provide explanation or apology for consequences that they did not cause. For example, parents will be responsible in this way for some consequences of their children's actions. This is sometimes called 'strict liability' and such an understanding of responsibility operates in different areas of our social life (on the term in philosophy of law, see Coleman and Mendlow 2015).

[40] See also Eshleman 2014; Pasternak 2010; Thompson 1980.

[41] This idea of agency, control, and responsibility has been described in different ways that represent the same set of conditions; for example, see List and Pettit 2011, 155; Scanlon 1998, Chapter 6.

[42] The definition is based on Miller 2007, but these conditions can also be found in Coleman 1992; Goodin 1985; Scanlon 1998. From this point onwards the discussion focuses on outcome responsibility, which is the concept employed here. Therefore, in what follows, I use 'responsibility' for outcome responsibility, but at times I will go back to using the relevant prefixes when I want to emphasize a specific type of responsibility (for example, outcome) as opposed to the other possibilities (such as causal or moral).

constrained.[43] Nevertheless, agents cannot misuse this excuse for inept conduct. If the agent does not have the possibility of doing otherwise at a point in time, but can prudently obtain such possibility, then I take the predicted outcome to be avoidable.

These two conditions complete the responsibility account I will work with here. Together with a causal account connecting the agent with an outcome, they can determine whether the agent can be held (*outcome*-) responsible for the consequences of her actions. I suggested that a plausible interpretation of the CBDR will assign this notion of responsibility to developed states as those who bring about the deleterious effects of climate change. In sum, we can say that there are three necessary conditions for assigning outcome responsibility. When

(i) A's action φ causally contributes to outcome X

(ii) A can reasonably foresee that action φ will causally contribute to outcome X

(iii) A can reasonably avoid action φ

then *A is outcome-responsible for X*. Since we assume that X is an undesirable, harmful outcome, A has a *pro tanto* duty (i) to stop φ-ing, (ii) to prevent X (when and if possible), and to compensate those harmed by X when she fails to do so.

However, some theorists argue that our existing normative concepts tying agency with harmful outcomes do not aptly account for how we act within some contemporary complex systems of human interactions.[44] "The model of harm underlying the classic formulation of the harm principle—discrete, individual actions with observable and measurable consequences for particular individuals no longer suffices to explain the ways our behaviour impinges on the interests of other people" (Lichtenberg 2010, 588-9).

Climate change is driven by the uncoordinated on-going actions of millions around the world, which are mediated by highly complex natural processes with acute

[43] There are other types of reduced or annulled responsibility in this context, where agency is waived or defeated—the inability to take an informed, rational decision (typically small children and people of unclear mind) and being an instrument of another person or natural forces (being physically or mentally controlled by another person or my body's being completely out of my control due to natural causes, such as unexpected tweaks or natural events like strong winds, etc.). I ignore these cases as I see them as less relevant to our purposes here. One form of mental control is interesting in the case of climate change—manipulation. Manipulation is a subtle form of coercion where a person is brainwashed to believe that some external wills are her own (Scanlon 1998, 274-284; Miller 2007, 91-97). This is a complicated and controversial case that I will not discuss here. For an in-depth discussion of the manipulation of public opinion and responsibility in the context of climate change, see Vanderheiden 2009, Chapter 6.

[44] See in Scheffler 2001, 39-45; Jamieson 2014, Chapter 5; Jamieson 2015, 26-9.

consequences for life on earth that will also affect those living remotely from us geographically as well as temporally. The reach of climate change is global as well as extending into the future, affecting generations to come. In short, it is nothing like assigning me responsibility for breaking your expensive vase. I think that many of the challenges such a claim faces arise from the causation account that underpins it, to which I dedicate a more elaborate discussion in the following section.

1.5 The causal story of climate migration

In order to establish a moral relation between the GHG emissions of states and human mobility—the relation that underpins my chosen conception of responsibility—we need to see how emissions and movement are causally linked. A good way to do so is to answer two fundamental questions: Do states cause climate change? And does climate change cause migration? It is possible to conceptually view the relation between emitting GHGs and human mobility as three stages.[45] The first stage is from emitting to global warming; the second is from global warming to climate change effects; and the third is from climate change effects to human migration.[46] Each entails some challenges for responsibility attribution, and in what follows I tackle each of these challenges in turn.

The first stage: anthropogenic global warming

Our climate has a cycle of absorbing heat from the sun, releasing some back into space, and capturing the rest, absorbing it into Earth's surface, land and seas. The heat captured within the atmosphere is what enables the life we see on our planet. GHGs, as well as clouds and water vapour, play a big role in this cycle as they make such heat retention possible (what is known as the greenhouse effect). Some GHGs are released

[45] A more precise account should also include the category of 'land-use' (mainly deforestation), which also has an impact on the ecosystem and earth temperatures. I also take 'global warming' to be the main link in the causal chain of climate migration. Here I leave out other pathways that causally connect emitting to climate change and its potential impact on human mobility. For example, higher levels of GHG lead to ocean acidification that destroys marine eco-systems (I do include this in examples of climate change effects, either directly or as implicitly in the IPCCC report references). This will have a huge impact on fishing and can induce migration. This omission is made for the sake of simplicity alone. The argument also holds we also include 'land-use' and parallel causal mechanisms that tie emitting actions to migration *via* climate change effects.

[46] This description draws on Nicholas Stern (2009, 16). However, Stern divides the causal chain differently: from people to emissions; from emissions to stocks; from stocks to rising temperature; from rising temperature to climate change based on human impact.

by humans into the air during their various activities, among them methane and carbon dioxide (CO_2), which are the most significant ones. The power that each of these gases has to increase temperatures is unified in one measure—CO_2 equivalents—that represents the amount of additional heat it captures in the atmosphere.

As part of the climate cycle, some GHGs are absorbed in what are called 'carbon sinks' such as forestry, seas, and algae. Therefore, we can have an impact on this cycle by altering our environment (deforestation is the main factor), as well as through the GHG emissions we produce. So, while some of the processes that determine the Earth's temperature are natural (and include the fluctuations in temperature), human activities can increase the concentration of GHGs in the atmosphere and the amount of heat it therefore captures (IPCC 5AR WG1, 1.2.2).

According to the Intergovernmental Panel on Climate Change (IPCC), the amount of GHGs released into the air has grown rapidly from the pre-industrial era to today, and has increased in pace since the seventies, even more dramatically in recent decades. This has led to an atmospheric concentration of GHGs that is unprecedented in the last 800,000 years of the Earth's history, which is the cause of most of the world's average rise in temperature from the mid-20th century onwards (IPCC 5AR SYR, Topic 1, and esp. 1.1-1.3). The IPCC provides different future scenarios (RCP scenarios) relating to global warming in the 21st century (and beyond), which vary according to possible patterns of emissions levels (see figure 1.1). The more 'optimistic' possible future pathways predict a stabilization of global average temperatures between 1 °C and 2 °C in 2100. The least worst possibility based on the 'pessimistic' scenario predicts an increase to above 3 °C by 2100, while going above 4 °C is also probable (IPCC 5AR WG1, 12.4.1.1, fig. 12.5, table 12.2 and 12.3).

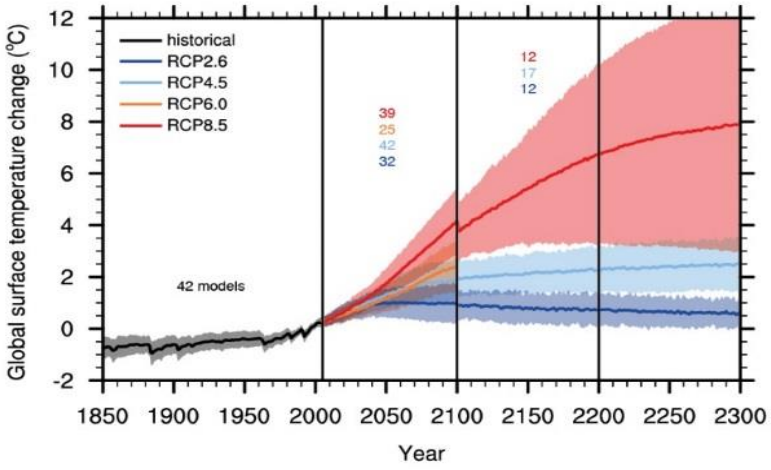

Figure 1.1: Global surface temperature change (IPCC 5AR WGI, Figure 12.5)

We can see from the IPCC report that anthropogenic global warming is underway, and we can estimate the future rise in temperature to some extent under different possible scenarios. These scenarios are important because estimations of how the climate will change largely depend on the increase in temperatures we face. We also learn that it is an accumulative phenomenon. Much of past emissions contribute to the present and future radiative forcing that increases the global temperatures.[47] The causal link in the first stage seems well established. Emitting GHGs increases their concentration in the atmosphere, which causes an increase in temperature. Therefore, anthropogenic emissions are causing the global warming we observe.[48]

We can draw an initial conclusion from the first stage in the causal chain: the observed impact and the predictions for the future are something agents are causing together; it is a collective outcome. It is not strictly speaking a collective action, as a product of a joint action, because there is no coordination among agents or an intentional structure of acting in order to bring about climate change together. Nonetheless, the actions of all agents across time and space bring it about. We can also know (or at least approximate) how much each state has contributed to this outcome, based on its emissions levels.[49] However, we need to adopt a broad understanding of state responsibility, which also includes indirect emissions—GHGs that come with the consumption of goods and services that might be produced in other countries.[50] I assume that though it will not be easy, we can calculate this more complex account of states' impact on climate change. It will be similar to a scaled-up individual carbon

[47] I write 'much' because some GHGs fade away with time. Carbon dioxide is very durable, but some such emissions will be absorbed by the earth surface and oceans (and may stay there).

[48] Nonetheless, some climate sceptics will suggest that this statement is either overconfident or false. It is important to note that the scientific consensus on the causal relation between anthropogenic GHG emissions and global warming is overwhelming (there is less agreement over atmospheric sensitivity, the rate of change, and the consequential weather events) and confidence in this assertion is only growing as the research progress and more evidence is gathered (see in IPCC 5AR SYR, 1.3; IPCC 5AR WG1, Fig. 1.9). Even when we consider the possibility that the vast majority of scientists have simply got it wrong, this just adds another type of uncertainty to the one I will discuss later in this chapter. It should not call into question the overall existing scientific assessment. Moreover, this uncertainty should not lead us to relax regarding climate change, as such uncertainty cuts both ways—it is as possible to discover that we have *over*estimated our impact on the global climate system just as it is possible to find out that we have *under*estimated it.

[49] Remember that I use GHG emissions as a simplified measure. In general, outcome responsibility applies to other aspects that contribute to global warming and climate change, such as land-use.

[50] This challenge is sometimes expressed in the distinction between production-based accounting and consumption-based accounting and the problem of carbon leakage. Some have suggested that it would be fairer to move to consumption-based accounting or to address the shortcomings of production-based accounting in some way (Peters and Hertwich. 2008; Eckersley 2010; Steininger et al. 2014).

footprint measure: the overall impact of your lifestyle on the climate measured in terms of carbon dioxide.

The second stage: Climate change effects

The second stage is the causal link between the increase in temperature and the changing patterns of the global climate. According to the IPCC report, many future weather events will become more intense, frequent, and widespread. In addition, the increase in temperature will expand the surface area of the ocean and lead to the melting of the Earth's ice sheets, both causing sea levels to rise. The increase in extreme weather events—among them tropical storms, heat waves, droughts, floods—and the more gradual rise in temperatures, change in precipitation patterns, coral bleaching, and rising sea-level will have adverse impacts on human lives and livelihoods (IPCC 5AR SYR, Figure 1.11). Around the world people will experience reduced food availability and higher exposure to health threats, land loss, damage to property and infrastructure, and in extreme cases threats to life (see figure 1.2).[51]

No.	Hazard	Key vulnerabilities	Key risks	Emergent risks
i	Sea level rise and coastal flooding including storm surges [5.4.3, 8.1.4, 8.2.3, 8.2.4, 13.1.4, 13.2.2, 24.4, 24.5, 26.7, 26.8, 29.3, 30.3.1, Boxes 25-1 and 25-7; WGI AR5 3.7, 13.5, Table 13-5]	High exposure of people, economic activity, and infrastructure in low-lying coastal zones and Small Island Developing States (SIDS) and other small islands Urban population unprotected due to substandard housing and inadequate insurance. Marginalized rural population with multidimensional poverty and limited alternative livelihoods Insufficient local governmental attention to disaster risk reduction	Death, injury, and disruption to livelihoods, food supplies, and drinking water Loss of common-pool resources, sense of place, and identity, especially among indigenous populations in rural coastal zones	Interaction of rapid urbanization, sea level rise, increasing economic activity, disappearance of natural resources, and limits of insurance; burden of risk management shifted from the state to those at risk leading to greater inequality
ii	Extreme precipitation and inland flooding [3.2.7, 3.4.8, 8.2.3, 8.2.4, 13.2.1, 25.10, 26.3, 26.7, 26.8, 27.3.5, Box 25-8; WGI AR5 11.3.2]	Large numbers of people exposed in urban areas to flood events, particularly in low-income informal settlements Overwhelmed, aging, poorly maintained, and inadequate urban drainage infrastructure and limited ability to cope and adapt due to marginalization, high poverty, and culturally imposed gender roles Inadequate governmental attention to disaster risk reduction	Death, injury, and disruption of human security, especially among children, elderly, and disabled persons	Interaction of increasing frequency of intense precipitation, urbanization, and limits of insurance; burden of risk management shifted from the state to those at risk leading to greater inequality, eroded assets due to infrastructure damage, abandonment of urban districts, and the creation of high risk/high poverty spatial traps
v	Warming, drought, and precipitation variability [7.3 to 7.5, 11.3, 11.6.1, 13.2, 19.3.2, 19.4.1, 22.3.4, 24.4, 26.8, 27.3.4; WGI AR5 11.3.2]	Poorer populations in urban and rural settings are susceptible to resulting food insecurity; includes particularly farmers who are net food buyers and people in low-income, agriculturally dependent economies that are net food importers. Limited ability to cope among the elderly and female-headed households	Risk of harm and loss of life due to reversal of progress in reducing malnutrition	Interactions of climate changes, population growth, reduced productivity, biofuel crop cultivation, and food prices with persistent inequality, and ongoing food insecurity for the poor increase malnutrition, giving rise to larger burden of disease. Exhaustion of social networks reduces coping capacity.

Figure 1.2: Key risks (IPCC 5AR WGII,' Table TS.3)

[51] Some of these effects are already attributed to climate change with different degrees of confidence (see IPCC 5AR SYR, 1.3.2-1.4, Fig. 1.11). The future risks of climate change are presented in topic 2 of the IPCC 5AR SYR (see 2.3 and table 2.1 specifically) and at length in IPCC 5AR WGII. Particularly illuminating and easy to digest are Assessment Box SPM.1, Figure 1, and tables TS. 1, 3, 4, and 5.

A few features of climate change are worth mentioning in this context to emphasise their implications for moral thinking. The first is uncertainty. The uncertainty has two related sources. One is the simple fact that climate change effects will take place in the future, which is to some extent always uncertain. GHGs stocks have a lagged and on-going impact on projected climate change effects. Neither the present level of GHG concentration nor those associated with different climate scenarios have developed overnight; rather, they have been accruing over long periods of time. GHGs that were emitted in the past influence the present and future climate, and current emissions will have an impact on future weather patterns.[52] This delayed impact makes intergenerational justice an integral component of any debate on moral and political philosophy and climate change.[53]

More pertinent to my argument is how this lagged character of climate change effects leads the analysis to the realm of probabilities and risk. Since we are not discussing simple and immediate cause-and-effect relations, we have only varied levels of certainty in the expected changes in weather patterns. This is not a unique feature of climate change. Much of our future-oriented thinking is done in terms of probabilities, from our trivial daily decisions (What are the chances of rain? Which road is more likely to be jammed at this time of the day?) to more elaborate calculations (like those of insurance and risk management). Evaluating possibilities is not new for moral reasoning and it is pertinent to the case of climate change effects.

The second source of uncertainty is the magnitude and complexity of the global ecosystem. Uncertainty is a built-in feature of climate science.[54] Again, complexity and uncertainty play a part in many other challenges in the social and political world. Often they are discussed under the broad term of *risk*. I explore the implication of theorising climate change effects in this way in Chapter 3.

A second and related feature of climate change effects is the possibility of irreversible impacts on the ecosystem. Climate change is not merely a cumulative phenomenon, a linear-like relation between levels of emissions and expected climatic hazardous events. It also has some 'tipping points'. A *tipping point* is a crucial threshold of ecological systems that, when pushed beyond it, move them into a new phase without

[52] Some GHGs that have been released will stop having any impact as they will be absorbed as part of the Earth's carbon cycle.
[53] See in Caney 2005, 740-50; Gardiner 2006, 402-7; Stern 2009, 16-7, 75.
[54] Cf. Caney 2009b, 176; Gardiner 2010, 9, Broome 2012, 117.

the possibility of returning to the former condition in the foreseeable future. One known example is the melting of the Greenland ice sheet, which can raise sea levels up to seven meters (IPCC 5AR WGII, Assessment Box SPM. 1).[55] There are levels of GHGs that may force the ecosystem beyond such tipping points, inducing irreversible processes that will result in large-scale singular events of colossal devastation to human and non-human life on Earth (see: figure 1.3). In these cases, the addition of emissions to existing stocks will not only make a causal contribution to raising the temperature and the related aggregated impacts; some bulks of emissions may launch the climate along a whole different trajectory. Therefore, the increment of each agent needs to be measured against the emissions of all other emitters, the existing concentration of GHGs, and in relation to these suspected tipping points.

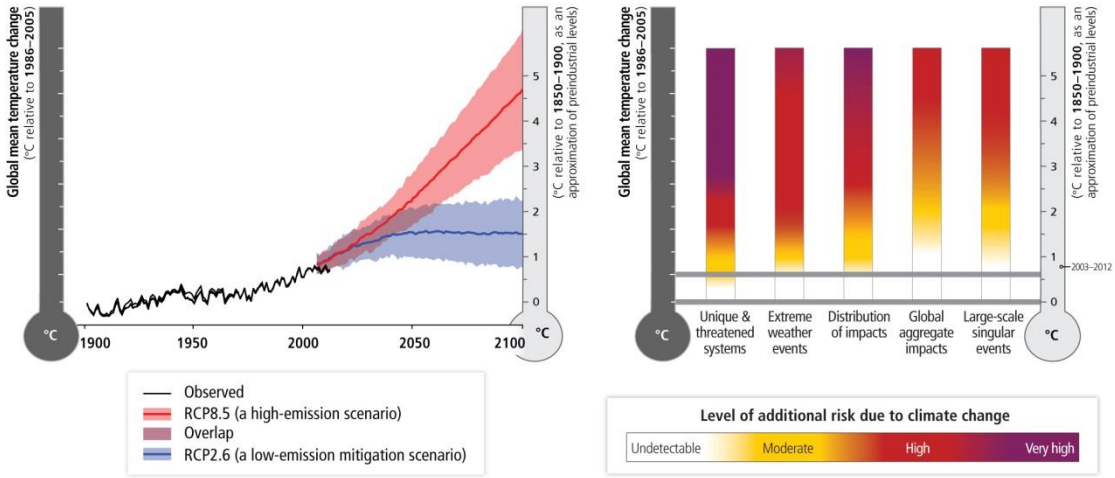

Figure 1.3: Temperature scenarios to key risks (IPCC 5AR WGII, Box TS5, figure 1)[56]

Under these circumstances, making a normative judgment on an agent's emitting actions will be complex and difficult. It will be impossible to determine who the pivotal agent is that triggers such irreversible transformations. In addition, there is no well-founded understanding regarding the precise levels of GHGs that will force such irreversible alteration in the ecosystem. This adds uncertainty to the evaluation and judgment of states' responsibility. However, there are estimations that link higher global temperatures with a higher probability of such events (IPCC 5AR WGII, B-1 and also see figure 1.3). Therefore, despite existing uncertainties, it is possible to claim that additional emissions increase the risks of climate change harms, either by contributing

[55] The melting of the Greenland ice sheet is not a short-term scenario, though; 'over a millennium or more' are the words used in the IPCC report.

[56] The shaded areas in the graph on the left represent temperature variability. This is one sign of the built-in uncertainty I described above. The two graphs in the figure also illustrate how large singular events become more likely with further increases in temperature.

to a gradual process of warming or by making it more likely that we will cross dangerous tipping points.[57]

This brings us back to the moral assessment of risk creation, which I discuss in the following chapters. But it also emphasises that the deleterious effects of climate change are an inescapable case of collective harm—an idea I introduced in considering the first stage of the causal chain. At this stage of the chain, I want to draw attention to a different related aspect: the *generality* of scientific analysis. Associating general predictions of changes to the Earth's climate system and environmental trends with GHGs stocks in the atmosphere is not the same as linking specific individual occurrences to global warming.[58] An individual weather event can only be associated with the general phenomenon of climate change in retrospect as a deviation from a long-term average for the climate. Therefore, it is difficult to claim with confidence that some present weather events are the result of climate change.

Nonetheless, we can rely on scientific research to provide probabilities regarding changes in trends of extreme weather events (IPCC 5AR WGII, 18, specifically FAQ 18.3). For a moral argument that is grounded in something akin to responsibility for causing harm, this gap in causal attribution must be bridged.[59] To understand why, think of those who will be harmed by one of the environmental impacts mentioned above—a flood for example. If we want to assign responsibility to emitters for the plight of flood victims, we must show in what way they caused the flood. Without an account that can support attributing a specific climate-related event to the emitting actions of others, it will be hard to establish such a claim of responsibility. We can only go as far as showing their contribution to a climate system where such events are more likely to occur.

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[57] For an influential political philosophy paper on how we should address and act under climate change uncertainty, see Shue 2010.

[58] There have been some recent developments on this front, especially with respect to slow process and events such as heat waves. Recent studies claim to attribute present environmental phenomena to climate change (Trenberth, Fasullo and Shepherd 2015; National Academies of Science, Engineering, and Medicine 2016). Such progress can assist in assigning responsibility to some specific environmental impacts to a degree; however, the broader claim I make here regarding responsibility attribution still stands.

[59] On this problem in the context of the 'Polluter Pays Principle' see Caney 2015, 754-5. Caney introduces a micro-level account that ties the individual action of pollution to specific harmful impacts, and a macro-level account that ties polluters as a group to the harms they impose on all affected as a group. Climate change can only be explained on the macro-level account. According to Caney, it is possible to ascribe different levels of costs to polluters based on the levels of contribution. I agree with Caney here, and my discussion is a more elaborate version of this macro-level account.

Since we cannot track the harm done to individuals at one end to the contribution of specific agents (in my account states) at the other end, we are left with the possibility of pointing to all of the emitters as jointly responsible for the specific harms *produced by the more hazardous climate system they create*. They are not directly responsible for each event; they are responsible for specific harms *via* the dangerous climate they bring about. This does not mean that we cannot ascribe a different level of responsibility to each emitting state, just that their responsibility is in essence *shared*. I explain in what way we can sustain this claim in the next chapter. At this point we see that this feature reinforces the conclusion I draw above from the analysis of the first stage of the causal chain.

Last, taking the first and second stages together, we see that higher levels of emissions are correlated with more warming, and further warming is predicted to lead to more devastating outcomes. We can infer backwards from this to get the following: if we want to avoid damage, loss, and injury, we need to limit global warming and its main cause—anthropogenic GHG emissions.[60] When we determine the level of climate risk and harmful effects we can deal with (and are also morally allowed to bring about), this will give us an approximate temperature target. This target gives us a sort of GHGs budget, or as it is often called, a 'carbon budget'. Such a budget tells us how much we can emit globally while staying in the purview of the temperature target.

Therefore, claiming that agents are causing climate change also points to a core distributive issue. How much we can emit without going above the global carbon budget raises the obvious question: how to allocate this budget? This is one of the main topics explored by political philosophers. It is mainly about mitigation duties, which is not my focus. However, I return to the distribution of the carbon budget in the next chapter and discuss it briefly to explain its relation to my argument.

The third stage: Multiple drivers of migration

This last stage examines the causal relation between climate change-related weather events and population mobility. At the beginning of the previous section, I highlighted some of the possible impacts of climate change on human lives. The last IPCC report states that:

[60] I will later claim that this is not the only way. We can *also* combat climate change risks and harmful impacts through adaptation.

> Climate change over the 21st century is projected to increase displacement of people. […] Displacement risk increases when populations that lack the resources for planned migration experience higher exposure to extreme weather events, in both rural and urban areas, particularly in developing countries with low income. […] Changes in migration patterns can be responses to both extreme weather events and longer-term climate variability and change. (IPCC 5AR WGII, 20)[61]

However, the connection between climate change and mobility is not that straightforward. "As with other elements of human security, the dynamics of the interaction of mobility with climate change are multifaceted and direct causation is difficult to establish" (IPCC 5AR WGII, 767). The fact that climate change is not the only driver of migration stands at the centre of one of the main debates in the field of climate change and migration.[62]

There is no single answer to the question 'How do climate change effects influence migration?', because in different contexts the interaction between climate change and other factors will have different outcomes. Current research on climate migration provides conflicting evidence, and more work needs to be done before a consensus can emerge.[63] Nonetheless, there is widespread agreement among migration specialists that climate change will impact human mobility. There is also widespread concern among international organizations, including the United Nations (UN) and the International Organization for Migration (IOM), to name just a few.[64]

I will discuss possible migration patterns in further detail in Chapter 4, but for the purposes of this chapter it will suffice to claim that higher exposure to climate-related stressors increases the probability of emigration from vulnerable regions. Postulating the same background of intensifying and moderating factors, the increase in environmental pressure will make it more likely that some people will decide to leave their current place of residence in response (see figure 1.4 for a model illustrating such complex relations).

As long as the relevant climatic weather patterns are part of the mechanism that drives migration, the causal chain I depict here remains complete. For our purposes here, it is sufficient to show that climate change can be part of the causal story through

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[61] Section 4 in Chapter 12 of the IPCC 5AR WGII is dedicated to migration and mobility, where it is possible to find more on the current stage of the literature on the topic.
[62] I return to discuss such related debates in Chapter 4.
[63] For a recent survey, focusing on international movement, see Obokata, Veronis, and McLeman 2016.
[64] Evidence of such concerns can be found, for example, in IPCC 5AR WGII, SPM B-2 and the Advisory Group on Climate Change and Human Mobility 2015.

its impact on the supporting conditions for human life. This also means that the argument is relevant for cases in which there is no increase in the overall level of migration from a specific location or country. It is possible that due to environmental impact, some who would not emigrate otherwise will do so, and some who otherwise might have moved will stay put (IPCC 5AR WGII, 12.4.1.2). It is still the case that climate change will be part of the causal mechanism that induces migration and therefore a plausible starting point for attributing responsibility to emitters.

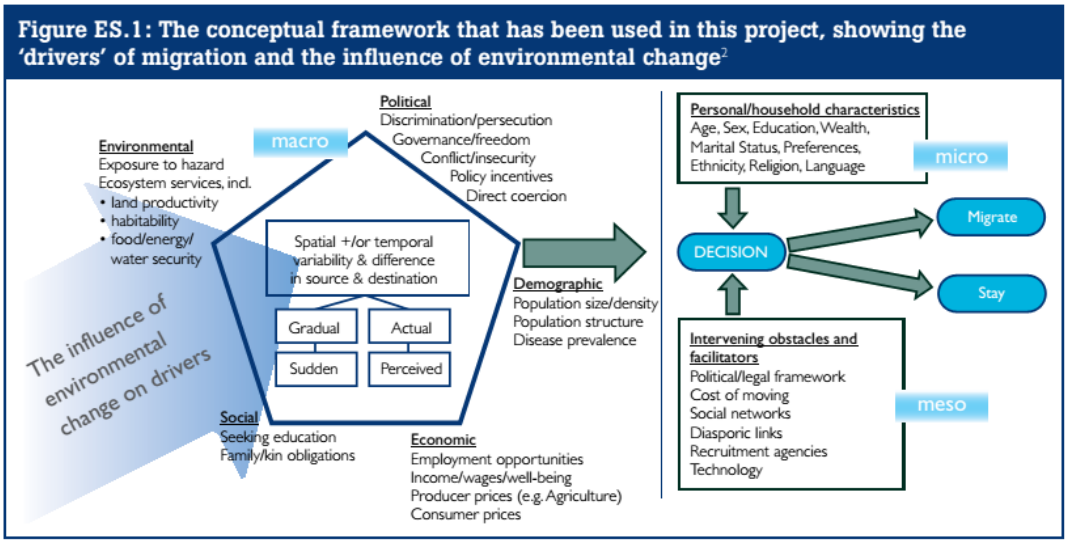

Figure 1.4: Multi-causality of climate migration (Black et al. 2011)

In this inquiry, I will bracket the other driving factors of migration and relate my discussion solely to the environmental disruptions caused by climate change. The understanding we gain from such an investigation must integrate other relevant considerations when we return to look more closely into the complicated reality. Nonetheless, one might wonder, even at this stage, what the significance of climate change as a driver of human mobility really is. If it has only a trivial impact in comparison with the other drivers at play, what force will this type of argument have? What level of responsibility and derivative obligations can we attach to it? I have two brief responses to such worries that I will mention here, but a fuller answer to this challenge will be given as my argument unfolds in the following chapters.

First, in extreme scenarios the climatic factor will be salient. Future floods and tropical storms, for example, will displace many, just as such natural disasters are uprooting millions worldwide today.[65] Also, a higher sea-level may force people to

[65] "Extreme weather events provide the most direct pathway from climate change to migration. It is widely established that extreme weather events displace populations in the short term because of their loss

leave coastal settlements and under extreme scenarios may lead to the relocation of entire populations, such as those living on small islands (IPCC 5AR WGII, 12.4.1.3). However, I do not wish to focus on these scenarios here. In less extreme scenarios the environmental impact of climate change will work in tandem with other drivers of migration. For example, agrarian societies or communities are vulnerable to the environmental changes climate change will bring—more so if they lack resources or mechanisms to cope with such changes, as is the case with poor societies and households (McLeman and Hunter 2010, 451). So, while the main reported reason for relocation will be economic, part of its *underlying* reason will be environmental processes associated with climate change (Obokata, Veronis and McLeman 2016, 118-22).

This brings me to the second response. The connection between climate change and poverty mentioned above shows that it is difficult to distinguish between different types of migration patterns and migrants 'on the ground'. This is less of a concern for the more conceptual level of analysis at the early stages of the argument. It is more pertinent when we start thinking about immigration policy in the context of climate justice. In Chapter 4 I propose to adopt a certain view of climate change immigration, namely to see it as an adaptation mechanism for immigrants and their sending societies. I develop this proposal into a policy-making framework in Chapter 5, where I explain that admission policies do not necessarily have to try to identify who is relocating due to climate change-related stressors.

As far as causality plays a part in establishing emitters' responsibility for cases of climate change migration, I think that what I provided here is enough. What emitting states ought to do and how much burden it is possible to attach to such responsibility will depend in part on the responsibility of other agents. Additional sources of obligations in this context could be outcome responsibility for other important drivers of migration such as poverty, as well as other moral reasons for having relevant obligations, such as duties of the state to its own members. At this stage, we already see both the complex causal link between states' emitting activities and climate migration and the challenges it raises for responsibility attribution. It is time to conclude the findings of this chapter and move to address these challenges.

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of place of residence or economic disruption." (IPCC 5AR WGII, 767) Almost 22 million people were displaced by disasters in 2013 (Internal Displacement Monitoring Centre (iMDC) 2014, 7).

1.6 Conclusion

This aim of this chapter was to explore how it is possible to claim that states are responsible for the harms caused by their GHG emissions. This claim is premised on a causal picture and a compatible concept of responsibility. My discussion of the three stages of the causal chain of climate migration showed that, though there are some hurdles, it is possible to causally link anthropogenic GHG emissions and human migration. The description of the causal chain unfolded a complex story that differs from more straightforward incidents of inflicting harm. The uncoordinated actions of a huge number of agents create a dangerous climate system that will bring about great devastation as well as induce migration and displacement. This causal picture raises challenges for the conception of responsibility I have offered, which is based on what can be called responsibility for bad outcomes or, following David Miller, 'outcome responsibility' and the derivative obligation to redress a foreseeable and avoidable outcome that an agent brings about. I suggested that this notion of responsibility underpins the PPP, which is one of the main candidates discussed in the literature for assigning the duties of mitigation, adaptation, and L&D to agents. This is compatible with a plausible interpretation of the CBDR principle, a core norm of the international climate regime.

To establish my responsibility-based argument and in response to these challenges I proposed to:

(i) Take states as the relevant agents for responsibility attribution.

(ii) Hold states responsible together for creating hazardous climate change; this means that their responsibility is *shared*.

(iii) Theorise the possible adverse outcomes of climate change in terms of *risk*, due to the probabilistic nature of future changes in weather patterns.

(iv) Take the state's contributions to harmful climate change as *a* cause of human mobility as sufficient grounds for attributing some responsibility.

In the following chapters, I take up these points and develop my argument for the obligations that the states responsible for bringing about climate change have towards climate migrants. In Chapter 2, I elaborate on the meaning of the shared responsibility of responsible states, its challenges, and how we can overcome them. This explanation will enable us to attribute different degrees of responsibility and associated obligations

to states according to their level of GHG emissions (addressing bullet-point *ii*). Chapter Three is dedicated to exploring the implications of risk for the notion of responsibility I use in the context of climate change (addressing bullet-point *iii*). The meaning of responsibility for bringing about bad outcomes will need to be broadened to capture risk creation, and the obligations of states will be reformulated accordingly. The view of migration I suggest we adopt in Chapter 4 responds to the challenge that multi-causality (bullet point *iv*) poses to my argument. I suggest thinking more about how migration can contribute positively (in normative terms) to reducing the harmful impact of climate change, rather than solely focusing on the reverse—the positive (in statistical terms) impact of climate change effects on human migration.

I end this chapter with some concluding remarks on the first bullet-point—taking states as the relevant agent for responsibility ascription. Some might worry that working with state-level responsibility will lead to unfair burdens being placed on individual members of such states (Caney 2005, 760).[66] Ultimately, those who will bear the burden associated with state responsibility are its members (Pasternak 2010, 188; Pasternak 2012, 361). Some of them may lead a low-carbon lifestyle or have justified reasons for their level of emissions; for example, people living in extreme cold weather who cannot use clean energy sources for heating (Caney 2009a, 131). Why should they have to pay the cost of the accumulated consequences of other members' actions? I will not attempt to provide a full answer to this objection, as it requires a detailed account of the relations between collective responsibility and the responsibility of the individual members of such groups. But I will briefly comment on a possible way to address this concern.

Why members of a polity should pay the derivative cost of the state's collective responsibility is a long-standing issue in moral and political philosophy.[67] We can employ a useful distinction between two main principles to distribute such costs to citizens. One is *sensitive* to the proportional contribution to the harm and the second is *insensitive* to their personal involvement in the collective harm-doing (Pasternak 2010, 189-93).[68] There are different ways to defend sensitive and insensitive principles.[69] I

[66] If one also includes far past emissions in the account of responsibility, the problem is starker, as Kay Mathiesen writes: "given that collectives persist over time, there will be people who are members now but who did not belong when the action occurred, or, perhaps who were not even born yet" (2006, 251).
[67] A sample of literature stretching from the post-WWII interest in the topic to our contemporary concerns can be found in (in chronological order): Jaspers 1961; Arendt 1994; Feinberg 1968; French 1998; Kutz 2000; Gilbert 2006; Mathiesen. 2006; Pasternak 2011, 2012; Collins and Lawford-Smith 2016.
[68] Avia Pasternak writes on *proportional* and *equal* distributions, but they map onto this more general description of sensitive and insensitive principles.

want to stay neutral on such possibilities, as my argument here is not bound to any of these alternatives. I will take the attitude advocated by Christopher Kutz (2000) and claim that what is important is addressing the plight of those adversely affected.[70] In addition, at the state level it will correspond to what the collective agent owes them. Internal distribution could then be a matter for internal deliberation. As with many other collective decisions regarding distribution, the public will decide such matters according to its existing procedures. I will stay at the level of states and the reader will have to make her own judgment on how the cost of the obligations I argue for should be distributed among members of the public.

[69] On when states can shift the collective costs to their citizens, see: Pasternak 2012. For some defence of the insensitive (equal) distribution of costs, see: Pasternak 2011 (equal distribution there can include proportional payments based on financial capacity to pay).

[70] In a recent publication, Kutz (2015) directly focuses on climate change and suggests an interesting view, which I find appealing, on the relations between individual-level and state-level responsibility in relation to moral feelings such as guilt. He emphasises the constructive role such moral sentiments can play in combating climate change.

2. The shared responsibility of states

> *Humanity will need to become inseparable from our responsibility to act. Accepting and acting upon our individual and shared responsibilities must therefore be the central theme of the World Humanitarian Summit.*
>
> —Ban Ki-moon, the UN Secretary-General (United Nations, 2016a, 6)

> *To fight climate change, we're all in this together. Canada is back.*
>
> —Justin Trudeau, Prime Minster of Canada (on his Twitter account at the start of COP 21, 30th November, 2015)

2.1 Introduction

This chapter continues the inquiry into the responsibility of emitting states for the adverse effects of climate change. In the last chapter, I proposed to work with the concept of outcome responsibility to ground the obligations of states arising from the harmful impact they cause through their emitting actions. The notion of outcome responsibility relies on a causal link that ties emitting activities to harms. For my project, this specifically means harms associated with human mobility. Exploring this causal link, in the previous chapter I presented some significant challenges this account of responsibility faces. In this chapter, I begin to examine these challenges and explain what *shared responsibility of states for climate migration* means. This discussion will begin to establish the conceptual groundwork for the rest of the thesis. Together with Chapters 1 and 3, this chapter develops the conceptual toolkit I use to solve my main question: what obligations do states have towards climate immigrants?

I try to accomplish several things in this chapter. First, I take two steps towards applying the concept of outcome responsibility to the context of climate change. The first step, discussed in section 2.2, establishes the degree of responsibility a state has, based on its level of emissions as part of a shared global responsibility. The second step, discussed in section 2.3, shows that the conditions of responsibility, outlined in the previous chapter, are met. This means that states can foresee the outcomes of their emitting actions and that they have the ability to avoid the detrimental consequences of their emissions. These two steps establish the responsibility of states for climate change impact, based on the approximate amount of GHGs they emit. The third task is to identify the group of states that will bear the duties of adaptation. The assignment of such duties is grounded in the notion of responsibility I advance, but incorporates additional considerations.

The appeal to such considerations starts in section 2.3, where I discuss the conditions of outcome responsibility. In section 2.4, I examine the extent to which my responsibility-based account can explain and ground all of a state's duties of adaptation. I conclude that, despite some challenges, the contributions states make to creating the hazardous consequences of climate change still play a pivotal role for responsibility attribution as well as for holding states to duties of climate justice, and particularly those of adaptation.

2.2 The shared responsibility of states and their share of responsibility

Emitting states have a *shared responsibility* for transforming our ecosystem into a perilous one and inducing more hazards and suffering. States are involved in 'unstructured harm': a systematic, unorganized way of creating harmful outcomes (Kutz 2000, 166-7).[1] As opposed to *collective* responsibility, where responsibility only emerges at the group level, shared responsibility allows us to divide responsibility based on each agent's level of contribution to the harm (May 1992, 38).[2] For collective responsibility, we need a group agent who can be held responsible directly, or we have to make a further normative move to explain and justify the fair share of responsibility attributed to each member. By contrast, for the shared responsibility of states we need neither a global collective agent, nor a separate argument that moves us from the collective-global level to the individual-state level. It is possible to infer the responsibility of each state based on its role in creating the collective harm.

We will shortly arrive at a theoretical account of causation within a group that supports this claim. The argument in this section unfolds in a particular fashion. I go through possible claims a state can make in order to exempt itself from responsibility for the disastrous effects of climate change. Through exploring and replying to such attempts to evade responsibility, I demonstrate how responsibility applies to the case of climate change.

[1] There is some interesting writing in political philosophy on agents' participation in this type of collective harm in the context of global justice; for some prominent examples, see: Pogge 2002; Valentini 2011; Young 2006.

[2] It is also different from what could be called 'joint responsibility', where the individuals held responsible bring about the outcome in the form of a joint action, based on the commitments or intentions of the acting agents (Gilbert 1990; Roth 2011; Smiley 2011).

Over-determination

Shared responsibility is typical for cases of collective harm-doing, which raises difficulties for responsibility attribution, most notably the problem of *over-determination*. Over-determination arises when an outcome could have come about even if some actions leading to it were not performed. In other words, some acts are unnecessary conditions for the outcome. Think of the fifth person carrying a table and her causal contribution to moving it from point A to point B. If the fifth person is redundant for achieving the outcome, then in what way is she a necessary cause of it's coming about? For our purposes here, some emissions may not be necessary to bring about climate change. So, on these grounds a specific state can argue:

> *Evading attempt 1: I, state A, am not the problem. It is the other states that emit who cause global warming and climate change. If they would stop emitting, my emissions would stop causing global warming.*

Such a claim is open to each state and we will have an awkward result—each state has a line of defence against being held responsible.

For evading attempt 1 to work, we must assume a threshold of GHG concentration that will bring about bad outcomes. As such a threshold case, evasion attempt 1 only works if, in case all states except state A stop emitting, state A's emissions do not bring us above that threshold. State A could say that under such circumstances its own level of emissions is not harmful. But these are not the circumstances we live in. In our real world, state emissions always make the situation worse because global warming is a cumulative phenomenon. Every substantial amount of GHGs that an agent releases into the atmosphere contributes to global warming and raises the risk of related future harms.[3] This fact makes it easier to address the case of climate change as a collective harm than other over-determination cases. With climate change, the agent's emitting actions can create some of the harm; his additional emissions do not merely cause the same outcome as others; they augment it.[4] Therefore, the contribution of states in the case of climate change can be evaluated more directly according to the amount of GHGs that can be attached to each state.

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[3] Many normative philosophers have pointed to this feature, for example Broome 2012, 34-5; Lawford-Smith 2014, 393-4; Miller 2008a, 131.

[4] This feature might cause difficulties in applying outcome responsibly for emissions to previous generations; it is not clear that such past emissions are causing harm by themselves, as it is sometimes presented (see Miller 2008a, 132). This is not a problem for my argument, however. As it will become clearer later, I qualify the application of responsibility to only relatively recent past emissions.

There are, however, some cases where the charge of over-determination may still be relevant. When I discussed the second stage of the causal chain, I presented the possibility of 'tipping points', irreversible changes to the climate system that will launch it into a catastrophic trajectory (like the melting of the Antarctica ice sheet). With such events, it is difficult to determine the specific contribution of each state to pushing the system beyond the tipping point threshold. So any state can argue something along the lines of state A's claim, now revised in terms of these potential thresholds:

> *Evading attempt 2: I, state A, am not the problem. It is the other states' emissions that are going to drive our ecosystem beyond such dangerous thresholds. If they would stop emitting, my emissions would not even bring us close to these tipping points.*

In reply, I remind the reader that in Chapter 1 I showed that each substantive addition of GHGs brings us closer to these sorts of thresholds. It makes it more likely that we will cross them. The connection between causal contribution and raising the likelihood of an outcome is provided by the more theoretical part of my answer, which I turn to now. This theoretical proposal also provides a satisfying general solution to collective harms and the problem of over-determination.

Being part of a sufficient group for causing harm

A prominent solution for collective harm problems is to consider each agent's causal contribution as part of a set that together brings about the outcome. Derek Parfit (1984, 71) has suggested a version of such a solution: a moral principle that obliges individuals as members of a group if the group is sufficient to cause the harm, even if any individual contribution is not.[5] I will base my response on recent papers by Matthew Braham and Martin Van Hees (2010, 2012) and Kai Spiekermann (2014), in which they

[5] Parfit's work on many hands or collective harms cases has received a fair amount of attention since the publication of *Reasons and Persons*. I cannot do justice here to the impact of the two main examples he provides—'the drop of water' and 'the harmless torturers'—and to the discussions that follow (though he is not the first to raise them, see for example: Glover 1975 and Regan 1980). Here are few examples that take up the general challenge: Gruzalski 1986; Kegan 2011; Nefsky 2012; Hansson 1999. More recently the challenge these cases present has been taken up in discussions of individual responsibility for climate change (see Chapter 1, n. 9). Much of the debate was instigated by Walter Sinnott-Armstrong (2005) who addresses Parfit directly.

work out a more precise account of how individual causality can be inferred from being a member of a sufficient group that causes harm.[6]

Braham and Van Hees do so by using the NESS test, where "*C* is a (NESS-)cause of *E* if, and only if, there is a set of sufficient conditions for *E* such that: (1) *C* is a member of the set; (2) all elements of the set obtain; (3) *C* is necessary for the sufficiency of the set" (2012, 613).[7] This formulation of the NESS test is helpful for resolving the challenge of over-determination discussed above. Spiekermann's proposal adds a probabilistic account that captures the case of climatic tipping points well. Spiekermann (2014) argues that the level of causal contribution to an outcome could be determined according to the probable contribution each individual makes to that outcome. In my normative study, such levels of casual efficacy are relevant for determining the level of agents' responsibility for a harmful outcome.

Based on such proposals, we can say that an increase in the *expected* harmful outcome provides us with responsibility at the collective level, here the shared responsibility of states. In addition, we can determine each state's share of this responsibility according to its contribution to the collective harmful outcome. So, beyond being a good solution for over-determination in climate-change tipping-point cases, these proposals also provide further substantive support to the idea that states have a shared responsibility for the adverse impacts of climate change. We can use the state's level of emissions as a proxy for its contribution to global warming and the corresponding deleterious effects of climate change. Subsequently, the shared responsibility of states is grounded in being part of this sufficient set of emitters and on its predictable contribution to climate change effects measured by its level of GHG emissions.

The fact that it is possible to estimate each agent's impact on the climate does not mean that it is possible to evaluate its degree of responsibility in isolation from the actions of other emitting agents. The amount of GHGs each state emits does not raise the temperature by itself; it does so by interacting with existing stocks of GHGs and the additional flow of emissions other states produce. This is why the responsibility of states is essentially shared, and the proposals above succeed in capturing this nicely.

[6] The papers are general in scope; they do not take climate change as their main subject or even as a case study. Spiekermann even rejects the applicability of his proposal to climate change.

[7] The NESS test (Necessary Element of a Set of antecedent actual conditions that was Sufficient for the occurrence of the consequence) has also been suggested as a way to determine causation in law by philosophers; see Hart and Honoré 1985, Chapter V.

Nonetheless, a state can unilaterally make things worse by increasing the likelihood of catastrophic tipping points. Moreover, even regardless of such thresholds, each substantive amount of GHGs pushes the climate further down a dangerous path. In virtue of their emissions, each state makes the adverse consequences of climate change more likely to occur, and it is predicted that we will face more such hazards even below the suspected tipping points. The collective outcomes states bring about together will be different depending on how much each of them will emit. In other words, hazardous climate change comes in degrees. Understanding contributions in such terms is consistent with thinking about state responsibility in terms of creating risk; a point I suggested in the previous chapter and will develop fully in the next chapter.

Unfairness

I want to address another possible claim states might use to exempt themselves from responsibility for their emissions. This is a more complex attempt than the first two. It has two parts that, when combined, raise concerns regarding how fair is to attribute responsibility for all the GHGs states emit.[8] The first part reiterates the attempt to evade responsibility examined above, stating that no one's bulk of emissions cause harm in itself; only when it is added to other GHG concentrations does it raise the probability of harm. But it adds that climate change risks and harms are associated with certain levels of GHG concentration. So, we have an amount of GHGs that we may be able to emit without reaching levels that science tells us are dangerous and harmful.[9] The second part suggests that identifying one state's contribution and assigning that state responsibility for our having reached such hazardous levels of GHGs is unfair. Combining these two parts, we get a new version of state A's claim:

> *Evading attempt 3: It is true that I, state A, now emit, together with other states, and that together we are raising the world temperature, but this is only because*

[8] The criticism I present here is a well-discussed issue in climate justice literature. Many write on the relation between historical emissions and the distribution of emissions rights (the right to emit GHGs)—this is what the coming passages will present. The two parts I present here follow a combination of points raised by Miller 2008a, 132-3 and Caney 2005, 763-5.

[9] Though it is good to mention that some think that in certain places we already experience the effects of climate change (see n. 58 in Chapter 1). Moreover, even if we were to somehow magically reduce our emissions to zero tomorrow morning, we are already committed to some future warming and other effects of climate change (e.g. a rise in sea levels) based on the existing concentration of GHGs and the dynamics of the climate system (Hartzell-Nichols 2011).

> *some states have emitted a lot in the past and put me in the position in which additional GHGs really put the world at risk.*

This kind of claim can be made by developing states against developed states advocating historical responsibility for climate change (such as backward-looking types of responsibility—causal, outcome or moral—that can be applied to emissions released in the distant past). This claim points to a dimension of unfairness. There is a distribution issue here: how much each state can emit within a certain limit.

The unfairness stems from the temporal position of states and their publics. Past emissions took up much of the 'space' for such 'safe' emissions—emissions that we can release without making the climate hazardous—because of their privileged position on the timeline. In other words, those who emitted earlier in history used up part of the 'space' we have to emit. For later developers, this is unfair because those early developers left them less space to emit now. This is true for current and future generations of people living in developed states, and it is also true with respect to present-day divisions between developed states and developing states.[10] Developing states want and need to emit GHGs now in order to achieve the same level of welfare that members of affluent developed states enjoy. But it might be impossible to achieve such level of welfare without emitting amounts that will create climate risk and harms. For this reason, it seems unfair to restrict their development by burdening them with the demand to curb emissions, which are only harmful due to the level of emissions of early developers.[11]

Therefore, this claim concludes, in order to know why emissions today are an appropriate ground for responsibility attribution, we need to address this distributive issue. We need to explain why states ought to be held responsible for some emissions but not for others. This requires providing an argument for the distribution of GHG emissions that states are allowed to emit. It is unfair to assign responsibility for harms resulting from the excess GHG emissions of other states to a state that has not exceeded its quota. But we must find out how much each state is allowed to emit, that is, its emission rights before the possibility of harmful effects, to complete this analysis. While together all GHGs are pushing the climate beyond its 'no-harm' limit, it seems

[10] This is true to an extent. Later in this chapter I return to the distinction between developed and developing states, to explain how I see it and in what way it is relevant to my argument.
[11] This is of course true for future generations as well. But I bracket such intergenerational issues in this project.

that only the excess emissions should be subject to responsibility attribution. The fair distribution of emission rights should address both the historical dimension as well as the different levels of development of states today. So, a revised claim will be:

> *Evading attempt 4: If everyone else would emit only the amount they were allowed to according to a fair distribution, then my emissions would not have any harmful effect.*

The just distribution of GHG emissions rights was and still is a main concern in the climate justice literature. The debate on the matter is still live, but I will not attempt to rehearse it here.[12] In general, in this work, I assume that there is a theoretical answer to the question of what such a just distribution will be and that we can apply it to the carbon budget, that is, the level of GHGs we allow to be released to the atmosphere globally. However, for evading attempt number 4 to succeed a stronger assumption should be made. We first need to assume that there is a fair distribution that, if and when it is upheld by all states, will result in a level of GHGs that does not have adverse consequences. Under such a stipulation, there will be no hazardous climate change. Then we have to relax part of this assumption, and consider the case of some states emitting beyond their allocated budget. When this happens, the states as a group may reach a harmful level of GHG concentration. And since they are all contributing to such an outcome, they all share the responsibility for it. In *this* scenario, state A has a point. The claim expressed above is true because the reasons that state A's emissions are contributing to a harmful outcome is the non-compliance of other states.

However, this claim to an exemption from responsibility fails, and for a fairly simple reason: it is not the case that states have a share of a global emissions budget that they can use without contributing to more expected climatic hazards. In our real world, at present, we are on the edge of such a 'no-harm' limit and most likely have passed it. Even if the entire world were to miraculously be decarbonized tomorrow, through past emissions we have already committed to a level of warming that is associated with the potential for destructive effects (Shue 2015a, 322).[13] Furthermore, the literature on a fair allocation of emissions rights is informed by climate science and international

[12] A good, but not exhaustive, list of relevant papers is: Caney 2005, 2010a, 2012; Grasso 2012; McKinnon 2015; Meyer and Roser 2012; Miller 2008a; Moellendorf 2012, 2014; Neumayer 2000. Despite their differences, these writings have a lot in common. For a more distinct position see Posner and Sunstein 2008; Posner and Weisbach 2013.

[13] Shue rightly mentions the on-going impact of already released GHGs and the dynamic of the ecosystem as leading to alterations in the climate, based on current levels. He mainly mentions the rise in sea levels, but more general effects can be drawn from IPCC 5AR WGII, Table SPM. A1.

negotiations. Scholars discuss a carbon budget that can match 2 °C of warming; this is thought to be compatible with a relatively stable climate (IPCC 5AR WGII, FAQ 19.1).[14] Achieving this temperature goal, and even achieving it with a normative philosophy stamp of approval for its fairness, will still entail a fair amount of adverse climate change effects. In short, none of the states that have emitted or that emit a lot of GHG emissions have complied with what could be called a fair portion of a global carbon budget that is compatible with a 'no-harm' threshold.

Maybe we should understand the appeal to fairness differently, though. State A may take my reply on board but claim that under such circumstances it cannot avoid contributing to the hazardous effects of climate change. Such a line of argument presents a different strategy from the attempts to evade responsibility I have examined thus far. The claim is no longer an attempt to prove that the agent should not be considered a cause of harm, but rather that the emitting activity and its adverse consequences can be justified or excused in some way.[15] If state A can establish its immunity from responsibility or its reduced responsibility, then it might still be unfair to hold state A responsible for the impact of such emissions. How can this be established? Simply by showing that the notion of responsibility for bad outcomes does not apply to all or some of a state's emitting actions because the conditions of its application do not hold in that state's case. In the definition of outcome responsibility, I presented two conditions—avoidability and foreseeability—which have to hold to make the causal connection between an agent and an outcome relevant for responsibility attribution.[16] I turn to examine these conditions in the context of climate change in the section to follow.

In summary, in this section, I have defended the possibility of attributing responsibility to each state according to its contribution to the collective harms of climate change. I presented two objections to my position, one from over-determination and the second from unfairness, and rejected them. The upshot, then, is that the shared

[14] In the 2015 international summit in Paris, states agreed to strive toward a lower goal than this, going for warming up to 1.5 °C (UNFCCC 2015, Article 2.1.a).

[15] This is different from Miller's (2008a) position. Miller thinks that it is mainly a question of fair distribution and not of creating a harmful outcome. Some of my conclusions concur with Miller's claims, because I will exempt past emissions based on the foreseeability condition in the next section (as he does as well). But my causal account does place more direct responsibility and obligations on emitting states than his account allows.

[16] In section 2.4 I will go back to discussing a complaint of unfairness akin to responsibility evasion attempts 4 and 5. The claim there will be focused on adaptation duty, and to understand it we first need to go through the coming section on the application of the two conditions of responsibility to the case of climate change.

responsibility of states can be disaggregated based on each state's level of GHG emissions.

2.3 Meeting the foreseeability and avoidability conditions

The concept of outcome responsibility is not a mere description of causal production—A causes B. The causal link is a prerequisite for responsibility attribution, but we must also show that the agent had relevant knowledge of the outcome and the ability to do otherwise. These are the foreseeability and avoidability conditions portrayed in Chapter 1. The second step in applying responsibility to emitting states is to examine whether these conditions are met. Structurally, I will continue exploring this through state A's attempts to exempt itself from responsibility, though the claims in this section will be more successful. In other words, this section will show where these conditions are not fully met.

The ability to foresee harmful climate change

The ability to foresee certain conditions motivates the following claim:

> *Evading attempt 5: I, state A, cannot be held responsible for the hazardous consequences of climate change, as I did not know and could not reasonably have been expected to know that they would result from my emitting activities.*

Let us see how far this claim can reach based on what is and was known about climate change.

In the case of climate change, it seems that many of the potential calamitous outcomes are known to the agents, as can be discerned from the IPCC reports I have briefly summarized and from ample scientific research that is publicized in an array of ways. Therefore, emitters can no longer use a lack of relevant knowledge as an excuse. However, this claim may be used to reduce responsibility for some of their past emissions. Many political philosophers take the early 1990s (usually referring to the publication of the IPCC's first assessment report) to be the point after which agents can no longer use ignorance as an excuse for not taking responsibility for their emissions.[17]

[17] For examples, see: Baer 2006; Caney 2005; Faber 2008; Baatz 2013; Moellendorf 2014; Shue 2015a; Singer 2002. Some take different dates, such as the mid-80s, as the point where there was sufficient scientific evidence for the causal link (Miller 2008a, 129). I take the publication of the IPCC report as a

From that point, then, it is possible to connect responsibility for combating climate change to the contribution of states to the problem, that is, taking their share of accumulative GHG emissions as a function of each state's share of responsibility. The obligations and burdens of states are (at least partly) determined based on their emissions levels. There is a problem with this, however. On such an account we have a deficit of responsibility, as a portion of emissions was emitted pre-1990, a period of time in which we cannot expect agents to have known the full consequences of their emitting activities.

Addressing this deficit, it is possible to consider other normative sources. When we think that the plight of others is acute and someone should respond to it, and when we cannot assign backward-looking notions of responsibility to account for why an agent ought to remedy a situation, we may consider forward-looking accounts of responsibility too. Here, we can appeal to the 'respective capabilities' of states that the UNFCCC convention provides as an additional principle alongside the CBDR. This, I suggest, can be interpreted along the lines of the APP and points to states with a better capacity to take the relevant burdens and fulfil duties that will also cover the impact of pre-1990 emissions.[18] At this point, it is enough to conclude that the foreseeability condition is met (for present and relatively recent past emissions) and cannot be used by emitters as a way to avoid taking responsibility for the effects of climate change to which they are now (and since 1990) contributing.

The ability to avoid harmful climate change

In order to apply the 'ability to avoid' criterion to the case of climate change effects, we must show that a state could act differently, that is, that it refrain from contributing to the creation of hazardous climate effects. Focusing here on mitigation, a claim for exemption from responsibility will have to suggest that there are no reasonable options for curbing emissions:

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clear-cut point in time, which also has some official recognition from states in the scientific evidence—one that leaves little room for claiming justifiable ignorance based on the foreseeability condition. For a relatively short and captivating description of the development of climate science and what was known and when, see: Jamieson 2014, Chapter 2.

[18] Cf. Caney 2005, 769.

Evading attempt 6: I, state A, cannot be held responsible for the hazardous consequences of climate change, as there is no way I can reduce my GHG emissions.

However, this is a rather unconvincing claim as many mitigation options are already available, ranging from bigger steps such as using existing, cleaner sources of energy, modifying agricultural methods, introducing a carbon tax, increasing energy efficiency, and promoting and advancing less polluting patterns of consumptions like lower meat consumption, buying local, and so on. In addition, states can enhance the Earth's capacity to absorb GHGs, mainly carbon dioxide, by enlarging 'green' spaces in their territories: planting more trees, creating parks, and so forth.

Moreover, they can work to make further mitigation possible. So even if state A were to revise the claim, suggesting that at some point in time it did not have available options for emissions reduction, this would not show that the condition of reasonable avoidance is not met. For example, states can invest in research and development of alternative, large-scale clean energy production.[19] This type of prudent action, which enables more mitigation in the future, corresponds with my claim that the ability to avoid includes the capacity to make avoidance a real possibility for the agent. In other words, it is not only about what an agent can do right now, but also what she can do right now in order to do more (or avoid more in this case) in the future so that she can live up to her responsibility.

It is difficult to provide a yardstick for mitigation efforts that establishes when states have done all that they can reasonably be expected to do to avoid bringing about harm. Emitting activities are necessary to fulfil justified interests; the trivial example is respiration, which emits CO_2. In almost all economies, and especially in industrial economies, producing food, housing, clothing, healthcare, and education (all of which I take to be undisputable goods that fulfil basic human needs) involve the emission of GHGs to a certain extent. So a revised version of state A's claim may look something like that:

[19] It is also possible to invest in research and development of geo-engineering technologies; carbon capture and removal are probably the best known (but there are others). This route is more contested than those previously mentioned. On the different technologies, their risks, and the main reservations, see: Shepherd and Rayner 2009, ix–xii, 1–3, 45. However, some suggest that reliance on geo-engineering solutions is implicit in governments' climate policies. Anderson (2015, 898–900) argues that the gap between the commitment states make to mitigation, their current level of emissions, the existing development plans they make, and their current dependency on fossil fuel energy can only be explained in this way.

Evading attempt 7: I, state A, cannot be held responsible for the hazardous consequences of climate change, as I cannot reduce my level of GHG emissions without a significant disadvantage. It would be too costly and you cannot reasonably expect me to make such sacrifice.

On the face of it, this sounds like a plausible claim. Demands on others typically hit a limit somewhere, and sacrificing such fundamental needs is perhaps asking too much. But some of the emissions produced support lifestyles that are well above the fundamental human needs enumerated above. So while as far as the ecosystem is concerned every unit of CO_2 emitted is the same, in some sense not all emissions are equivalent. Some emissions support more fundamental and urgent needs and others more excessive and even frivolous lifestyles. This idea is captured by Henry Shue's (1993) oft-cited terms *subsistence* and *luxury* emissions. When comparing states with such terms in mind, we find that some developed states enjoy high levels of material well-being while developing states, or many of them at least, are still struggling to provide a similar level of welfare to their members.[20]

This distinction between developed and less developed states should not be confused with the different capacities to act on climate change that corresponds to the 'respective capabilities' of states. I am not discussing how to distribute among states the duties to tackle climate change in a general way. Here I am explaining that the avoidability condition is not necessarily met for all emissions. We have reasons not to assign outcome responsibility to a state if its emissions are of the kind that supports fundamental needs that states cannot provide without emitting GHGs.[21] Because we cannot reasonably expect a state to compromise such justified goals, we can only assign it a moderated level of responsibility. This is not merely excusing some of the responsibility a state has. The state has a justified reason to emit some level of GHGs, and we will not ascribe outcome responsibility to the expected impact of this bulk of emissions.

[20] This is not to deny internal inequalities in each state. However, the aggregate level is an indicator of the relevant level of welfare of a state. We can make a more in-depth examination of consumption patterns and so on, but this is beyond the scope of the present work. I take it for granted here that we can associate much of the emissions in developed states that are also among the big emitters with lifestyles and material welfare that go beyond the fulfilment of basic human needs. How each state then tackles poverty and inequality is another matter. This issue of internal inequality can be related to the way each state delegates the costs of collective-level obligations. I gave a brief commentary on this intricate matter in the conclusion of Chapter 1.

[21] Simon Caney's (2010a, 217-8) revised Ability to Pay Principle (ATP in his paper) and Darrel Moellendorf's anti-poverty principle (2014, 22-3) reflect a similar concern. Cf. McKinnon 2012, 97-101.

Accepting these claims means that we can roughly distinguish between developed and developing states when we attribute responsibility for climate change effects. It is not that developed states do not have to emit in order to support such fundamental needs, just that their emissions support a higher standard of lifestyle that cannot be justified in the same way (Shue 1999; 2015a). In addition, similar needs will demand a different level of emissions to support them, based on the context. For example, heating in very cool countries will require a lot of energy (Caney 2012, 264). So, accounting for 'subsistence' emissions will have to be nuanced to capture such factors.

As with the foreseeability condition, we see that we have some gap between the overall amount of emissions and the group of emissions we can attach responsibility to, according to the view I have advanced so far. We face a responsibility deficit. Since the level of emissions is associated with hazardous effects, there will be some risks and harms that outcome responsibility cannot account for.[22] The potential impact of climate change is so damaging that we do not want to leave it unaddressed. Therefore, we should incorporate additional reasons for holding states to duties relating to climate change. It is possible to demand that wealthier and more competent states take on more duties relating to climate change. This is sometimes suggested under the Ability to Pay Principle (APP) mentioned in the previous chapter.[23] Some argue that the possibility of benefiting from the level of welfare created (at least partly) by past generations' emitting activities (represented by the Beneficiary Pays Principle, the BPP) should also inform our judgment regarding a state's duties.[24]

These complementing reasons or principles should provide a fuller account of the responsibility and duties of states. What we get is a layered account that combines the APP and perhaps the BPP together with outcome responsibility or the PPP (which is the principle I suggested my account of responsibility underpins; see Chapter 1).[25] Any matrix we try to design for calculating the level of responsibility for states and their degree of duties ought to compute all of these normative principles. Some have

[22] An additional reason for such a deficit is the impact of non-anthropogenic climate change. There is also a natural dynamic within the ecosystem that contributes to the process of global warming and climate change. We cannot assign outcome responsibility to such processes, as their emissions are not the product of human agency (at the individual or collective-level).

[23] By combining something like the APP with PPP some writers try to overcome their limitations; see Caney 2005, Shue 1999; Page 2008. I will not elaborate on such discussions here; I just take a few points from them that help explain my position.

[24] For examples of scholars defending or using this principle for distributing climate change duties, see: Baatz 2013; Butt 2013; Page 2012.

[25] The most obvious account that suggests such supplementary reasons can be found in Simon Caney 2010a, where he offers *the remainder* and *the hybrid account*.

suggested guidelines for such a calculus and others have opted for methods for doing so.[26] I accept the need for a more complex account but want to stress that outcome responsibility has a distinct role within it. As presented in Chapter 1, I take the reasoning of outcome responsibility to be akin to the logic of corrective justice. As such, I suggest to take it as the primary source of duty, while other principles can serve as complementary reasons that assist in overcoming the limitation of scope identified in the discussion above. Here, then, when I write about the obligations states have, in the background is this complex account that combines different reasons. Nonetheless, the focus and emphasis are on outcome responsibility as the core grounding of such obligations.

To sum up, from the little I have written here, it is clear that it is possible to avoid contributing to creating a more dangerous climate, at least to some degree. So the avoidability criterion is satisfied with respect to what can be reasonably expected from states. Also, the foreseeability criterion is fulfilled for present activities, though it only applies to relatively recent past emissions (from around the early 1990s). With this, I complete the second step in the application of my chosen conception of responsibility to the case of climate change. The first step (explored in the previous section) explained how we can assess the responsibility of each state as part of the shared responsibility of all emitting states. Here, I have established that the two conditions for outcome responsibility are met for emitting states (with the caveats regarding each condition analysed and discussed).

2.4 Responsibility for hazardous climate change and adaptation duty

In this section, I make the third step in applying my notion of responsibility to states: identifying the responsible states. With this step, I narrow down the scope of responsibility ascription in two ways. First, I focus on adaptation, and second, I classify the target-group of states that are the appropriate agents for responsibility and duty ascription. I start by explaining my focus on adaptation and which of the emitting states I take to be the proper bearer of relevant duties. This part completes the description of the responsible agent, here the responsible state, to which I will assign obligations in relation to climate immigrants in the chapters to follow. I then move to show that

[26] For example, on different measurements schemes, see: Bear et al. 2010 (and Hourdequin 2009 for revised suggestions); Füssel 2010; Müller, Höhne and Ellermann 2007.

despite the limitation of the scope of outcome responsibility discussed above, it can still play a significant role in grounding the degree of duties states incur. The data we have illustrates that the emissions of recent decades lead to a significant level of responsibility. At the same time, it also shows that my argument may warrant burdening some developing states with greater duties of adaptation than many people may think is fair. I end this section by alleviating this concern, showing why my argument does not grant such a conclusion.

Responsibility and adaptation duties

In this thesis, I focus on adaptation and the relevant obligations associated with it. Adaptation can be understood as the ways in which individuals or systems cope with the impacts of climate change.[27] Migration falls under climate change adaptation. Mobility is a coping mechanism on the part of individuals and communities when they are faced with internal and external pressure. It is also a response to environmental stressors, and therefore we expect it to be a response to those associated with climate change.[28] Taking migration to be a form of adaptation is more than a description; it is a scholarly and a normative position, on which I elaborate in Chapter 4. Here, it is enough to point out that migration is not an issue of mitigation. Human mobility is not about reducing GHG emission.[29]

When duties of adaptation are invoked, typically what this means is the obligation to support, finance, and advance adaptation policies. These efforts can be divided into

[27] In Chapter 1, I cited part of the definition given in the IPCC report: "The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities" (IPCC 5AR SYR, Annex II, 118).

[28] I presented this link between weather events associated with climate change and human mobility in Chapter 1, section 1.5. I return to it in Chapter 4.

[29] That said, some try to tie the two, arguing that the relocation of poor individuals from a developing state to a wealthy developed state will increase the receiving state and the global level of emissions. The idea is that the carbon footprint in developed states is much higher than in the developing poor states. Therefore, increasing South–North international immigration will be damaging to mitigation efforts, as it will increase global GHG emissions (see Miller 2016, 107-8). Here are a few brief points on why I take this to be mistaken. First, if developed states act to decarbonise their economies, as it seems that they ought to according to most arguments regarding mitigation duties, then the carbon footprint of newcomers will be less significant as a result. Second, the reason why poor developing states have a low level of emissions is precisely the fact that they are poor and developing. They are struggling to provide a level of welfare that is accepted as the norm in more developed states. In my view, and according to some of the leading philosophers writing on climate change justice (Caney 2010a, Moellendorf 2014; Shue 1999), global mitigation policy should allow developing states to emit more so they can provide their citizens with adequate levels of rights and welfare. The trend of emissions ought to bifurcate, so it goes down for developed states and up for developing states (I discuss this point later in this chapter). Therefore, it is not clear that relocating from the latter to the former, in the long-term, would have the impact on the global level of GHGs suggested in this argument.

two kinds: domestic and global. Within the climate regime, care for the domestic part is manifested in national adaptation plans and has more recently been expressed in the pledges each state provides in its Intended Nationally Determined Contributions (INDCs).[30] Commitment to the global adaptation efforts is typically expressed and given in pledges to adaptation finance: money that goes to international funds or through other channels to support adaptation projects and programs in other states, mainly the least developed states.[31] In political philosophy, the duty of adaptation seems, at least implicitly, to always refer to the global kind.[32] But I think the distinction is important, and assists in classifying the group of states that ought to bear adaptation duties in general and global duties in particular.

The distinction between domestic and global adaptation duties I suggest here rests on an underlying assumption, which I will now make explicit:

> *Societal justice duties assumption:* I assume that states have duties towards members of their publics. They are the administrative body whose purpose and design is to secure and realize some needs and interests of the public. Through state institutions, it is possible to pursue and achieve a notion of societal justice.[33] Therefore, we expect states to address the losses and injuries climate change will cause to publics within their jurisdiction.

Following this assumption, I suggest thinking of adaptation duties as a two-tiered system. Each state will first care for those of its own members who are adversely affected by climate change. As far as it bears duties of adaptation, it will carry them out within its jurisdiction. Then, the state may also have global duties of adaptation towards vulnerable individuals beyond its territories. What type of adaptation duties a state has

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[30] On the role of domestic adaption goals as part of states' (INDCs), see Kathleen Mogelgaard and Heather McGrey's (2015) explanation on the World Resources institute website. The explanation includes a useful illustrative map that shows which states include adaptation as part of their INDCs (which is not to say that states excluding it do not have relevant adaptation policies). The detailed INDCs can be found on the UNFCCC website (http://unfccc.int/focus/indc_portal/items/8766.php).

[31] Often the commitment states make at climate change international summits to raise 100 billion US dollars per year is mentioned (see in Paris COP21 website: http://www.cop21.gouv.fr/en/one-hundred-billion-dollars). International adaptation is a complex web of different schemes and institutions. A good overview of its structure and magnitude can be found on the Climate Policy Initiative website, including useful illustrations: http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2015.

[32] This is true as far as the intergenerational issue is bracketed, as it is here.

[33] By this I simply mean some view and vision of (mostly distributive) justice in *a* society. There is no specific content I allude to here, and it should be compatible with a very broad array of theories.

and to what degree is determined by its level of responsibility, the adaptation needs of its public, and its capacity to accommodate them.[34]

Some states either have a very low ability to cope with climate change or will experience impacts that will exceed whatever coping capacity they currently possess. They will need the assistance of other states to deal with the disastrous impact of climate change. Furthermore, there can be a normative 'negative' gap between the level of responsibility we ascribe to states and their domestic adaptation needs. They might be highly vulnerable to climate change hazards or perhaps bear very little responsibility. Either way, such states will be subject to a high level of vulnerability, but are only responsible for the impacts of climate change on a much lower level. The reverse is true as well. States can be responsible for the adverse impacts of climate change to a great degree, but with low levels of vulnerability and a high capacity to adapt to climate change. The responsibility they are assigned will exceed domestic adaptation needs; they will have a 'positive' gap between their level of responsibility and the ability to facilitate domestic adaptation. These states will assist those states with a 'negative' gap.

If we generalize this idea, we get three types of cases: (1) net-creditors, (2) neutral states, and (3) net-debtors.[35] When the measurement of a state's adaptation duties (its responsibility adjusted and supplemented as suggested above) show that it is a net-creditor, this means that vulnerable individuals affected by climate change in its territory face unaddressed adaptation needs. Net-debtor states are those who are both more responsible and more capable, and less vulnerable to climate change effects. Therefore, for them, outcome responsibility also grounds their global duties of adaptation. States that on this measurement will be net-debtors should be the ones addressing the unaddressed adaptation needs of net-creditor states. When a state's degree of duty and its population adaptation needs even out, it will be neutral; there will be no demand to assist vulnerable individuals outside its jurisdiction. In this case, a state's duties of adaptation will be fully exhausted by its domestic efforts.

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[34] More generally, some suggest that the measurement of the climate change duties a state has should incorporate similar considerations. Such calculations of responsibility *cum* GHG emissions adjust it by factoring in variables such as GDP and population size. For examples, see: Baer 2010; Füssel 2010; Müller, Hönne and Ellermann 2007. For a DIY comparison, see the range of possible variables on the World Research Institute website's 'equity Explorer' (http://cait.wri.org/equity). Such a calculation method will also result in a moderated degree of duties that can be assigned to developing states—a claim I make with respect to adaptation duties in the coming passages.

[35] The terminology and the general idea is drawn from Paul Baer (2006).

This could be seen as a different way of describing a more familiar distinction between developed and developing states, focused on adaptation. And to a great extent it is, but the two descriptions are of course not entirely compatible. I have given a general criterion for dividing adaptation duties into domestic and global goals. We can classify states into the categories I suggest, but it is not guaranteed that we will get a perfect overlap with what we now call 'developed' and 'developing' states. It is possible that some of the states that are considered part of the 'developing' group will be found to be neutral or even net-creditors. It is also possible that states that are now taken to be 'developed' states will be found to be net-debtors. Moreover, as with the more familiar distinction between 'developed' and 'developing' states, the reality is dynamic and states can move from one category to the other in time. Since my focus is duties of adaptation on the global level, from now on I will usually refer to states that can be found to be net-debtors as Responsible States (hereafter RSs).

How much is left of responsibility for adaptation?

Above I identified the group of states that in principle bear adaptation duties. The main basis for assigning them these duties and to what degree is the concept of outcome responsibility. And as I argued, we take a state's contribution to climate change via GHG emissions to be the basic measurement for their level of responsibility. However, I also pointed out that the conditions for outcome responsibility limit the scope of its application to a subset of GHGs from the global concentration and flows of emissions. So some may wonder whether there are any emissions left over to which the notion of responsibility I use applies.

Well, the answer to this question is yes. One main limitation came from the foreseeability condition. That is, we can only assign outcome responsibility from the point in time after which it is reasonable to expect states to know the consequences of their emitting activities. I suggested, following other philosophers, that the publication of the first IPCC assessment report at the start of the 1990s can be taken to be this clear-cut point in time. But states have not stopped emitting GHGs and continue to push the planet along a dangerous path. The global level of emissions from 1990 onwards is still on the rise (see figure 2.1(a)). Developed states, who I just stipulated will be among the RSs, have not reduced their GHG contribution very far. The US, the European Union states, Japan, and Canada contributed 33% of the global accumulated GHG emissions

between 1990 and 2011 (see figure 2.2). Moreover, currently, states are committed to emission reduction based on a set year, such as 1990 (other states have a later year as the baseline for measuring emissions reduction). Considering that for many of them levels of emissions were high on this date, such expected reductions still amount to a considerable level of GHGs that will be released to the atmosphere.[36]

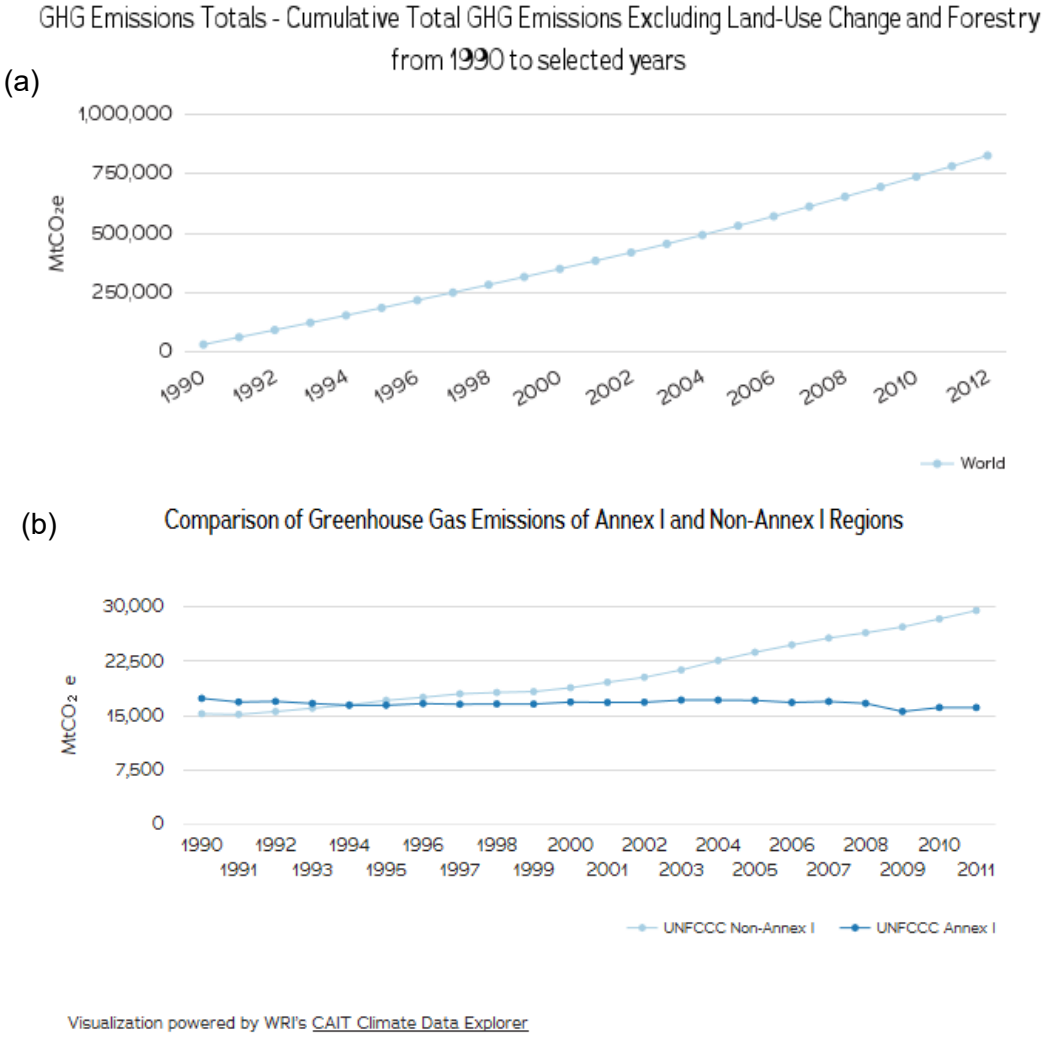

Figure 2.1: ***(a) Total world cumulative GHGs emissions 1990–2012; (b) comparison of Annex I and non-Annex GHGs emissions 1990–2011.*** The division between Annex and non-Annex states can represent (to an extent) the division between developed and developing states. The uprising graph of non-annex states shows their growing contribution to the global level of emissions.

However, the past twenty-five years have seen the entrance of some developing states into this group of big emitters, mainly Brazil, Russia, India, and China (BRIC)

[36] More on the problem of determining the emission rights of states based on a set point in time (coined 'grandfathering'), see: Moellendorf 2012.

(see Figures 2.1 (b) and 2.2). We expect this trend to continue in the future: developed states reducing their emissions and developing states increasing their level of emissions.

In some sense, we also hope for this. We expect developed states to curb their emissions and move in the direction of decarbonisation, while allowing poorer developing states to emit GHGs, enabling them to grow their economies and develop out of poverty. In other words, developed states bear more duties of mitigation. The reasons for this lies in the distributive nature of the problem and what many think fairness demands. I explained in Chapter 1 that we decide what level of further GHG emissions we can emit without destabilizing the climate and this gives us a carbon budget that can be allocated to each state. Considering moral principles of distribution such as the PPP, the APP, and for some also the BPP, the developed states are assigned with greater duties in terms of mitigation.[37]

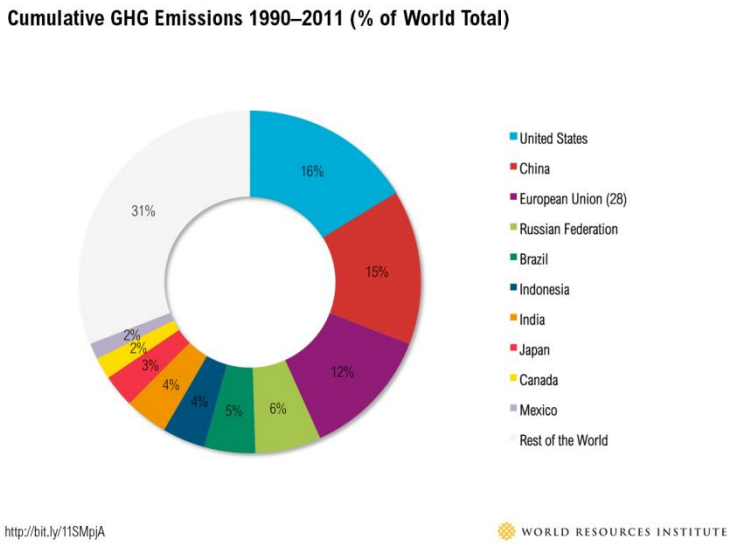

Figure 2.*2: Cumulative GHGs Emissions 1990–2011 (% of world total)*

The reason I bring up the issue of mitigation again here is that together with my focus on adaptation and the trends I have just presented, they point in the direction of an uncomfortable conclusion. My position on the outcome responsibility of emitting states seems to ground something like the following argument. States like the BRIC are exempted from or incur reduced degrees of mitigation duties, they are allowed to emit more under a fair scheme of GHG-rights distribution. Nonetheless, and to an extent as a result of this GHG allowance, such developing states share a larger portion of the responsibility for bringing about the hazardous outcomes of climate change. Their

[37] Caney 2010a, Moellendorf 2016, Shue 1999; Page 2008.

contribution to climate change grows with the increase in emission levels, which is the basis for our attribution of outcome responsibility. In other words, BRIC states, for example, significantly contribute to a hazardous climate that creates adaptation needs. On the face of it, they bear corresponding duties of adaptation as a result. And such duties may match those of developed states, as BRIC states have emitted 34% of the world's accumulated GHGs for 1990–2011 (see figure 2.2). Such a conclusion strikes many as unfair.

It is possible to reformulate this claim of unfairness as another version of state A's evading attempts numbers 3 and 4:

> *Evading attempt 8: Letting me, a developing state A, emit responsibility-free GHGs on the one hand, and holding me fully responsible for them when it comes to adaptation, on the other hand, is unfair. I should not bear the same degree of duties as a developed state that has put me in a position where my permitted level of emissions leads to harm.*

Unlike the former evading attempts, I will not try to refute this one. I agree that it is not right to place the same, and in the future potentially more, adaptation duties on developing states, mainly those undergoing rapid economic growth such as BRIC states. So instead of showing what is wrong with state A's claim, I will explain why my argument is not committed to such erroneous inferences.

Assessing the degree of responsibility of each emitting state according to its emission levels provides a basis from which to determine what duties of adaptation it in principle has. But it still does not tell us how much we will demand from each state in terms of contributing to the *global* efforts of adaptation. The assessment of which states are RSs given above explains why, and I will use it here to respond to the charge of unfairness in state A's claim.

I will take as an example developing states with emerging economies, such as the BRIC, with an increasing impact on the global climate system. Two aspects of my account of a state's duty of adaptation explain why some such developing states will not be among the RSs. The first is the division of duties of adaptation into domestic and global duties. The second is the incorporation of considerations such as vulnerability to climate change effects and the capacity to cope with them. Considering these two aspects, it is not that BRIC states will not bear any adaptation duty, but rather that their obligations will mainly be exhausted domestically. Some of these states may be

classified as net-creditors, even if they have emitted a high level of GHGs, to which we can *prima facia* attribute outcome responsibility. This will be because they are highly vulnerable to climate change and less capable of tackling it by themselves. Consider India, Russia, and China, as illustrative examples, taking the US as a reference point that is representative of the developed states—for many, it is the chief RS in the developed world (see a summary of the comparison in Figure 2.3).

India perhaps is the most obvious example of a net-creditor among the big emitting states (at least among BRIC states). When we use some complex matrix to calculate the degree of adaptation duty, we see that its development needs and vulnerability to climate change outweigh its overall contribution to global warming and climate change.[38] Even if we assign India responsibility based on its GHG emissions, we may not derive from this that it bears adaptation duties, due to its low capacity and high vulnerability. And if according to some calculations India should bear some duties of adaptation, I contend that it should target domestic efforts, which in all likelihood will only cover some of its adaptation needs. Therefore, India should count as a net-creditor, deserving financial support to address the adaptation needs of its vulnerable members.

Other developing states may come out as net-debtors from such a calculus, and hence will be among the RSs. Russia might be one example, especially if one considers a version of the BPP.[39] Though climate change is a threat to Russia, as it is to all states, Russia is not among the most vulnerable states and its level of development and wealth is comparably high. When we compare it to the US, we see that the responsibility and duties we can infer from the data I have collected are not that far apart.

[38] I used the World Resources Institute's 'equity explorer' (http://cait.wri.org/equity/) to design the comparison. I compared only four indicators: (1) cumulative per capita GHGs emissions; (2) projected total emission by 2030; (3) degree of vulnerability; (4) development needs measured by GDP-PPP per capita (see figure 2.3). The comparison should be taken very speculatively, as people may use different variables, measurements, and estimations based on other data sets and get different results. Nonetheless, I think that for the states I chose as examples, the results will be similar enough to classify them as net-creditors, net-debtors, and neutral states in the way I have.

[39] I did not include this in my comparison, and it is still a first indication of this result. But if one wishes to incorporate something along the lines of the BPP, Northern countries, Russia included, could be, at least in the medium-term, a net-beneficiary of climate change, mainly for agriculture productivity (Mendelsohn et al. 2000).

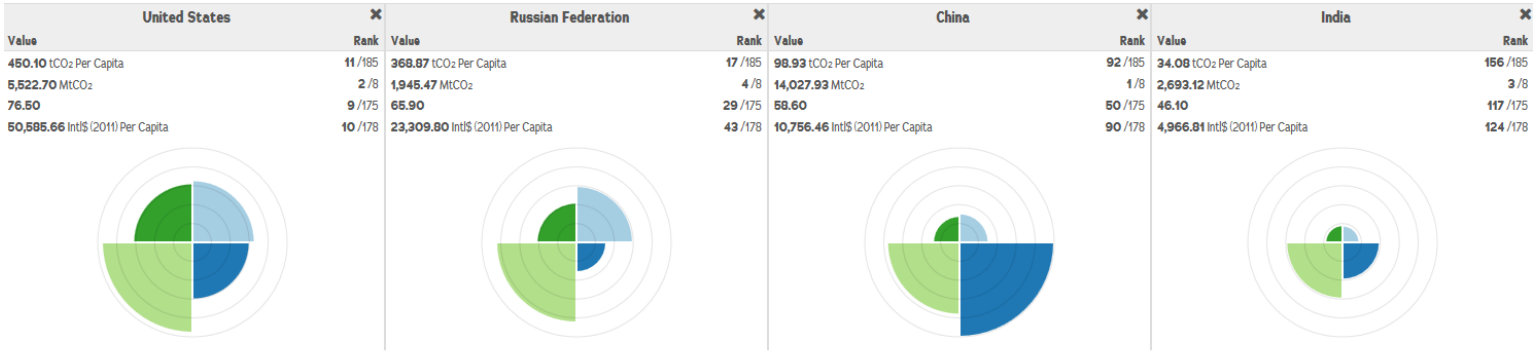

Figure 2.3: ***A comparison between US, Russia, China, and India*.**
I chose four indicators for comparison (see index at the left-hand side of this figure). They are not determinate factors that can tell us the degree of adaptation duties each should shoulder. They should be read as an illustrative tool to investigate this question. There are a few clarificatory points to make on this chart. First, it is good to note that the projected CO_2 emissions (blue shaded region) does not control for population size and the measurement of historic emissions from 1990 (the pale blue shaded region) does factor population size. There might be a simple methodological reason for that (we do not know the size of future populations), but we should bear in mind that disregarding population size can bias the calculation. Second, it should be noted that vulnerability (pale green shaded region) is indexed in a reverse-ranking order. It means that a high-ranking (like the US being 9th on 175 states), means very low vulnerability in comparison with other states. Therefore, a larger region on the chart means low vulnerability and a small region high vulnerability. Lastly, the chart measures the society's levels of poverty and development needs based on the state's GDP and purchase power per person. This is a rough measurement, but for the illustrative needs of the examples it will suffice.

The chart illustrates the comparison I made above. *India* is the poorest and most vulnerable state with the lowest level of responsibility for climate change. *China* struggling with almost the same level of poverty and development needs as India. It is also highly vulnerable to climate change hazards. However, its projected emissions places it as the biggest emitter in the future. So, we might judge that China will become a RSs in the future (more so if China's economy will continue to grow and it will reduce its poverty level). Based on the each of the indicators, the US seems to be most responsible of the states I compare here. However, Russia is not that far behind. Russia's level of emissions 1990 is similar to the US's levels. But it is true that Russia is more vulnerable to climate change as well as less wealthy than the US. It is not a comprehensive and robust comparison, but even as a suggestive illustrative tool, we see that Russia might be among the RSs. In any case, the chart illustrates how we can calculate the degree of adaptation duties each state ought to shoulder with relation to its adaptation needs and capacity to meet such needs. Based on such measurement we can determine which states have global adaptation duties. In other words, who are the Responsible States.

Moving to China, as the world's biggest new emitter, we see that it is possible for it to end up being an RS, despite the domestic challenges of poverty and climate change adaptation.[40] China's expected impact on the climate system in the coming years is so vast that it may overwrite its reduced responsibility and exceed its domestic adaptation obligations. Also, recall that developing states ought to have more emitting allowances precisely so that they can overcome poverty and achieve better welfare for their publics. So hopefully, with time and emissions used, they will also gain better capacities to deal with their publics' adaptation needs. The reasons for limited responsibility and for bearing lower duties of adaptation will no longer hold (or to a lesser extent). In other words, they will move into the group of RSs. Specifically, with China, the facts 'on the ground' suggest that it has already started taking on climate justice duties that suit the present biggest economy and emitter in the world.[41]

To sum up my response to the charge of evading attempt number 8, I do not think my argument will result in an unfair distribution of adaptation burdens. States will have a legitimate demand for adaptation assistance when they cannot meet the adaptation needs of their vulnerable affected individual members. Maybe some of the states labelled as 'developing' will be among the RSs on my account, but I hope that following the brief comments I have given here it is clear that there are principled good reasons for this.

2.5 Conclusion

In this chapter, I showed we can assign outcome responsibility to emitting states as agents that contribute to the creation of a harmful climate change. I took some of the challenges portrayed in the first chapter, explained what they entail, and showed what pathways we can take to overcome them. In line with the findings of the first chapter, the conception of responsibility in the context of climate change and human mobility is found to be an intricate matter. I developed a rich account of the responsibility of states

[40] Perhaps China will be classified as neutral. I do not make an actual calculation here, I only offer some data to help us make coarse-grained judgments. I leave it to those better equipped than me to design more precise ways of making such determinations.

[41] China's pledges to global adaptation finance matches that of the US (Nelson and Mauldin 2015). China is also taking major steps to reduce its level of emissions. It is not the case that it completely exempts itself from any need to make mitigation efforts. The accord between the US and China on climate change (Phillips, Harvey and Yuhas 2015), the ratification of the Paris agreement, and its latest INDCs express this shift (See World Resources Institute website: http://cait.wri.org/indc/#/ratification, and http://cait.wri.org/pledges/#/profile/China). It is left to see if China will continue in this direction after United States' administration change and the stark shift in its climate policy.

for climate change's harmful impact and grounded it in the literature on climate justice. The main contribution of the chapter can be summarized in the following points:

(i) Emitting states bear *shared* responsibility for creating harmful climate change.

(ii) The two conditions of outcome responsibility—foreseeability and avoidability—are met.

(iii) The adaptation duties of each state will result from a complex measure that includes additional considerations alongside outcome responsibility.

(iv) The Responsible States are a group of emitting states that bear global adaptation duties.

To show how it is possible to hold an individual agent, here a state, responsible for a collective outcome, I presented theoretical proposals that target such a challenge. Based on these, I claimed that states are part of a set that is necessary for bringing about the adverse effect of climate change. Such accounts also allow us to take the emissions level of each state as its contribution to this deleterious outcome and therefore as a proxy for its degree of responsibility (point *i*).

Examining the conditions for holding emitting states responsible for bringing about climate change (point *ii*) showed the applicability of my chosen conception of responsibility as well as some limitation to its scope. First, emitting states can be held responsible for current emissions and recent past emissions: those emitted when they knew and could have known about the destructive consequences of emitting GHGs. Second, the different options for mitigation and adaptation show that states can avoid much of their current emissions and prevent future harmful effects from the GHGs they already emitted. Nonetheless, some levels of emissions are unavoidable, as they are necessary for achieving fundamental needs and interests. We cannot attach outcome responsibility to these emissions.

I showed that even with these limitations there is a significant space left for outcome responsibility to determine the degree of duties each state ought to bear. Nonetheless, we need more than just outcome responsibility to decide on each state's mitigation and adaptation duties. Fairness and the fact that we have emissions that can be exempted from responsibility should lead us to incorporate considerations relating (in one way or another) to the capacity of the state, which can be captured by the APP (point *iii*).[42] There have been different suggestions regarding how to make such

[42] We can also incorporate considerations pertinent to the BPP, as suggested above.

adjustments to calculations; some provide general principles and others a more precise matrix. I suggested that, for adaptation duty, we distinguish between domestic and global policies and programs. Only states that are net-debtors, those whose degree of adaptation duties exceeds their domestic needs, will also be responsible for the adaptation needs of vulnerable affected individuals who are not members of their own public. They will, and this is the phrase I will use from here on, be the Responsible States (point *iv*).

The term Responsible States (RSs) encapsulates the complex of reasons for holding a state to have adaptation duties. The component of outcome responsibility in RSs' obligations when it comes to global efforts towards adaptation is important. I take it to be the core of this broad and complex outlook on their duties of adaptation. It also operates differently from supplementary considerations that are based on the capacity of the state (those following the APP). It has the logic of corrective justice. This notion of responsibility for bad outcomes directly identifies the relevant states that have obligations towards those deprived as a result of their actions. In addition, the content of their obligations is not limited to cases of extreme circumstances where the administration of a state cannot cope with the impacts of climate change and other states are called to act. Outcome responsibility grounds obligations of repair in less dramatic cases of deprivation. It is not merely a distributive principle of remedial responsibility that first assumes a pre-existing duty to remedy some predicted harms and losses and then allocates obligations according to relative capacity, as with the APP. Being responsible for making others worse off makes an agent owe them something, some sort of reparation, more directly and in virtue of such actions.

This, as we will see, is highly relevant to the type of climate migration I focus on here. Much of the impact of climate change on human mobility will not be manifested as extreme emergencies where foreign aid is required to resolve catastrophic human suffering. There will be more moderate events and processes, which will induce further migration, and RSs will bear obligations with respect to such movements as those who contributed to its underlying causes. The implications of this conclusion will be explored further from Chapter 4 onwards.

As we have seen, there are many challenges to applying outcome responsibility in this context. But I have shown that it is possible to overcome many of them. The overall conclusion of this chapter is that states can be held responsible for the hazards

associated with climate change according to each state's relative contribution to their creation. From this, it is possible to say that the primary duty stemming from such responsibility is to redress the situation that has been created or better still not create it in the first place. Before I proceed to discussing what the more particular obligations of RSs in the context of human mobility might be, I further develop our understanding of responsibility for creating climate change. We need to start thinking about it in terms of risk creation too. This is the task of the next chapter.

3. Responsibility for Creating a Dangerous Climate

> *Whenever, in short, there is a definite damage, or a definite risk of damage, either to an individual or to the public, the case is taken out of the province of liberty, and placed in that of morality or law*
>
> ——Mill (1869, IV/§10)

> *[C]limate change poses a direct threat to a wide range of universally recognized fundamental rights, such as the rights to life, food, adequate housing, health, and water*
>
> —United Nations (2007)

> *We live in constant fear of the adverse impacts of climate change. For a coral atoll nation, sea level rise and more severe weather events loom as a growing threat to our entire population. The threat is real and serious, and is of no difference to a slow and insidious form of terrorism against us*
>
> —Saufatu Sopoanga (Prime Minister of Tuvalu, at the 58th Session of the United Nations General Assembly New York, 24th September 2003)

3.1 Introduction

Adamou has lived in Sirba, Niger, his whole life. He is a fisherman, and makes his living from the Niger River. Jairo is a farmer in the western highlands of Cabricán, Guatemala. He has a small plot of land where he grows crops to support his family. Kim, a mother of three, from the Philippines, works in a factory close to her hometown.[1] Expected changes in rainfall patterns increasingly make these people's lives precarious where they reside. The shrinking Niger River becomes shallower and there are less fish. The prospects for Adamou's livelihood are not bright, and he cannot see how he can go ahead with his planned marriage proposal to Fati, whom he loves, without the certainty of supporting her and their future children. The dry season will be longer in Guatemala's highlands and there will be less and less precipitation. Jairo is already struggling to put food on the table and he fears his family will suffer from food shortages over long periods of the year. Kim is among the many whose lives were tragically destroyed by the sequence of tropical storms that raged through the Philippines. She lost her house and her job. Now she has managed to find a normal house in her hometown after a period of displacement living in a makeshift dwelling. She is wary that she enjoys only a false sense of security, as it would only take another big storm to make her homeless again.

[1] These are of course all fictional stories. They are, however, based on the following studies: Afifi 2011; Randall, Salsbury and White 2014; Warner et al. 2012; Gemenne, Brücker and Ionesco 2014; International Organization for Immigration (IOM) 2014.

Adamou's, Jairo's, and Kim's futures where they reside are uncertain. If current environmental trends continue or exacerbate, how will they support themselves and their families? Is there hope for fishing in the Niger River? Will there be enough rain for Jairo and his family to live from their agriculture? Will Kim be displaced again due to another cyclone? Facing such looming threats they may look for a safer future elsewhere. Maybe Jairo will try to find a job in the US, where he has heard that some other Guatemalans manage to earn enough money to send back to support their families. Kim is thinking of joining the many women who have moved abroad to work as domestic care workers in Canada or in one of the Golf countries. Adamou wonders if pursuing the life he wants means relocating to neighbouring Benin or Nigeria, as some of his friends and relatives have done. If he was to establish himself there, then maybe Fati's family would accept the marriage proposal, she would follow him, and they could start a family.

How should we respond to cases of relocation due to the devastating impact of *expected* changes in weather patterns? Do states have obligations towards individuals in situations similar to those of Kim, Jairo, and Adamou? Do states who emit a large quantity of GHGs bear special responsibility and thus ought to bear these obligations? In this chapter, I want to pave the way for answering such questions. In the stories presented here, the effects of climate change are depicted as a threat: something that is yet to eventuate but that still has implications for people's lives. How we can normatively address the impact of risk brought about by climate change is my main question, then. The first part of such a task is to explain in what way big emitters are responsible for the adverse impact of climate change even before some predicted environmental devastations materialise. The second is to construe from this what kind of obligations they have to the Kims, Jairos, and Adamous of this world who are subject to those risks. Thus, in this chapter, I move from a focus on the responsibility of emitting states to discussing their derivative obligations.

My argument faces a challenge when it comes to such risk scenarios. I want to hold states responsible and ascribe certain obligations to them accordingly. However, it is not clear that the conception of responsibility I have defended in the last two chapters is equipped to deal with cases of expected bad outcome. Responsibility for a bad outcome usually brings to mind an image of an identifiable concluded bad result that someone brings about. The standard outlook of such a conception of responsibility is

retrospective; the harm is done and now we are looking for the agent who ought to be held responsible for it. If Paul acts in a way that brings losses to John, then Paul may be responsible for John's loss. All things considered, we tend to demand that Paul redress the losses he brought upon John.

However, with climate change the situation is somewhat different. The actions that are the source of the harm, emitting GHGs, have already occurred and continue to occur, but the harm is yet to eventuate. It is as if Paul acts now in a way that may bring about losses to John in the future. But this is not a purely *prospective* matter either—the responsibility cannot be reduced to a duty not to emit. First, we have already emitted and we continue to emit GHGs, which will in all likelihood bring about different sorts of harms in the future. Second, emitting actions are not yet causing harm in terms of expected environmental disruption, but we have the intuition that they still carry a normative weight before any eventuation of such potential devastation. In order to know what the obligations of Responsible States (RSs)[2] to climate migration are, we need first to address the underlying theoretical question that characterizes this challenge: how can an agent be responsible for an outcome that may or may not eventuate from her action? If, in the end, no harm will come to pass as a result, for what do we hold the agent responsible?

I plan to tackle this question by making room for the notion of responsibility for creating risks. My argument follows the corrective justice path, which matches responsible agents with obligations of redress for the harm they bring about. However, I also have an accompanying motivation that departs from its typical retrospective logic. I want to establish obligations towards the environmental hazards RSs bring about that have a *preventive* faculty. The delayed effects of emitting GHGs makes it possible to attribute responsibility for present emitting actions due to the future harms they will bring about without the need to wait and see if those harms will actually materialise. Nonetheless, this preventive function of the obligations is grounded in a corrective justice outlook. If we can hold agents responsible for risks as bad outcomes they create for others, then redress can target the risk and does not have to be limited to the future materialised losses they denote. In this way, the obligations of redress are incurred *ex-post* to generating climate risk, but *ex-ante* to eventuated climate-related harms.

[2] I remind the reader that my focus is on adaptation duty and Responsible States (RSs), namely, those that can found to be net-debtors. The state's overall degree of obligations (which includes other normative considerations besides outcome responsibly) exceeds the adaptation needs of the vulnerable affected individuals in its public (see section 2.4 of this work).

This is how the chapter unfolds. In section 3.2, I explain why putting others at risk is morally bad. Drawing on work done in the ethics of risk literature, I show how climate risks are already harmful and how they express wrongful treatment. In section 3.3, I explore what sort of redress is owed to those subject to such harms and wrongs of risking[3] in the context of climate change. I present three types of reparative obligations—reimbursing costs, restoring options, and repairing relationships—and in section 3.4 I show in what way they are connected to climate change adaptation.

3.2 Why risking is bad

Risk

Risk can be understood in different ways.[4] A simple and broad definition will take risk as the "likelihood of a possible negative outcome, such as a loss, injury, harm or death" (Hayenhjelm and Wolff 2012, 29).[5] I will use a more elaborated representation of risk that is based on the Intergovernmental Panel on Climate Change (IPCC) report's definition.[6] The structure of risk has two complementary elements: hazard and vulnerability. A *hazard* is an event or process that has some likelihood of causing harm. It consists in the probability of the event and the magnitude of the adverse impact. *Vulnerability* is the disposition to be adversely affected by the hazard. Sources of vulnerability are myriad, including macro-level aspects like geographical location, the level of infrastructure, effective institutions, local culture, as well as micro-level aspects such as income level, gender, age, and health condition.[7] We can understand risk as the

[3] This form of the verb 'risk' may sound to some like a mistake. I follow John Oberdiek here, who uses the term in this way, and I provide his explanation: "in order to avoid the cumbersome constructions like 'subjecting another to a risk of death', I will adopt the more economical 'risking' (Oberdiek forthcoming, Chapter 3, n. 1).

[4] I am not appealing here to what sometimes been referred as the technical definition of risk and uncertainty. According to this definition, we reserve the term 'risk' for cases where we can ascribe probabilities, and the term 'uncertainty' for cases with unknown probabilities. I rarely use uncertainty in this work, but when I do, it is in a general sense and not in the 'technical' one mentioned here. For the discussion here, risk and uncertainty are interchangeable. In addition, risk in the technical term is not limited to bad outcomes; it can also refer to good expected outcomes. I, however, follow here the common understanding in everyday language that typically associates *risk* with a bad outcome and a *chance* with good outcome.

[5] For discussion of the different definitions of risk, see: Hansson 2004; Aven and Renn 2009; Aven 2010.

[6] For the IPCC definition, see: IPCCC 2014 5AR WGII, Fig 19.1, Box 19–2, 19.2.1. The main way I depart from this definition is by including 'exposure' as part of 'vulnerability'. See Moellendorf (2014, 17) for a model of climate vulnerability similar to the one I present here.

[7] The two different levels are interrelated, of course. Being a poor black woman in a relatively wealthy and egalitarian society (both in terms of race and gender) would make one far less vulnerable to similar hazards than if one were in a racist society with a rigid class system where women are considered inferior and their income and status depend on the male figures in their lives (fathers, brothers, husband). For

overlap of hazards and vulnerability. We can also perceive the level of risk as a function of its two fundamental elements: hazard and vulnerability. This helps us see that a similar environmental event, in terms of probability and magnitude, can lead to different levels of risk due to the varying degrees to which individuals are vulnerable to it. There might be more complex ways to model and define risk, but I think that the one I suggest here is sufficient, and I also believe that its simplicity is advantageous, for it helps keep the core argument lucid.

Risking is composed of three different roles: the *risk-taker*, the *beneficiary* of the risk, and the *subject* to it (Hansson 2007, 28).[8] An agent can play each of these roles or all of them in different types of risking cases. When Alice decides to enjoy an extreme sport such as snowboarding, she benefits from excitement and joy but also risks an injury.[9] In such cases of taking risks, the individual plays all the three roles. But risks can also be imposed. Then, different agents play the three roles of risk creation. For example, a government may *take* the risk of building a new nuclear power plant, the *beneficiaries* will be the plant's shareholders, and the residents of nearby towns will be the ones *subject* to the risk. The division does not have to be so neat. The residents of nearby towns may also benefit from the nuclear plant, as it will open up many lucrative job opportunities. Also, some of the shareholders may live in these towns and be exposed to the risk of reactor-meltdown. Nonetheless, when the risk is imposed or created for others, this is a public matter and normative questions of justice and fairness arise (Carnor 2007, 39). In cases of privately taking risks, we will normally be fairly permissive when it comes to the risky activities one wishes to engage in. However, with public risks, we will be far less lax (Hayenhjelm 2012). Creating climate change risks falls under the category of public risk (Shue 2010, 147; Moellendorf 2014, 15–6).

Arguing that emitting states are responsible for the dangers of climate change requires that risks will be *separate* but *not independent* from the actualized bad outcome they indicate. Separate, because I want to argue for outcome responsibility and derivative obligations that pre-empt future-eventuated harms. Not independent, because risks receive their meaning from the predicted outcome they denote; risk is always *a risk of X*. For the argument to work, I need first to show that a risk can be morally bad,

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more on vulnerability indicators for individuals, see: IPCC 5AR WGII, 13.2.1.5; 19.2.2.1. A different way to express vulnerability is given by Robert A. McLeman (2014). Despite differences in conceptualization, I take up the core elements of McLeman's concepts of risk and vulnerability.

[8] In Hansson's chapter the titles are: decision-maker; beneficiary; risk-imposed.

[9] For the sake of simplicity, we assume that she does not risk others in her actions.

as a separate cause of concern. There are two main ways to perceive creating risk as morally bad: *(i)* risk itself can be seen as a sort of *harm* (risk-harm), or *(ii)* putting others at risk can be seen as treating them *wrongly* (risk-wrong). A type (*i*) case, harming someone by putting her at risk, can also be a type *(ii)* case. To harm someone without adequate justification is to wrong her. Less intuitively, the reverse relation is not always true. I will suggest that there could be cases where we cannot identify any tangible harm inflicted on a person in virtue of subjecting her to risk (hence, not an (*i*) case), but still we can say that it was wrong to do so (therefore, an (*ii*) case).

Risk as harming

On way risk can be morally bad is risk-harm. Risk can become an imminent insecurity that hinders a person's ability to enjoy basic freedoms and goods (Hayenhjelm and Wolff 2006, 31). The risk could be taken as a harm separately from any future potential bad outcome, because the psychological impact it may have (Wolff and de-Shalit 2007, 68-9; McCarthy 1997, 220-1). Some risks can cause dread and anxiety. The acknowledgment of a looming threat can seep into the daily experience of the individual. Fear begins to accompany and spoil any enjoyable activity she participates in; as when we eat something rotten and cannot get rid of the taste, which takes over the flavour of any later bite.

Risk can be harmful in a different way as well. Knowing that you are subject to the chance of suffering from a bad outcome makes you invest in protective measures that will avert the harm or soften the blow if and when it comes (Wolff and de-Shalit 2007, 68-9). Putting an individual at risk can lead to additional costs and a diversion of resources from objectives and plans she has. In this form, risking others is to harm them, because of the additional costs imposed on them.

Climate change risks can be described as harmful in this way. People will have to prepare and protect against the expected hazards of climate change. In climate change discourse this comes under the heading of *adaptation*. Adapting to climate change requires a lot of resources and efforts, both in protective measures (averting the bad outcome), developing better capacities to deal with the changes, and coping with their

adverse impact (alleviating the bad outcome).[10] The increasing need to adapt to climate change means that existing and potential plans will be abandoned as the resources will be diverted from such objectives to adaptation goals. This is a cost that affected vulnerable individuals and their local and national governments incur from climate change risks.

As a response to expected hazards and environmental processes, some will relocate in search of a safer future. Therefore, migration scholars emphasise that mobility can be an adaptation option. Migration involves costs and difficult sacrifices but can also offer opportunities and gains. The decision to move is typically driven by a mixture of such reasons. It would be too simplistic to say that migration is an adaptation cost incurred in virtue of climate risks. In addition, sometimes people move away from a location after an environmental disaster and as a result of deficient preparations. In these cases, we might not think of the movement as adapting but rather as a failure to adapt. I elaborate on this matter in the next chapter, where I suggest a way of perceiving climate migration. For most of this chapter, we will take migration to be an adaptation option, but one that entails some costs for those on the move.

One dismal facet of climate migration is the pervasive sense of insecurity that underlies the relocation decision. People move away from their homes, dreading what might happen if they stay. They are also anxious and fearful about what will happen when they leave: the unknowns of their journey and its final destination.[11] This is a particular manifestation of the psychological harm involved in being subject to climate change risk, which is one of the ways risk can be harmful. That said, psychological harms are a tricky thing.[12] They are harder to assess, easier to manipulate, and unlike

[10] For example, the last report by the World Bank estimates that the global cost of adaptation to a 2 °C warmer world by 2050 will be between 70-100 billion US dollars for each year from 2010-2050 (see the World Bank website: http://www.worldbank.org/en/news/feature/2011/06/06/economics-adaptation-climate-change). For other estimations see: IPCC 5AR WGII: Table 17-2, p. 959.

[11] Of course, having such disposition does not mean that immigrants categorically lack hope and excitement.

[12] See McKinnon (2009, 271); Fritze, Blashki, Burke and Wiseman (2008) on the emerging work and the challenges of relating mental health problems with climate change risks. The perspectives of migrants and those individuals vulnerable to climate change in the context of mobility is complex and yields mixed results in empirical research. For some work on the topic see: Arnall, and Kothari 2015; Farbotko and Lazrus 2012; Lazrus 2015; Shen and Gemenne 2011. For a more personal insight into the anxieties and stress that accompany those on the move due to environmental processes, see 'Moving Stories' (COIN 2014). Many interesting newspaper articles have been published on this topic in recent years. The New York Times ran a good series on the topic. See: 'Carbon's Casualties' (http://www.nytimes.com/2016/05/03/us/resettling-the-first-american-climate-refugees.html). The Guardian ran an interesting series on Native Alaskan people: 'American's first climate refugees'

cases of more tangible damage, it is less clear what sort of redress they command. Without denying that psychological suffering is a viable outcome of being exposed to climate change risk, I leave this impact aside for now. My main focus with respect to climate risk-harm will be on adaptation costs.

Risk as wrongdoing

Both harmful risks—mental suffering and protections costs—have a significant shortcoming. Without any knowledge of the looming threat, one cannot suffer psychological harm or try to avert the risk (and incur the associated costs). But in many cases where people are oblivious to the potential danger, it is still reasonable to hold that the risk they are exposed to makes their situation worse than it otherwise would have been.

A useful way to explore such a claim is to analyse cases of risking without any material harm at all. Suppose that one agent creates a risk to another agent without her awareness and without any harmful outcomes.[13] Let us assume that we have the foresight to see that the risk will never materialise or that the window of opportunity for the risk to ripen into harm has passed. Here we see a big challenge for responsibility attribution, as Catriona McKinnon rightly marks: "[t]he key point […] is that it can render liable agents who perform acts putting others at risk before the risk materialise, or even if the risk never materialises, and even when those others are unaware of the risks that have been imposed on them" (2011, 78).

(https://www.theguardian.com/environment/interactive/2013/may/13/newtok-alaska-climate-change-refugees).

[13] There are those who take such intangible adverse impact to be a sort of harm (Railton 1985; McCarthy 1997; Finkelstein 2003). Claire Finkelstein (2003), for example, bases her argument on Joel Feinberg's definition of harm as a set-back of interests, and claims that agents have an interest in not being put at risk. On this view it is clear that risk imposition is harmful on its own without any tangible harm being inflicted. And if one establishes a right against risk imposition, then its violation can be described as harming as well. Stephen Perry (2007) disagrees and argues that this does not qualify as harm, though imposing risks on others can be wrong on other grounds. The distinction I make here between risk-harms and risk-wrongs has merit regardless of which side one takes in this debate. And though I myself refer to risks without material harm as risk-wrong as oppose to risk-harm, my discussion is more informed and influenced by John Oberdiek's work (2009; 2012; forthcoming), which could be read as a 'risk-as-harm' position (though he criticises both Finkelstein and Perry, see Oberdiek (2012 345–50)). In a working paper Tom Parr and Adam Slavny (2016) isolate cases where risk is not a harm at all, but just a harmless wrong (such as a discriminatory attitude). In this way they track the wrongdoing involved. I only became aware of their work after drafting this chapter. The conclusion they reach has some similarities with my claims here.

Consider the following example:

> *Dirty Toys*. In Little Town, the company 'Dirty Toys' manufactures and sells adorable toys but disposes of its waste in a way that contaminates the local water reservoir. By drinking water, the residents of Little Town are being exposed to a higher risk of developing serious illnesses.

At this point, no one in the town is aware of the situation and there is no indication that any of them are getting sick due to pollutants in their drinking water; maybe no one ever will. In other words, no tangible harm is done to them. Nonetheless, I claim that Dirty Toys are doing something wrong, and I think that many will share this intuition.[14] But what exactly is the wrong in their doing?

A simple way to get our head around what is wrong in the way Dirty Toys risks others is to head down to Little Town, gather the locals, and share with them what we know on Dirty Toys' waste disposal methods. Observing their outrage can illustrate that there is something utterly reprehensible about Dirty Toys' deeds. Their reaction does not tell us that they have incurred the harms of being subject to risk (the costs of protecting against risks and psychological suffering). It speaks of the abhorrent way in which they were treated.

By imposing a risk on the people of Little Town, Dirty Toys treats them wrongly, even without any discernible harm being inflicted. Putting others at risk can create relations that will be judged as wrongful. This claim has two components: what we do to them by imposing risk and what sort of relationship it forms. Starting with the first, I claim that by risking other agents we, at the present, are changing their map of possible futures in terms of the set of possible options, their likelihood, and their quality. John Oberdiek (2012) writes:

> Imposing risk does just this in virtue of narrowing the risked person's otherwise 'open future'. […] One can do harm in subjecting a person to risk, for it effectively attaches sanctions to or normatively forecloses certain options that would otherwise be available to the individual, thereby narrowing the risked person's set of worthwhile opportunities. (351–2)

In Little Town, clean water is no longer available. Having both the option of drinking from the reservoir's water and the option of maintaining the previous level of health risk is denied to the inhabitants, due to the actions of Dirty Toys. We can say that they are

[14] For similar examples and analogies trying to pump the intuition that there is something morally wrong in cases of imposing risks even without tangible harm-doing, see: Schroeder 1990; Oberdiek 2009, 2012.

already worse off in some way, as having a safer future, the one they had before the water contamination, is better than a future life without safe drinking water.

Someone might say that while this description could be true, it does not prove much. Their situation has been altered, but I need to put some flesh on the bones of my claim to show in what way agents are less than they were before the intervention. If we assume that agents are wronged even without any actual material harm, then writing that they become 'worse off' is insufficient as an explanation. In what way are they worse off needs to be explained.

One way to express the deprivation the residents of Little Town suffer is by pointing to the way that Dirty Toys' conduct has stripped them of the ability to decide on their own lives. Oberdiek (2012) explains this in term of curtailing the agent's autonomy. There is no consensus on what autonomy is and what the normative implications of it are.[15] Therefore, I will only draw from his argument the following: removing valuable safe options from a person's possible set of options is to have some decisional authority over her (Oberdiek 2012, 356). The agent generating the risk determines the future of the one she subjects to that risk.[16] When the nature of the outcome and its likelihood are not trivial, as with drinking contaminated water, this is not a light matter.

It is not being under the decisional power of another alone that conjures wrath, but how and why such authority has come about. To go back to the different roles in risking, we can say that Dirty Toys is the risk-taker and the beneficiary of the risk (using a simple, cheap way to dispose of waste), while Little Town's residents are those subject to the risk. Dirty Toys takes advantage of its privileged position and benefits at the expense of the residents' safety. This is a form of exploitation.[17] This is worse than the general worry about having decisional authority because it shows that Dirty Toys is abusing the power it has over others.

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[15] Oberdiek uses Joseph Raz's (1998) account of autonomy.

[16] A different source to ground such a claim might be found in political philosophy literature on freedom. Republican freedom is concerned with *possible* freedom constraints and not only *actual* ones. Being under the authority of another agent (potential *domination*) is also a cause of concern on this approach (Pettit 1997; see also, List and Valentini 2016). I intentionally abstain from judgement regarding which type of theory is preferable. I think they lead to similar conclusions regarding my main claim here and can be taken as different ways to express a similar moral concern.

[17] I do not have here a well-defined and specific notion of exploitation in mind have. Exploitation can have different meanings and is used in a varied way in normative arguments (Wertheimer and Zwolinski 2012). I use it here in a general and broad way, taking inspiration from Robert Goodin, who defines exploitation as: "turn[ing] the other's disadvantages to our own advantage" (1985, 194).

However, there are many cases where risks are created by agents who do not benefit from them at all. Unlike the example above, we can think of circumstances where one agent is the risk-taker, a second agent is subject to the risk, but the benefits of this risk flow to a third agent. Or, what is more likely, risk scenarios without neat distinctions between the different roles. The agent who takes the risk and benefits from it is also one of those subject to the risk. Then it is plausible that she will only have net-negative outcomes (after calculating the expected losses and the harms of being under risk) and not genuine benefits. This will no longer be a clear case of exploitative relations, but the charge against the way the agent uses her decisional authority may still hold. In a way, in generating risks for others one places a wager on their future. One takes some significant aspect of their lives in one's hands, so to speak.

This power reveals the wrongness in the risk-relationship that has been formed. Agents need to show the appropriate attitude towards others; they need to give proper weight to the lives of those they put under risk (Railton 1985). This is sometimes expressed in terms of having a 'duty of care' (Oberdiek 2009, 391; 2012, 355-6). Failing to give the right kind of consideration to the interests of others is failing to treat them with equal respect, a fundamental liberal value (Anderson 1999; Dworkin 1985, 188-91; Gosepath 2011). Exploitative relations such as those between Dirty Toys and Little Town's inhabitants are a particular way to renege on this normative commitment. But acting without due care, in a negligent manner, will be deemed wrongful in a wider range of cases. When the outcome of our conduct can compromise the safety of others, we ought to give it weight in our deliberation and decision-making. How much, and in what way, is an intricate matter. Here I only show what the core wrongness in risking is.[18]

Climate change is of the messier type of risking. States create risks by emitting GHGs, they benefit from this emission, and they are also exposed to the associated environmental hazards. However, not all states play the same role to the same degree. Some, the big emitters in the industrialised North, create most of the risk, harvest most of its benefits, and are exposed to lesser dangers. Such states are most likely to be among the RSs. Others, the least developed states, have contributed very little to the

[18] This focus on the relational aspect of risk-wrong goes beyond what Oberdiek explicitly argues. However, I think that not only it is compatible with Oberdiek's view, it is an implicit aspect of his position which actually completes it. For a detailed and more critical discussion of the shortcomings of Oberdiek's argument and how the attitudes of the risk-taker matter in a similar way to what I claim here, see Parr and Slavny (2016).

level of GHGs in the atmosphere, their members have not gained from industrialisation to the same degree as others, and are among the most vulnerable to climate change effects. The different level of risks states face is a combination of different dimensions of vulnerability. Some prominent and widely cited ones are the geographical location of many developing states, which is prone to weather extremes, a greater reliance on agriculture, and a lesser capacity to deal with climate change impacts. The developed wealthy states fare better on most of the vulnerability indicators but mostly they have a greater capacity to adapt to climate change.[19] This unequal distribution of benefits and risks might not be as clear a scenario of exploitation as the Dirty Toys example represents. Nonetheless, considering the potential threats climate change poses, RSs' decisional authority over those highly vulnerable to climate hazards must pass a high bar not to be deemed as wrongful, as a failure to treat other with equal respect.

3.3 Redressing climate risks: reimburse, restore, and repair

By emitting, states increase the risks of climatic hazards and in doing so already harm and wrong individuals in the ways I have just described. The emitting states we hold responsible for climate change, the RSs, are therefore responsible for the losses they bring about as well as for the diminished set of safe options vulnerable individuals will have. Facing this serious charge, what ought states to do? Typically, one's responsibility for bringing about a bad outcome generates a duty of redress (Miller 2007, 87); one ought to restore the situation to what it was before the detrimental intervention (Goodin 1991a, 143).[20] But since climate change risks are not like the expensive vase that you broke, an answer to this question requires a little more space.

Prior to their duty of redress, emitting states have a preventive obligation to avoid the creation of risk altogether. It is always better, and other things being equal, morally required, to avoid harming and wronging others. In the political philosophy literature, this imperative is what mitigation duties are about: states ought to reduce their levels of GHGs or decarbonize their economies. This is the *prospective* aspect of their responsibility. How much each state ought to do in terms of mitigation depends on how much risk we are willing to accept; how more dangerous we are willing to make the

[19] This characterisation is often mentioned; for a few examples, see: Füssel 2010, 598; Hartzell-Nichols 2011, 689-90; Stern 2007, pp. 65-103.
[20] This is how some prominent theorists explain corrective justice and liability in tort law (Schroeder 1991, Coleman 1992).

global climate. What counts as dangerous is not given by science; it is a normative judgment (Moellendorf 2014, 11; IPCC 5AR WGII, FAQ 19.1). Nonetheless, the international commitment to stabilising the climate is informed and follows the findings and estimations of scientific research. At present, the science suggests that we can have a relatively stable climate with up to 2 °C warming (IPCC 5AR WGII, FAQ 19.1), and the latest international political commitment is to make further attempts to halt warming at 1.5 °C (UNFCCC 2015).

This brings us back to the issue of the carbon budget and distributing emission rights I mentioned in previous chapters. I will not discuss the just distribution of emission rights between states and the role responsibility plays in it here.[21] It is crucial to understand, though, that having a threshold for how manageable we try to keep the climate does not mean it is going to be risk-free (nor without any harmful consequences from the materialization of many of those risks). While states are under a stringent duty of mitigation to uphold the carbon budget and stick to a certain level of risk (Caney 2010b, Moellendorf 2014, Shue 2010; 2015b), this does not exhaust their obligations based on the risk they generate within this limit. Even under the benign assumption that states will comply with a fair distribution of emission rights that can stop global warming at 2 °C or 1.5 °C, we are still going to face an unequal distribution of benefits and risks. In other words, even our most optimistic scenario presses the question of the responsibility of big emitters for making the climate more dangerous within the carbon budget (IPCC 5AR WGII, 19.7.1).[22] Getting a fair distribution of emissions rights right is not the full story, then. States may still bear obligations for the adverse impacts expected when the carbon budget is upheld. Staying within the limits of their duty to mitigate does not annul their responsibility for the harmful impacts of situations they create. Limiting the level of risk and expected harms states create by altering the ecosystem, if they succeed in respecting such constraints, is to avert some consequences they should not bring about. But states can still be held outcome responsible for the hazardous outcomes they bring about through the GHGs they do emit.

Furthermore, states may succeed in keeping a carbon budget that will not warm up the planet beyond the 2 °C target, but nevertheless achieve it unfairly. For instance, the

[21] See reference Chapter 2, n. 12 for literature on this topic.

[22] IPCC best emissions scenarios are for warming of 1.5–2 °C. While they significantly reduce some of the risks—and among them the risk of irreversible singular events—, they still carry many other risks at moderate and high levels.

developed states might use much of the budget, leaving too little for developing states from the perspective of a fair distribution. In this case, they may owe them some sort of compensation for the hurdles this creates for their legitimate development needs.

Since not all hazardous climate impact can be addressed by mitigation, states also have obligations with respect to adaptation and loss and damage (L&D). In the current political philosophy literature, retrospective responsibility is either about punishment or redress. The responsibility I assign to emitting states is not a reason for punishment, but it does lead to some liability for the harms or L&D created: a duty to redress the adverse outcome (Miller 2007),[23] which I have suggested we view through the lens of corrective justice.

Taking risk to be a harm and a wrong in itself means that such liability enters the stage before the hazards materialise. The notion of responsibility for creating risk carves a space for an in-between account that is retrospective in relation to the generated risks and forward-looking in relation to the potential future harms. Within this space, states can be held responsible for the risk-harms and risk-wrongs they create through their GHG emissions. They impose a more dangerous climate on vulnerable individuals and they owe some form of redress for doing so. By increasing the risk of the adverse effects of climate change, RSs (*i*) levy excess costs of adaptation on affected individuals, (*ii*) diminish the valuable safe options those individuals have, and (*iii*) taint their relations with them. In what to follows I work my way through these dimensions, explaining what sort of redress they entail, and end by showing how they relate to adaptation and L&D. I use the terms reimbursing for (*i*), restoring for (*ii*) and repairing for (*iii*).[24]

[23] In the context of climate change, see: Farber 2008; Mckinnon 2009.

[24] A note on alternative terminology: the UN has produced a document titled 'Responsibility of States for Internationally Wrongful Acts' that suggests three parallel forms of reparation: compensation (comparable with my 'reimbursement'), restoration (comparable with my 'restoration'), and satisfaction (comparable with my 'reparation'). I am not suggesting that these draft articles' scope covers climate change harms as well, but I will refer to this document and its concepts at times to illustrate that my ideas are not foreign to some trends in international politics and law. A main difference is the role of restoration in my account in the context of responsibility for risk creation. It comes to complement reimbursing the costs of adaptation, which is the first and clearest type of harm. From the philosophical angle, Seve Ove Hansson and Martin Peterson (2001, 160-1) have opted for a different set of obligations owed to those put at risk: obligation to (1) compensate, (2) communicate, (3) improve, (4) search for knowledge, and (5) attitudinal obligations. Their (1) can be mapped into my (*i* and *ii*), and some of their (2), (3), and (5) onto my (*iii*).

Reimbursing costs

A central aspect of climate change risk-harms is the cost of coping with a dangerous climate. Preparation will vary across states and regions, but common to all will be the aim of reducing the risk with which people are confronted (IPCC 5AR WGII, 16.2). The list of adaptation options is long: improving governance, accessible credit, social insurance, and more sustainable urban planning will reduce vulnerability to climate change impact, and by that the risks people face.[25] The main point is that effective adaptation can reduce the level of risk for most climate impact, even after we have generated such risk by emitting GHGs (see figure 3.1 for an illustration of this claim).

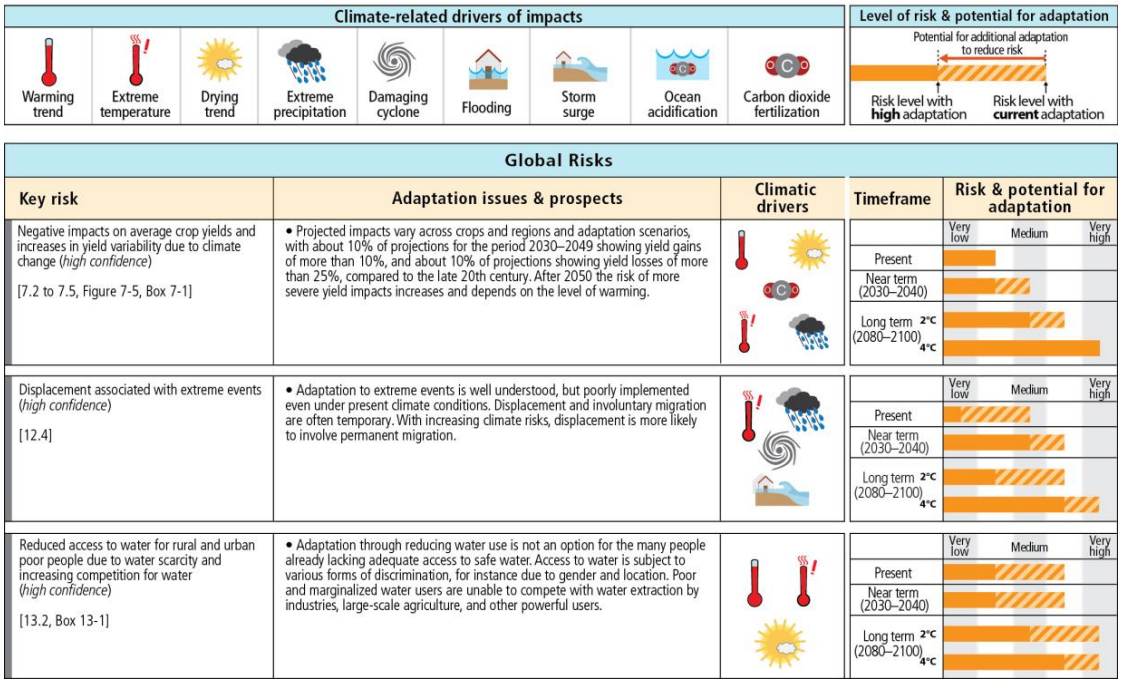

Figure 3.1: Global risks and adaptation potential (IPCC 5AR WGII, Table TS.4)

The costs of adapting to climate change are significant and individuals and states are already burdening it. The case for redress here is a straightforward one—RSs should reimburse those costs (Farber 2008). How much of the costs they need to reimburse, of course, is less simple to determine.[26] But a principled reason why and to what extent emitting states ought to reimburse these adaptation costs is their degree of responsibility for climate change risks. Nonetheless, a claim to reimbursement for adaptation costs is

[25] For a different classification and a range of adaptation options, see: IPCC 5AR WGII, 14.3 and Table 14-1, Table 16-1; Füssel 2010.
[26] However, see an attempt to operationalise such a duty of compensation for adaptation costs in Farber 2008.

limited in its scope, as it is not available to all those subject to climate change risks. It is mainly unavailable to two main groups: the very poor and the unaware.[27]

The very poor, almost by definition, do not have the surplus resources to cover costs beyond their subsistence needs. Often, they even have to sacrifice or risk basic interests in order to secure more urgent ones (Wolff and de-Shalit 2007, 70-3). That is not to say that there is nothing they can do in order to adapt.[28] But the very poor cannot take many of the necessary adaptation measures because they simply cannot afford them. So while they will in many cases be more vulnerable to climate change hazards, they cannot improve their circumstances through adaptation (Stern 2009, 13; Moellendorf 2014, 17). On top of this, and for the same reasons, they cannot demand that their adaptation costs be reimbursed. The risk-harm argument is not available for the very poor in the way it is for those who can and do pay for their adaptation efforts.

One possible way to get around this shortfall is to claim that states ought to look after their vulnerable poor individual members.[29] They should initiate and finance adaptation policies and programs that include the very poor. Then, based on costs born at the state-level, if such costs exceed their own degree of adaptation duties (if they are net-creditors, according to the terms I suggested in Chapter 2), they deserve a payback from RSs. Nevertheless, the problem of the poor can be elevated to the state level: some poor states will face great adaptation needs without having the equivalent funds to cover them. Therefore, their position will be similar to the position of very poor individuals, at least in relation to a portion of their adaptation costs. They cannot claim a reimbursement for money that they have not spent, and they do not spend because they simply do not have the money.

Those who are not aware that they are exposed to climate change risks cannot demand redress in the form of cost recovery from RSs for similar and dissimilar reasons. Similarly to the very poor, they will be exposed to the risks, will not reduce their vulnerability *via* adaptation, and for that reason cannot claim for costs they have not born. Unlike the very poor, they have the resources required for climate change

[27] Under the second group—the unaware—we can put future generations. I will not discuss future generations here, as I bracket intergenerational concerns in this dissertation. However, it is clear that those who have not yet been born cannot be aware of the risks they will face when they do come into existence. Therefore, they cannot act today to safeguard their future, and have no relevant compensable costs (McKinnon 2009). For a discussion of risk and duties to future generations, see: McKinnon 2012, Cripps 2013.

[28] In other words, I am not trying to deny that they remain agents even under highly constraining conditions.

[29] I assume that states have such responsibility in section 2.4.

adaptation.[30] It is possible to suggest a state-level solution for this group as well.[31] Many adaptation options do not require those at risk to self-identify as being vulnerable to climate change risks. For example, a better property-right regime, and regulation for land-use and fishing are ways to address climate risks (IPCC 5AR WG II, Table TS.7), and there is no need to check whether every individual impacted by them knows their connection to climate change effects. Also, some policies, warning systems for example, can make individuals aware of the risks they face and this alone may reduce their vulnerability to the risks.[32] Unlike the case of the very poor, states are generally aware of the climate risks they face as well as of their adaptation needs. At the minimum, we can assume so, based on the fact that state representatives approve the text of the IPCC report, which identifies many such risks.

To sum up, the costs of protecting against climate risks, born by those subject to, should be reimbursed to some degree by those who created the risk. This is what redress for risk-harm means. We can file this under adaptation costs and the adaptation duties of RSs. The claim for reimbursement can be made by states (or other levels of administrative authority). State involvement will always be crucial in coordinating and allocating funds, but it also becomes crucial in terms of mediation, as an agency that can overcome the inability of the very poor and the unaware to make claims for reimbursement.

The obligation to reimburse the costs of adaptation is of great importance, but it is still limited, leaving out other dimensions of climate change risks that RSs should redress. First, the economic cost of adaptation represents a partial picture of the adverse impacts vulnerable individuals may be exposed to. Redress should take care of all aspects involved in risk-harms, including those that cannot be replaced by monetary transfers. Second, overcoming the problem of the very poor and the unaware through state-led adaptation policies and programs may still leave one sub-group uncovered, one I have a special interest in—immigrants. Adaptation programs and policies are typically planned and implemented within the state's jurisdiction. But some individual members

[30] Of course, someone could occupy both analytical categories: being very poor and unaware. Then, the actual reason for not adapting will be unawareness, but not the sole cause of it. If the person were to become aware of the risk, she still would not have the means to adapt.
[31] It does not have to be a state-level solution in the strict sense. Local governments and municipalities can initiate and implement adaptation policies at a local level. Nonetheless, claims for reimbursement of the costs of such investments often go through at state level.
[32] Sven Ove Hansson and Martin Peterson (2001, 160, 163) take such acts of communication to be an important and distinct obligation in the context of risk imposition.

may cross state borders. Domestic adaptation does not apply to them, and it remains an open question how local adaptation efforts can address the potential costs borne by immigrants. In the case of immigration, there might be some gap between adaptation costs that in principle merit reimbursement and the way adaptation policies and programs are usually orchestrated by states. The next section on restoring safe options goes some way towards dealing with these two shortcomings.

Restore safe options

One aspect of risk-wrongs is the non-material loss of safe options. Some pathways that were part of an individual's possible future are made unavailable. For instance, the number of alternative futures in which a farmer's family in rural Bangladesh can provide for their needs by growing rice is significantly diminished, as under many climate scenarios such a prospect will become untenable. In many riverside villages in Bangladesh soil erosion due to floods, which is expected to be exacerbated by climate change, is a major concern for those living off the land (Walsham 2010; Ayeb-Karlsson et al. 2016). A diminished set of safe options is a consequence of risking, which is independent of the individual's disposition towards the risk or the way she responds to it. In other words, we are not confronted with the problem discussed earlier with respect to the very poor and the unaware. Here, I do not focus on the costs of adaptation options, but on the options themselves. Redressing a bad outcome that an agent brings about is often understood as restoring the situation to what is was prior to the intervention; either so it is the same or to one of equal value (Goodin 1991b).[33] With the case at hand, this will mean restoring the safe options that were eliminated by climate risks.

Think of a drought-prone area in Bangladesh. Sumon and his family have some options for dealing with water shortage under the existing level of risk.[34] Sumon

[33] Goodin distinguishes between 'the same' and 'of equal value', reserving the term 'restoration' for the first and 'compensation' for the second. I put them under the same heading here, but later I do follow Goodin and explore important differences between restoring the situation to its exact previous state and ways of replacing it with more or less equivalent states. Goodin's distinction is similar to that given in the UN's 'Responsibility of States for Internationally Wrongful Acts'. According to this document, restoration is to bring the agent back to the *ex-ante* state of affairs, the one she enjoyed prior to the intervention. This position is opposed to an alternative view: making restitution based on a hypothetical counterfactual reality that tries to depict what the situation for those harmed today would be if the wrongful act had not taken place (International Law Commission 2011). For a philosopher that argues for the counterfactual (and more demanding and controversial) approach, see: Pogge 2002.

[34] The example is based on Walsham 2010; Ayeb-Karlsson et al. 2016.

organizes his life accordingly, makes plans, and revises them when necessary to secure his family's source of income. He knows what they can do when a drought comes and there is less water for irrigating the crops. He can make water ponds, switch to crops that require less water, maybe share the crops with other farmers to reduce costs and risks. This is not a risk-free life, but he obtains a range of options through which he can manage those known-unknowns. Sumon is a man with a plan(s).

But now let us suppose that Sumon's situation is altered by climate change. He now faces an increased level of risk and options that were considered safe can no longer be taken to be so. Longer and more frequent droughts and higher temperatures may require more drastic changes to secure Sumon's livelihood and his family's well-being. Some of the risks can make some composition of safe options untenable. For example, higher temperatures and lack of rain may influence the quality of drinking water and not only the availability of water for irrigation. Many of Sumon's life-plans are compromised, as they worked well enough under more moderate levels of risk. With the new and higher level of risk brought by climate change, such plans will not be enough to cope with environmental changes and further efforts, at greater costs, will have to be made to manage the excessive stressors.[35] Sumon and his family may have to change vocation, they may need to take their oldest boy out of school to save money, and might postpone the wedding of their daughter in the face of shrinking financial resources. And Sumon may decide to become a labourer in another country for a while in order to support his family. They may all relocate to a safer region. In sum, many of the actions Sumon could have chosen without these expected harsher outcomes are no longer available. His life becomes much riskier, and he has fewer safe options available compared to the previous more manageable risk-level.

Perfect and imperfect restoration

Restoring safe options means bringing individuals like Sumon back to the parameters of previous risk-levels. There are two main general ways of doing so. The first is trying to re-establish the situation that existed before the intervention. That will mean bringing back the earlier risk-level for each option that was put at higher risk. For example, if climate change increases the likelihood of crop-failure, then more resilient crops or

[35] Goodin's (1991a) view of compensation is sympathetic to this description and explains why it is important to restore such external disruptive interventions in one's life plans.

improved water systems (irrigation, water collection, water management, etc.) should be introduced. This action aims at making crops less prone to environmental extremes such as prolonged drought, and by that reducing the risk to the relevant option—in this example, making a living out of growing those crops. The aim here is to bring down the risk to the situation *ex-ante* the expected impact of climate change. This should be done for each important option that is at higher risk because of climate change.

In this way, through adaptation, we replace one safe option with another. Goodin (1991b, 264-5) calls this *means-replacing* compensation. With this form of restoration, we substitute like for like, enabling the adversely affected individual to pursue her previous life plans by different means. There are different ways to approximate this goal. Some substitution of the removed safe option will be a *perfect* replacement that successfully restores the situation exactly to its previous state. Monetary losses can sometimes be such cases. You took £100 from me and you bring me back £100. More common are *close* substitutions, for example replacing one lost laptop with another laptop of the same quality.

In the context of risk-wrongs, we can treat perfect and close substitutes as restoring the same situation, as they bring back the former level of risk to the pertinent objectives that were put at higher risk. They restore the situation without changing the life plans of affected individuals too much. For example, adjustments to the water system mentioned above might be a perfect substitute; replacing the crop for a more resilient one may be a very close substitute. These are ways to reduce the risk by restoring the same safe option—expected range of crop productivity—that was put at higher risk. Another way to respond to the higher risk of crop failure will be to change vocation or diversify household sources of livelihood. However, these adaptation options may not be very close substitutes, so we shall move on to different way to restore safe options.

It is also possible to restore safe options by substituting original options with equally valuable ones. There are things with unique value to which there are no close substitutes (Goodin 1991b, 273, 275); an archetypal example will be Vermeer's 'The Astronomer'. Such kinds of loss call for a different kind of redress, which Goodin (1991b, 264-5) calls *end-replacing* compensation. With end-replacing compensation we offer the victim goods, unrelated to those lost, in an attempt to boost her overall well-being to its former level. The goods lost will be typically adverse impacts that are not

easily replaceable by money or resources. Aspects of harms that are not economic, such as emotional distress, loss of personal ties, compromised cherished values, and self-respect are examples of hard or irreplaceable goods and values. This type of compensation may have a different aim from the direct options substitution involved. It can express recognition of the loss and the wrongdoing (Goodin 1991b, 269; Lane 1999, 228), which is an aspect I will explore shortly.

In the context of risking, this way of restoring safe options, restoring equally valuable options, does not aim at bringing back the previous risk level for each option; rather it attempts to make other safe options accessible to the agent so the former overall risk level will be restored. Consider another example. Fish and seafood are a major source of protein in parts of Bangladesh (Youssouf Ali 1999). Climate change is expected to adversely impact fishery (IPCC 5AR WGII, 7.4.2). Food security and nutrition-related health problems are at stake. One way to cope with such risk is to diversify sources of income. In some places in Bangladesh, this is a common way of dealing with stressors to one's source of income; for example, one household can grow crops, fish, and own some livestock. But when the environmental pressure mounts, people might need to go beyond their traditional coping mechanisms and shift their vocation in order to secure their livelihood. The response may also include a temporary or permanent move in search for a reliable source of income and safer living conditions (Ayeb-Karlsson et al. 2016).[36]

Both restoring the same safe options and providing equally-as-good-as safe options could be labelled adaptation measures. Therefore, redressing this aspect of climate-wrongs overlaps with reimbursing the costs of climate change risks to an extent. They are both part of the adaptation duties of RSs, but they are not one and the same. Reimbursing costs addresses a particular material outcome of being under climate risk—the loss of resources that are invested in adaptation and not in other objectives. This material aspect of risk-harm can be fully reimbursed; paying for the adaptation costs of affected vulnerable individuals means offering a perfect replacement for the damage created by putting others at higher risk.[37] Here the focus is on the loss of safe

[36] Some studies suggest that moving inland could be (or already is) a way to cope with the risks for fishery (Ahmed and Diana 2015; Islam et al. 2014).

[37] Notice that full reimbursement here does not mean paying back all of the costs of adaptation individuals or states have. Based on my account of responsibility, the extent of RSs' obligation to redress risk-harms depends on how much local government has to do for the vulnerable affected individuals of its own public. In addition, there may be some level of costs that fall on vulnerable affected individuals for

options. Even if an individual's actions are not in any way a response to the risk, and therefore no adaptation costs are incurred, the range of options she has is altered. When, in response to climate risk, the individual restores her previous level of risk by taking up some adaptation options, then we can discuss reimbursement in the way discussed above.

When the state (or other administrative authority or organization) initiates and funds adaptation programmes, then it restores the safe options these programmes target, and there will be no costs for which the individual should be reimbursed (assuming full coverage of adaptation costs). I claimed that in the case of the very poor and the unaware we should make such interventions to overcome cases where individuals cannot protect themselves against the higher risks they are exposed to. Restoring safe options as redress for climate-wrongs provides an additional and more direct reason why RSs have an obligation to finance adaptation plans in other states. RSs can directly fund adaptation initiatives or support them *via* institutional setups that provide the resources for state-led policies and programs. They do not have to wait for other states or individuals to incur adaptation costs in order to carry out such obligations of redress, as the obligation to restore safe options provides an independent reason to support adaptation. Moreover, just making the resources for adaptation available can encourage others to take adaptation measures, and in this way restore their safe options. The knowledge that there is a way to fund adaptation can generate more initiatives. Think of the adaptation funds that exist today. They finance adaptation based on application. Having accessible and large amounts of such funds (or other similar institutions) encourages the submission of adaptation projects. In this way, it brings about more adaptation options and does not merely reimburse pre-existing ones.

And there is an additional way in which RSs can restore some safe options to vulnerable or affected individuals. They can open their doors to climate immigrants. When your living conditions become precarious under climate change, moving to a safer place might be the adaptation option that meets your needs. Immigration, however, will restore safe options in the second way I described above. Relocation is neither a perfect nor a close substitute for the safe option that was removed by climate risks. Such an adaptation option replaces the original option with another, very different safe one. I think that most adaptation will fall under this category, namely alternative options that

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prudential reasons or due to contributing fault. Following Chapter 2, I work under the assumption that RSs still have adaptation duties.

are fairly remote from the original options. When adaptation is pursued through making auxiliary options (or sets of options) available that are not close enough to the original, the situation becomes more complicated. We can no longer assume that in all cases the replacement is truly and in every respect as good as the original option. And this worry has some relevance to cost reimbursement as well. Even cases of full reimbursement of adaptation costs might leave some normative residues when they involve a more remote substitution of safe options. Whether it is the individual who restores her options or whether this is performed other institutions, we have to think about what losses such auxiliary adaptation options involve.

Economic costs are not the full story when it comes to climate vulnerability and adaptation. Going back to the example of Sumon, he can change occupation, perhaps moving from working in agriculture to working in industry. But being a farmer, maybe with a lineage that has always lived off a particular piece of land, is very different from being a day labourer in the garment industry, even if his household income remains roughly the same. Every occupation or other auxiliary adaptation option has downsides, but also some perks. It is difficult to say which is better or to what extent they are as good as the original option. Nevertheless, the change itself can be a source of grievance to many. Establishing a workshop where one can produce and sell hand-made goods (or do so for a paycheck) might provide an alternative source of income in times of reduced fishing. It might even be a more stable occupation than being a fisherman. Alas, if a fisherman is *what you are*, then you will not be indifferent about the two apparently equivalent alternatives.[38] And even if by moving from drought-prone Niger in Africa to France in Northern Europe one can gain better life prospects than are possible in one's home country, this may still be cold comfort considering the life one leaves behind.

Unfortunately, it is not always possible to restore the same or similar safe options. There might be nothing we can do about this in many real-world cases; even our best available alternative adaptation options may involve some residual losses. Nonetheless, acknowledging this possibility can help when considering the adaptation options we should make available. They should minimise as far as it possible the residual loss involved in different adaptation plans. The replacement should aim at restoring every

[38] See for example the testimony of Pablo Flores, an Uru-Murato man in Bolivia who used to be an independent fisherman, and had to change vocation due to the shrinking of the local lake. After he started working in a salt mill, he said: "The Uru people aren't made for this. […] I'm not made for this. We can't do this kind of work. […] I can sincerely say this is a bad place" (Part of the New York Times series on environmental refugees, see n. 12).

valuable aspect of the safe options removed when possible, so that we achieve adaptation that is the least disruptive to the life-plans of affected individuals (Goodin 1991a, 152-3; 1991b, 277-82). For example, if being a farmer is an important part of one's identity, then a diversification of income should still enable working in the field, either part-time, as part of a shared ownership scheme, or even as an employee. Beyond adaptation, this emphasises that in cases where restoring enough similar safe options is impossible, we should make more effort to prevent the production of the risk itself, that is, be more serious about our mitigation duties. And we ought to make a special effort where we risk goods and values of great importance which do not have even a remote replacement—for example the death of someone close to you or the loss of your nation's homeland to the rising ocean (Goodin 1991b; Lane 1999; de-Shalit 2011).

The ideal of restoring perfect or close safe options will hardly be achieved in many cases of climate risk. Besides advising adaptation and mitigation policies in the way just described, understanding the meaning of such imperfect substitution for affected individuals can also inform the third form of redress I want to explore: repairing relationships between those who generate the risk and those subject to it.

Repairing broken relations

Risking others means exercising decisional power over their course of lives. This sort of gamble on someone else's future could be a wrong. The inequality of climate change risks and benefits confirms this worry: GHGs yield benefits to those who emit them while generating risks to others at the same time. I claimed that this situation is exploitative in nature, where some gain from making others worse-off. Without sufficient justification, this sort of exploitative relationship is another aspect of climate risk-wrongs that calls for redress. RSs ought to repair the relationship with those they made more vulnerable to climate change's hazardous effects. An additional reason why RSs may have to engage in this third type of obligation rests in the incompleteness of the other two forms of redress. Reimbursing adaptation costs and restoring safe options may leave some moral residues. As a result, RSs should supplement their redress by repairing broken relations when we cannot reimburse costs and restore the situation without leaving vulnerable affected individuals with significant losses.

I argued that the wrong in such exploitative relationships stems from failing to give the interests of affected individuals their proper weight. Their interests are written-

off in face of the gains the risk-taker obtains. This dismissiveness expresses a failure to treat others with respect, as the deleterious impact on their interests is either ignored or disregarded as unimportant in the face of curtailing the risk-generating opportunity. Remedying this aspect of climate risk-wrongs should make good on this specific misdeed. Emitting states need to show that they give a proper weight to the interests of those subject to the risk they create, expressing a concern for others that was previously lacking.

In moral philosophy, discussions over repairing broken relations often revolve around apologies and forgiveness (Razdik and Murphy 2015).[39] The core element I agree with here is the focus on the role of expressive actions and gestures that reflect attitudes that can restore the nature of relationship prior to the wrongdoing, or at least approximate it (Razdik and Murphy 2015).[40] However, I deliberately exclude forgiveness from my argument for several reasons. A salient reason is the requirement that the victim be aware of the wrongdoing in order to forgive it. I want to claim that RSs can rectify this relational aspect without the awareness of those put under climate risk. There are further reasons in addition. In the context of climate change, where wrongdoing involves many actors, it is not clear how the forgiveness of all those treated wrongly by climate policies could be obtained.[41] In addition, it is not clear what sort of a psychological structure we think a collective needs to possess in order to perform a full and genuine apology (Razdik and Murphy 2015).[42] Therefore, I will not assume a controversial notion of moral psychology of collective agents.[43]

Therefore, when I use the word ‘attitudes’, this should not be understood too literally. Instead of referring to attitudes as a ‘deep’ internal process, I am looking at the

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[39] For example, see: Govier and Verwoerd 2002; Hughes 2015; Lazar 2008; Walker 2006. Some of the literature on reparations and the relations between perpetrators focuses on transitional justice and specific reconciliation processes after grave historical injustices. In this context, other forms of repairing the relationships are examined, such as truth telling and amnesties (Radzik and Murphy 2015). I find such mechanisms to be less relevant to the case I am exploring. But there are some points that transcend the original context in which they were first thought of and they have influenced and shaped my discussion here.

[40] It is not necessary for the relationship to be restored to a fixed point before the wrongdoing at stake, here bringing about climate change. The relationship should be improved to fit or approximate a normative standard (Radzik and Murphy 2015). The standard I suggested above is respect for the equal moral status of others. So, even if there were no point in which states upheld this standard in international relations, this is where the obligation to repair the relationship should aim.

[41] On other differences between individuals and institutional apologies, see: Govier and Verwoerd 2002.

[42] Hansson and Peterson (2011), for example, think that collective attitudes that ought to be amended can either be traced to the individual members of the collective or refer to an ethos of the collective agent.

[43] For further reservations regarding forgiveness, see: Hayenhjelm 2016; Radzik and Murphy 2015, section 3.8.

'surface', focusing on the pattern of external behaviour of an agent, here a state, on how it can represent a certain attitude, and what it can express to others. Some actions follow a pattern, they reoccur and can be associated with the agent performing them. They become the way the agent behaves, that is, a habit. Such patterns of behaviour are part of interactions with others, and they tell us something about the attitudes of the agent and what others can expect from her or him. They are part of forming relationships with others (Razdik and Murphy 2015). Relationships have some standards that inform and regulate how those taking part in them ought to behave and treat others. For example, forgetting a friend's birthday is being a bad friend. If someone always prefers hanging out with his friends at the pub over the company of his children, we might not crown him as 'father of the year'. If I once forget the garbage collection day and let my garbage bags block the pavement, that might not be a big deal. But if I do it every week, then I am failing to meet a reasonable expectation to respect my neighbours.

In this study, I am interested in the patterns of behaviour of RSs that can be judged as exploitative, a failure to treat others with equal respect. What will it take to rectify such a corrupt relationship? What is the attitude that underpins the wrongful act? The answer lies in the reason why we judge patterns of behaviour or attitudes to be defective.[44] The risking actions of RSs reflect a disregard for others' important interests; therefore they ought to act in ways that express the appropriate weight such interests truly deserve. Since they extract advantages from putting others at higher risk, in order to correct the exploitative nature of the relationship they need to make it beneficial for those they put at risk as well. Or to put it differently, RSs ought to act so their emissions will not make others so disadvantaged. In the case of climate risk, they can do so through reimbursing the costs of risk-harm and restoring safe options in the ways discussed above. Repairing the relational aspect is pursued *via* the other types of redress, but is not exhausted by the previous discussions. The characteristics of such restorative actions need to deliver the right message; they should reflect a certain apologetic attitude.

Redressing in the right way

The reparative actions need to express an acknowledgment that the action was wrongful, an understanding of their impact on others, a genuine attempt to make good

[44] Cf. Hayemhjelm, 2016; Radzik and Murphy 2015.

on the wrong, and a promise not to perform the misdeed again.[45] Madeleine Hayenhjelm claims that actions, in her case compensation, can express such attitudes: "rather than expressing this in a verbal apology this regret and remorse is expressed in the compensatory offer of goods, money or services. It is acknowledging wrongdoing and expressing regret over and above any physical damages or losses" (Hayenhjelm 2016). So, the reparative actions can have two functions: reimbursing and restoring what it is possible to replace with the same or similar enough equivalents, and to address the relational aspect of the risk-wrong.

Recall that replacing a safe option with a remote substitute leaves residual losses. Here we cannot restore the life plans of affected individuals to the state of affairs before the risking. When we do offer something in exchange for these losses, as we sometimes do with compensation in tort-law cases, we mainly attempt to convey a message and not to replace what was lost. We address this relational aspect of the wrong by expressing the right attitudes towards those we harmed (Goodin 1991b; Lane 1999). It is possible to deliver such a message in the way we carry out the obligations to reimburse costs and restore options. There are different ways to express this: in the magnitude of redress, through the level of effort it demands from the responsible agent, and by showing that the redress represents an understanding of the harm and wrong and what it will take to restore things (Hayenhjelm 2016).

I will start the discussion with a simple example of interpersonal relations to illustrate this idea and then explore it in the context of climate change and risk.

> *Lost book*:[46]Aaron borrows a book from Beth. It is volume four of her precious Marx and Engels' Collected Works. Inadvertently he loses it, making Beth worse off as well as betraying her trust.

There are material and relational elements to Aaron's misconduct that he needs to address. Putting aside the apology he owes Beth, and whether she will forgive him or not, let us examine what compensatory actions would deliver the correct message for repairing relations. It is easy to see what would send the wrong message. Consider this response: seeing online that one can buy a second-hand copy of the lost item for around £6, Aaron simply gives this amount to Beth. Such material compensation, while often demanded by the courts, is insufficient, as it does not reflect an understanding of the

[45] Cf. Gill 2000; Govier and Verwoerd 2002; Scarre 2004, 24.
[46] Hansson and Peterson also mention borrowing and losing a book as example when they present the *obligation to improve* (2001, 160).

loss he brought on her as well as its damaging impact on their relationship. Aaron misjudges both the harm and the wrong of his carelessness. But let us assume that Aaron acknowledges that such an act would be inadequate, and buys Beth the lost volume himself, which seems to restore Beth's situation. Nonetheless, it is still not a complete rectification of both aspects. First, Beth is attached to the specific item Aaron lost. She had read it, written notes in it, she had made a lot of effort to collect all of the volumes she owns, and so forth. A new book is not the same as the old one, even if it is almost as good. In addition, it only expresses partial recognition of the mistrust he injected into their relations.

Aaron can do better if he wants to amend his relations with Beth and rectify his delinquency. He can go overboard with compensation, buy her a very expensive book instead of the one he lost. However, the five volumes of 'The Modernist Cuisine' (around £300 on Amazon) are not a replacement for volume four of Marx and Engels' Collected Works. For all the virtues of molecular cooking, it is not Marxist theory. Buying ten new copies of the book he lost will also be a failed extravagance. What is the use of owning ten copies of the same book? What Aaron *can* do is to find a unique edition of a book that he knows Beth always wanted, and maybe add a different volume of the Marx and Angels Collected Works that Beth does not possess. Such a compensatory act shows that he understands the book's value in Beth's eyes and the specific relation between the loss she suffered and the things she values and loves. He tailors the compensation accordingly, which expresses his genuine desire to make up for his action. And if the item he thought of buying is hard to find, his effort adds to the message. Sacrifice is another way to convey the right message. So Aaron can give her his own copy of volume four, one that he got as a present for his long membership in the Labour party.[47]

But maybe this is not enough. Reducing the mistrust Beth feels requires some additional forward-looking, promise-like gesture that shows Aaron can be thought as a reliable friend once more.[48] Sometimes the sincerity reflected in the compensation can express this renewed trustworthiness, as the desire to correct the wrong signals this. But to illustrate the point, let us say that Aaron does more than that. He may explain that after losing her book he set himself a new precautionary rule—he never takes borrowed

[47] For the sake of the example we will ignore the nagging question of why he needed to borrow a book he already had.
[48] Cf. Hansson and Peterson 2001, 160.

books outside of the loaner's house. This reflects his understanding of his own failure and his intent to amend them. Maybe he has a new borrowing policy, he only exchanges books now and if he loses the one he lent then he also loses his right over the one he loaned. It also expresses that he takes now more seriously this sort of activity.

But does this example work for cases of risk creation as well? Consider another simple example.

> *Oyster Card*: As she goes on the bus, Diana discovers that she does not have her Oyster card on her.[49] She rushes back to her flat but cannot find it anywhere. She sees a card belonging to Carlo, her still sleeping flatmate. His Oyster card is lying on the desk near the entrance. She hesitates for few seconds. She knows that Carlo usually wakes up after her and that he will probably need the card that day. But she really does not want to miss her early morning meeting, so she grabs Carlo's Oyster card and runs back to the bus station. It is a long commute, so on the bus she has plenty of time to think the situation through.

By the time she enters her meeting, Carlo will surely have woken up and noticed that his card is missing. But for the time being, he is only disadvantaged with respect to his expected future lost time and grievance. It is possible that on that day Carlo has planned to do some chores around the flat and will have no need for public transportation; he might even not notice that the Oyster card is gone or care much if he does notice. This is similar to those unaware of being at risk of future harms.

Diana knows that though she is pushing it, she will make it to the meeting on time. She still has some time on the bus to go. What she decides to do with this time matters. She took advantage of the fact she woke up early and could compromise Carlo's interests for the sake of her own. So if, relieved and happy about arriving at the meeting on time, she relaxes in her seat and checks her Facebook profile, then it seems like she is disregarding the impact of her action on Carlo's day. If she starts to prepare for the crucial meeting without doing anything about Carlo's circumstances, that might be excusable; it will depend on how important the meeting is and what Carlo's plans for that day are. But Diana can also put her mind to it and try to restore the option she denied to Carlo. Restoring the same option may be possible if she can remember where

[49] An Oyster card is an electronic card used to pay for public transport in London. You cannot pay in cash on a London bus (this is not merely a simplification for the sake of the example—this is how it really works).

her Oyster card is and send Carlo a text message with an explanation and directions.[50] She can ask a favour of the neighbour or the landlord, who have a spare key to the flat. Diana can kindly ask them to go to the nearby train station, buy a new Oyster card, and put it in the exact same place she found Carlo's. In this case, Carlo might not notice that the Oyster card was gone at all. This will be a perfect substitute: Carlo will be in the same situation as before Diana's intervention (assuming the card is just as good as the one she took).

Such actions also express concern for Carlo's interests in a way Diana's initial grab-and-run lacked. Therefore, they are the sort of redress that can amend the relational aspect of the wrong. Using her contacts with the neighbour or landlord to offer a perfect substitute, so Carlo will not be disadvantaged in any way, shows an extra effort that reflects her sincere intentions. If orchestrating this would come at the expense of preparing for the meeting, then there is also some sacrifice involved. If Diana is unable to restore the same option, she might go for a grand gesture and create an auxiliary option that is more than just as good as the original one. Assume that she knows that Carlo planned to spend the morning travelling to the supermarket and then get a haircut in the cheap barbershop nearby. She texts him, asking for the shopping list and offering to buy everything on the way back from work. In addition, she writes that he can go and have his hair cut in the posh place near the flat; she will pay for it and in the time saved Carlo can have coffee and read the newspaper in the local café he likes so much. In this case, she does not replace the same option, but options that track what the original option meant for Carlo on that day; options that are close substitutes. Moreover, giving him one better option, and one carefully tailored to his own taste, expresses her desire to make up for her rushed decision to 'borrow' Carlo's Oyster card.

But maybe Diana also needs to express that taking Carlo's possessions without asking will not become a habit. To do so, she should make some future-oriented gesture. For example, installing a small shelf near the entrance to the house where she will put her keys, wallet, and Oyster card. The new arrangement guarantees that she will never be in a similar situation again, where she feels compelled to take Carlo's belongings. Another thing she might do is to talk with Carlo about 'do's and don'ts' with respect to each other's private property, explicitly announcing her intentions to respect these new house rules. She does not have to do all of the above; some might suffice. They are just

[50] This can be to follow her *obligation to communicate* the risks she created for someone else (Hansson and Peterson 2001, 160).

examples of things that can make a difference, from simply restoring an option to a reparative action that can also fix the broken relationship.

3.4 How responsible states can repair exploitative relations

Now it is time to return to climate change risks. What we learn from the more abstract discussion is that RSs should carry out their duty of redress in a certain way in order to fulfil their obligation to repair relations, too. This means that RSs' obligations to reimburse costs and restore safe options ought to express acknowledgment of the harm and wrong that were done, as well as an understanding of its impact on the affected people. In addition, they ought to make a genuine attempt to address the full extent of the adverse impact and an intention to change their wrongful pattern of behaviour. I suggested above that reimbursing costs and restoring safe options can convey this message. I will now briefly review these possibilities in the context of climate change and RS's duties of adaptation.

RSs can repay *over and above* their portion of the shared responsibility as a way to address the relational aspect of the wrong through the obligation to reimburse adaptation costs. The vulnerability of individuals is compounded by climate change. The environmental effects expected with climate exchange multiply or intensify existing vulnerabilities (IPCC 5AR WGII, TS, 50-1). Climate change contributes to such vulnerability by raising the risks of particular harms. The adaptation duties of RSs should match the proportional impact of such increased vulnerability. Therefore, the support for adapting to climate change that vulnerable affected individuals are owed does not annul their vulnerability. They will still be exposed to risks in the same aspects of their life (for example, food security, health, and displacement) due to other stressors. So RSs can offer greater protection, invest more in programs and policies that can further reduce the vulnerability of individuals. There is room to do more for vulnerable individuals, beyond what the duties of adaptation require from RSs. Paying more than the obligation to reimburse demands is a way of showing that a RS is trying to repair its broken relations with vulnerable affected individuals.

Focusing on how the obligation to restore options can also be a way to repair relations, RSs can make *greater efforts* to restore the same safe options that have been removed from an individual's opportunity set. Such efforts can come at the expense of important goals of the RS and be seen as a genuine sacrifice. Diverting more funds from

domestic expenditure to projects like building defence walls against rising sea levels for the future safety of a coastal region could be an example of such effort. This example is not one of paying more than the obligation to reimburse adaptation costs requires. Building such a sea-wall might not be on the agenda of vulnerable regions. In all likelihood, it will be judged as too complex and costly. Therefore, there will be no adaptation costs that could be reimbursed as part of the obligation of redress. The obligation to restore options can identify more ways of going beyond what we demand from RSs. This example illustrates that when restoring a safe option, if the action reflects a special effort it can also be a way to repair relations.

Offering auxiliary options that track the losses experienced or the specific needs and preferences affected vulnerable individuals have could be another way to show concern for their interests. If the traditional trade of fishing becomes precarious, then one solution may be to substitute it with modern sustainable fish-farming methods. If it is impossible to ensure that affected vulnerable individuals can remain self-employed fishermen or owners of their own business, then offering job opportunities as deep-sea fishermen might be better than retraining them to be workers in a garment factory (assuming both are decent jobs in terms of payment and working rights). *Tailoring* the adaptation options is another way in which RSs can perform their obligation to repair relations through the obligation to restore safe options.

When it is impossible to restore the same safe option or a close enough substitute, we face a residual loss that emitting states have to acknowledge. Offering more in terms of other valuable options is second-best, but what should be done in these cases (Goodin 1991b, 287). This form of compensation speaks to the relational aspect of RSs' obligations of redress. By offering other valuable options, an RS not only lifts the affected individual to her previous level of welfare, it also *expresses the correct attitude of care* towards her interests and needs. Here too, the way it is carried out is important. Consider the case of malaria to illustrate the point. Malaria is expected to become more common in some regions due to the rise in temperature (IPCC 5AR WGII, 11.5). To address this risk and as part of its duties of adaptation, a RS can make protective mosquito-nets available (and a cure for Malaria when one is found) in impacted regions. But it can do more than that. The RS can also provide the medical assistance needed in these locations. Having protective measures in place against malaria is not as safe as having the prior lower risk of being infected. Nonetheless, providing other important

vaccinations and cures for common illnesses in the relevant area shows concern for that population's overall health-related interests. It reflects something that equivalent money transfer does not, namely, an acknowledgment of what is put at risk. Understanding the limitations on restoring the previous situation in full and making an effort to make up for it by improvement in a similar domain shows that RSs are paying attention to the interests of those they have exposed to higher level of risk.

All of the examples I have reviewed so far illustrate how RSs can do more or make a special effort to express that they want to mend broken relations. But in order to fix the exploitative relationship, RSs should also demonstrate that they are doing something to *stop reproducing the same patterns of benefits and risks.*[51] Such a commitment does not have to be expressed through reparative action in this case, as pledges to reduce their levels of emissions are a good indicator of RSs' efforts to do better. An ambitious commitment to curb GHGs and plans for decarbonisation show that a state takes the harmful impact its emissions have on others seriously, and that it is trying to change. Another way to demonstrate a commitment not to repeat the wrongful treatment can be to target the relevant decision-making procedures. RSs can give greater voice and influence to those highly vulnerable to climate change hazards. This can provide vulnerable affected individuals better safeguards against future unfair treatment. It is likely that with more influence over decision-making procedures, those highly vulnerable to climate change can protect their interests better and push against the exploitative distribution of climate benefits and risks. This more procedural avenue is not merely a way to promise the non-repetition of the wrongful treatment, it can also be seen as part of redressing climate risk-wrongs in a more direct way. I claimed that risking others means taking some aspect of their life out of their hands; it is to put them under the decisional power of others. Therefore, regaining such power to determine their life prospects might be what they deserve and part of the reparation for creating a dangerous climate.[52]

In this section, we started to move from the responsibility of emitting states towards their derivative climate change obligations. The responsibility for climate change risk-harm and risk-wrong gives rise to three modes of redress: reimbursing the costs of adaptation, restoring the lost safe options, and repairing the exploitative

[51] This matches 'Article 30: Cessation and non-repetition' in the *Draft Articles on Responsibility of States for Internationally Wrongful Acts* (International Law Commission 2001). See also Hansson and Petersons' obligations to improve (2001, 160-1).
[52] Cf. Radzik and Murphy (2015, section 3.9).

relations between RSs and vulnerable affected individuals. All three are connected to adaptation. They partially overlap but each makes a distinctive contribution to rectifying the harms and wrongs of climate change risks. Together they can inform what type of support for adaptation efforts RSs must offer as those creating a more dangerous climate.

3.5 Conclusion

In this chapter, I have explored the notion of responsibility for creating risk in the context of climate change, with some focus on immigration. The analysis of responsibility for the adverse outcome of climate change developed in the previous chapters brought risk to the fore. I argued that the creation of a more dangerous climate change is an outcome that constitutes a harm and a wrong for which emitting states ought to make redress.

My argument for states' responsibility for creating climate risks, and their derivative obligations, suggested that:

(i) Risking others constitutes a harm (risk-harm) and a wrong (risk-wrong) that give rise to obligations of redress.

(ii) In the context of climate change, risk-harm is mainly about adaptation costs and RSs incur an obligation to reimburse part of these costs.

(iii) Risk-wrong is about the removal of safe options and the exploitative nature of the unequal distribution of risks and benefits. RSs owe redress in the form of restoring safe options and repairing damaged relations through gestures expressing proper consideration for the interests of vulnerable affected individuals.

The responsibility of states for creating a more dangerous climate, therefore, leads to obligations of redress that are relevant to adaptation. With adaptation, there is a partial overlap between three different forms of redress: cost reimbursement, options restoration, and repairing of relations. Both reimbursing the costs of adaptation and restoring safe options address adaptation options. But restoring safe options can be a more direct and active method, as it does not require affected agents to incur adaptation costs to trigger them. Repairing relations is achieved by conveying the right message in the way RSs carry out their obligations of redress. For example, offering more or better adaptation options, tailoring the options as much as possible to the needs of vulnerable

affected individuals, or making significant sacrifices. It can show that they understand the devastating impact their actions have and a willingness to give proper weight to the needs and interests of vulnerable affected individuals.

This outlook shows the insufficiency of principles, such as the APP, that attempt to avoid grounding the duties of emitting states in their responsibility for bringing about climate change. Beyond overlooking the correct moral balance between those who cause harms and those who ought to pay for redressing them, such normative principles cannot address the relational aspect of climate risk-wrongs. In carrying out their duties of adaptation, RSs have to express understanding of the wrongness of *their* high level of emissions and a willingness to make good on them. Grounding these duties on the greater capacity to carry such obligations cannot convey such message. Putting all of our obligations in one basket, in this case the APP justification, leaves this aspect of climate injustice unaddressed. Therefore, principles grounded in outcome responsibly, such as the PPP, play a crucial role because they provide us with a fuller account of the moral obligations of emitting states.

It is time then, to start investigating how the adaptation duties of RSs are translated into more specific obligations towards climate migrants. In the next chapter, I discuss climate migration and how our understanding of it influences the structure and content of RSs' obligations.

Part II:

Obligations towards Climate Change Immigrants

4. The Obligations of States in the Context of Climate change Immigration

> *But when we had a drought last year in Kenya, prolonged drought, people had to move to places where they thought they could find grazing lands for their livestock. People had to move to places where they could find water, because most of the traditional water sources dried up… people move, you know.*
>
> —Isabella Masinde (in an interview for *Democracy Now*!, December 7, 2009)

4.1 Introduction

Ahead of COP 21 in Paris, the international summit where states' representatives negotiate climate change policy, the Advisory Group on Climate change and Human Mobility published its recommendations for this round of talks. The report ends by emphasizing the magnitude of the phenomenon:

> Future climate change projections indicate that previously unprecedented extreme weather events may become the norm rather than the exception and it is widely agreed that such events […] will amplify the risk and challenges of displacement over the 21st century. Evidence from past and recent events shows that weather-related disasters have resulted in significant levels of population displacement worldwide. Considering the impact of sudden-onset, weather-related hazards alone, a global average of at least 22.5 million people have been displaced each year from 2008 to 2014, and disaster displacement since the 1970s is on the rise. Since 2008, close to 175 million people who live in developing countries have been displaced by disasters, accounting for 95 per cent of the global total. (Advisory Group on Climate change and Human Mobility 2015, 9)

A similar message can be found in a recent briefing by The Overseas Development Institute (ODI), a UK-based think tank, which also forefronts the issue of risk in relation to climate immigration. In the introduction, they also present the complexity of the phenomenon:

> People move for a variety of reasons, and there are many modes and categories of human mobility. Understanding the characteristics of these movements and how they relate to different climate shocks and stressors is key to developing effective policy responses, adaptation plans and investments. […] Most commentators adopt a risk-centric approach to the issues in climate-induced migration and displacement. Essentially, this means understanding human mobility as a response to the risks associated with climate change and extreme weather. (Wilkinson et al. 2016, 2)

Both publications bring forth key points discussed and advanced in this work thus far, such as the importance and scale of the issue, risk and vulnerability, and their relevance to adaptation policy. They also point to the complexity of human mobility and the

different forms it may take. And that is the leading theme of this chapter: how to understand climate migration, to classify it, perceive it, and respond to it.

In the previous chapter, I established the responsibility of states for bringing about dangerous climate change, that is, for increasing the likelihood of hazards as a result of their emitting activity. Such responsibility is shared, but we can assign states a level of responsibility that matches, to an extent, their level of emissions. This adds to my earlier suggestion (in Chapter 2) to bring in additional relevant normative considerations (such as capacity), so we can say what share of the global adaptation duties each state ought to bear. We find, then, that Responsible States (RSs) are the main agents shouldering the global adaptation obligations that may be relevant to climate migration. I argued that the responsibility of RSs should be understood in terms of risk creation, that the derivative obligations RSs have are reparative in nature—redress for the harm and wrong of risking, and that such obligations take three forms: cost reimbursement, safe options restoration, and relationship repairing.

In this chapter, I move the dissertation a step further and focus on obligations towards climate immigrants. I start with some analysis of the phenomenon. In section 4.2, I provide a brief remark on the history of the term, suggest a typology for different mobility scenarios, and explain my own focus on one category of movement: Climate-induced migration. Then in section 4.3, I move on to discuss how we should perceive Climate-induced migration. I examine two opposing views (Migration-as-Adaptation and Migration-as-Maladaptation) in order to construct a third possibility, Migration-for-Adaptation, which I endorse. And in section 4.4, I connect this outlook on climate migration with the obligations of RSs for adaptation as construed in Chapter 3. I conclude that despite the complex conceptual landscape of climate migration, RSs bear obligations towards climate immigrants that should inform their immigration policy.

4.2 Climate migration

The debate over the term ‘climate migrants’

There is ongoing discussion over the definitions and terminology to be used with regard to population movement due to climate change effects. This grew out of a wider and similar debate about the conceptualization of migratory movements induced by environmental factors (which also include earthquakes, tsunamis, industrial accidents,

and development projects relocation).[1] From the 1990s onwards the debate has focused more on environmental drivers of movement that are associated with climate change, though many of the controversies still revolve around similar issues.

The debate over the proper terminology for this phenomenon has been, and to large extent still is, focused on the contested title 'environmental refugees' (and later 'climate refugees'). This is also the title that captured the attention of the media and the public. Many point to El-Hinnawi's report of 1985 as the instigator of the debate (Bates 2002, 466).[2] The term and topic started gaining traction a few years later, due to alarming predictions regarding the magnitude of future environmental migration (Myers 1997; 2002; 2005). While the use of the title 'refugees' to describe migration and displacement driven by environmental and climate factors is still ubiquitous in political discourse and the media, a more cautious and sceptical approach towards the use of the term is now predominant within the academic literature (Morrisey 2009; IPCC 5AR WGII, Box 12-4). The objections can broadly be categorised into two groups. The first raises concerns regarding the term's compatibility with existing relevant legal instruments and a potential backlash against any attempt to stretch their scope to protect this new class of migrant as well. The second emphasises that such a title is misleading and oversimplified. Migration has multiple drivers and treating the environment or climate change as the sole and direct cause is conceptually misguided (IPCC 5AR WGII, Box 12-4).[3]

Because of these objections, researchers have gradually moved away from the title 'refugees' and started working on a better conceptualisation of the phenomenon, striving for more focused research on the diverse ways in which environmental change impacts human mobility. Researchers now tend to use 'migrants' as the general term, adding prefixes to create further classifications, for example: 'environmental forced migrants', 'environmental-induced migrants', 'environmental motivated migrants', and

[1] For a comprehensive discussion of the many different types of environmental displacement, see: McDowell and Morrell 2010.

[2] Citing Essam El-Hinnawi's original report. The term 'environmental refugees' actually predates El-Hinnawi's report and was mentioned in the 1970s by Lester Brown (Morrissey 2009, 3).

[3] See also: Morrissey 2009; Keane 2004; Fritz 2010; Hugo 2010; Zetter 2010; Black et. al 2011; Renaud et al. 2007; Renaud et al. 2011; Foresight 2011; McAdam 2011; Piguet, Pécoud, and Guchteneire 2011; Zetter 2010, 2011; Faist and Schade 2013; Lonergan 1998; Black 2001; Williams 2008; Graeme 2010; Kälin 2010.

so on.[4] Many of the researchers entered such classification projects thinking that analytically distinguishing between sub-categories or cases of environmental migration is crucial in order to understand it and for the design of adequate policies.[5] Still, some researchers remain sceptical about establishing a distinct category of migrants that muddles the study of migration and has a prejudicial impact on immigration policies.[6]

I share the worries of the sceptics to a certain extent. To talk about climate migrants without carefully explaining the complex ways in which climate change will influence human mobility might lead researchers to misconceive the subject of their study; not just empirical studies of the phenomenon, but also normative inquiries, such as this work. Any study that distinguishes a category of persons that may deserve a special treatment must show that such a category can be established. I also accept the fact that the effects of climate change are not the only reasons why people decide to relocate. Nonetheless, such adverse effects are part of the reasons driving people to move. The fact that climate change is part of what induces migration is sufficient reason to explore its impact on human mobility, bearing in mind that there are other causes at play. Therefore, I use the term 'climate' when talking about such migratory phenomena in order to emphasise the specific interest of this inquiry. In what follows I suggest analytic categories that aid this normative inquiry, but by using them I do not claim that climate change is the only cause of these migration scenarios.

Typology of climate migration

I do not intend to address the full range of migration scenarios in which climate change plays a causal role. I focus on a specific class of cases that I find important and interesting, namely movement induced by gradual environmental changes associated with climate change. In order to distinguish the primary focus of my research from other types of migratory movement, I introduce a classification of climate migration. Similar to existing typologies in the literature on climate and environmental migration, I

[4] However, some continue to use 'refugees' as the general term (Bates 2002), or for a sub-class of migrants (Renaud et al. 2007). For a comprehensive list of terms that appear in the literature, see: Terminski 2011.

[5] For example, Bates 2002; Biermann and Boas 1010; Koko Warner et al. 2010; Renaud et al. 2011; Williams, A. 2008; Neuteleers 2011; Terminski 2011.

[6] This scepticism is registered in Black et al. 2011; Foresight 2011. For more fervent criticism, see: Nicholson 2012; Gemenne 2012; de Haas 2012. However, Francois Germenne's last piece in *Forced Migration Review* (2015) is interesting in this regard, since he reflects on such positions critically and lobbies to bring the term 'refugees' back to the discourse.

distinguish between categories based on the pace of the development of environmental hazards and the duration of the migratory movement.[7] For the purposes of this work I divide climate migration into three main groups:[8]

(1) *Emergency climate migration*: forced movement (or displacement) due to extreme rapid weather events (associated with climate change) such as floods and tropical storms.
(2) *Climate-exile*: the permanent relocation of communities when their territory becomes permanently uninhabitable.
(3) *Climate-induced migration*: the movement of individuals or communities from their regions, due to gradual environmental changes (associated with climate change) that, coupled with other factors, significantly restrict life prospects where they reside.

All categories of movement can be internal, within the territory of a given state, or international, when the end-point is beyond the state of origin's borders. I focus on the third category of movement and on its border-crossing aspect. But before I explore this, let me say a bit more on Emergency climate migration and Climate-exile and explicate the reasons why I do not put them at the centre of my argument.

Emergency climate migration

I will start with a short explanation of this category of movement. Under this heading, I put scenarios that are typically associated with forced, temporary, and short-distance

[7] For examples of a similar typology to the one I have suggest here in the migration literature, see: Renuad et al. 2007; 2009. Other classifications can be found in: Bates 2002; Barnett and Webber 2010; Kälin 2010.

[8] I exclude from my analysis two possible categories of climate migration that are sometimes invoked. The first is planned and forced relocation of populations due to climate change-related projects. The most obvious case will be the building of a dam for a hydroelectric power plant, which will flood a populated plain. The relocation of a population in these cases is connected to climate change, because this project might be a part of a state's mitigation plans, a way to switch to clean energy sources (for example, The Three Gorges Dam in China that led to the relocation of more than a million people). This is not the causal chain I am looking into and in such state-led projects the main cause of displacement and the main responsible agent are clear: it is the state that authorised the project. The second category is the movement of refugees fleeing conflicts to which climate change is a contributing cause. In the past, Darfur was the main case study for this link between climate change and conflict, but recently the civil war in Syria has been in the spotlight. There is a long debate on attributing a causal role to climate change in violent conflicts (on the topic in general, see: IPCC 5AR WGII 12.5, and Box 12-5 on Darfur. For Syria, see: Gleick 2014). I do not take a position in this debate. In my view, those fleeing such conflicts are refugees, with or without the causal link to climate change. Therefore, they should be recognised as such on the basis of the 1951 Refugee Convention and receive the protection and assistance that it grants. My responsibility-based argument can explain and ground claims that demand states that emit GHGs be the first to address such refugee cases (see on this point below).

movement.[9] Extreme rapid weather events, as their name suggests, unfold quickly and have a devastating impact on the physical environment, infrastructure, and property. The Philippines, for examples, are prone to tropical storms. In 2011 cyclone Sendong killed over 1,500 people, knocked down about 50,000 homes, and displaced almost half a million people. A year later the tropical storm Bopha killed another several hundred people, destroyed almost 30,000 houses, with nearly 200,000 displaced. But the worst storms unfolded in 2013, as typhoon Haiyan wreaked havoc in the islands. More than 6,000 people were killed and nearly 4 million were left internally displaced following the typhoon landfall. The years 2014 and 2015 added to this grim tally, when more than seven million people lost their homes due to metrological disasters.[10]

Some cases of Emergency climate migration can be seen as a refugee-like scenarios. Abrupt natural disasters that are associated with climate change may lead to border-crossing displacement.[11] When people flee for their lives, they seek safe-havens, which they might find in a neighbouring state, especially if there is no physical barrier to their movement (like an ocean or a mountain range). In these cases, it is reasonable to expect temporary protection from the host state until it is safe again to return to the impacted region. It is possible to relocate those displaced back into a safe region within their state of origin. But often, relocating displaced people to another temporary space will be much worse than hosting them in the neighbouring state to which they fled initially. This will be a refugee-like situation, and they will need the protection and supporting services of the host state until their safe return.

Now that we know what is included in this category of climate migration, let me briefly comment on its relevance to normative thinking. Earlier, I registered reservations about using the term ‘climate refugees’, however many definitions of the term ‘refugee’ given by political philosophers cover Emergency climate migration cases. From a normative perspective, the duty of the hosting state towards emergency climate migrants is similar to the broader duty to admit refugees. It is grounded in a universal commitment to protect the fundamental needs or rights of every human being when the

[9] This understanding is widely shared by scholars. For some examples, see: Barnett and Webber 2010; Fritz 2010; Hugo 2010; McAdam 2011; Piguet, Pe´coud, and de-Guchteneire 2011.
[10] The data is based on annual reports by the Internal Displacement Monitoring Centre (iDMC) 2014, 2015.
[11] See for examples the references to flooding in Vietnam and international movement in Obokata, Veronis and McLeman 2016, 117.

official administrative authority designated to do so is unwilling or unable to.[12] By most accounts, acute deprivation and the inability to secure these needs and right in one's state of origin are necessary and sufficient to trigger this duty in other states. This, in principle, is the duty of each and every state in the world.[13] However, the way the burden of this duty is shared is a separate question. Here different normative principles may be utilised, and being a cause in the creation of a refugee situation is sometimes given as a weighty consideration in deciding who should take in refugees, from where, and how many.[14] In a similar vein, it has been argued that emitting states ought to take in refugees in proportion to their GHGs emission level (Byravan and Rajan 2006, 2010).

However, the pattern of movement typical of Emergency climate migration is short distance (IPCC 5AR WGII 12.4; Foresight 2011). When international borders are crossed, people will flee to a neighbouring state, which on many occasions will not be one of the RSs. Assuming that they can find a safe temporary dwelling in these hosting states, a second relocation might be unwarranted and perhaps even undesired. So, while my argument may suggest that RSs bear most of the obligation towards such displaced persons, other states may assume the obligations of admission and resettlement (even for a short period of stay). This is the main reason why Emergency climate migration falls outside my thesis' scope. That said, in later parts of this thesis, I discuss how RSs can share their obligations. The discussion there offers some ideas on how to deal with this discrepancy. So even if my argument does not focus on this movement scenario, it will contribute to it with a few useful insights.

Climate-exile

Let us start again with a brief description of this category of movement. Climate-exile includes extreme cases where a territory will become permanently uninhabitable due to environmental degradation. The scenario discussed most often is the submersion of low-lying Small Island Developing States (SIDS) under the rising oceans. Tuvalu is often mentioned as one of the first to be affected, as its average elevation is about one meter

[12] Unlike the legal definition that emphasises political persecution, most liberal political philosophers and scholars adopt this more general conception of refugees. For some examples, see: Betts 2010; Carens 2013; Gibney 2004; Lister 2013; Miller 2016; Shacknove 1985.

[13] Cf. Walzer 1983, Chapter 2; Miller 2016, Chapter 5; Carnes 2013, Chapter 10.

[14] Some authors suggested this role of causality (for example, Walzer 1983, Chapter 2; Miller 2016, Chapter 5) and a few have also pointed to its potential applicability to the case of climate change (Carens 2013, Chapter 10; Souter 2014b).

above sea level. It is already densely populated and there are not many land reserves to accommodate prospective future internal migration, due to coastal erosion and inundation. Under various future scenarios, international migration seems unavoidable and if the worst of the future trajectories comes to pass, enough of Tuvalu's territory will be inundated to render it uninhabitable.[15] This possible scenario, together with the fact that sea-level rise is considered to be a distinctive effect of climate change, has brought many to regard it as the clearest case of climate migration, usually using the term 'climate refugees'. As opposed to cases of emergency climate migration, relocation in this case will be permanent, and at least in some cases must be to another state. If most of Tuvalu becomes uninhabitable, the majority of its inhabitants will be forced to leave.[16] Tuvalu is an example, of course. The need for permanent relocation of entire populations due to expected climatic effects might be the grim future of other locations as well.

Political philosophers focus mainly on Climate-exile cases, specifically the case of SIDS. Some have written on the distinctive nature of this category with relation to cultural group rights and immigration (Zellentin 2010; 2015), or the inability to compensate for the loss of homeland in the specific case of SIDS (Bell 2004; de Shalit 2011). Some scholars suggest that in the case of SIDS, potential immigrants have the right to resettle in another state or have a similar protected status to refugees under international law.[17] Others also address (at least to some degree) the claim to retain the right to self-determination as a nation or distinct political community in a new territory.[18]

I acknowledge the uniqueness (and importance) of such scenarios of permanent displacement, and I understand the attraction in tackling these philosophically intriguing cases. Nonetheless, the category of Climate-exile (mainly the case of SIDS) covers only a small portion of the human movement climate change will induce. Climate change

[15] There is a lot of uncertainty regarding how well we can protect against rising sea levels in the long run, but it seems that the level of rise we are already committed to will make it very difficult for SIDS to 'stay above water' metaphorically and literally, and under higher warming scenarios this will be impossible (IPCC 5AR WGII. 5.5).

[16] It is not necessary for all of the territory to be submerged to bring about total abandonment of the island. At some point the numbers of the local population that have stayed will not be enough to maintain their lives as they are used to. Any society or community needs enough people to fill the schools, to maintain a local economy, to have a full social and cultural life. On a smaller scale a similar process led to the exodus of Holland Island's inhabitants (Perch-Nielsen, Bättig and Imboden 2008; Gibbons and Nicholls 2006).

[17] This is the most common argument in the literature on the topic; see: Byravan and Rajan 2006; 2010; Bradley 2012; Eckersley 2015; Lister 2014; Nawrotzki 2014; Pellegrino 2014; Risse 2009; Wyman 2013.

[18] On this aspect see Nine 2010; Kolers 2012; Ödalen 2014; Vaha 2015.

will have a big impact on the volume of migration, and we will witness it sooner (some think that there is already climate-induced movement in some regions) than the far-future scenario of Climate-exile. This is the main reason I choose to focus on other patterns of movement. But I also have some reservations regarding the treatment such scenarios receive in the political philosophy literature. Climate-exile is mistakenly framed as a refugee-like situation. There are reasons why we should not simply apply an existing refugee framework to cases of Climate-exile. On one hand the refugee paradigm is 'more' than what is required for cases of Climate-exile. Climate-exile will not be the result of an abrupt event. It is the uncertain end-result of a long process such as a rise in sea levels or desertification. There is no eruption of a pressing need to provide protection to those who cannot achieve it under the jurisdiction of their own state. Other policies could be more suitable that the legal protection enjoyed by refugees; for example, negotiating relocation or planned immigration policies with specific states.[19] Also, in many cases, relocation will be within the state. This is true for threatened regions within the state's mainland as well as for some small islands. For example, the people of Shishmaref, a coastal village in Alaska, decided to relocate inland and there is ongoing discussion over the relocation of Kivalina, a small Alaskan island.[20]

However, on the other hand, thinking about the challenges of Climate-exile as if it was like every other refugee case will lead us to conclude that they deserve 'less' of what they are owed. For those who will become Climate-exiles, relocation is permanent; there is no prospect of a safe return home. In addition, by losing their territory, Climate-exiles will suffer some losses at the collective level as well. The peoples of SIDS, for example, may lose their homelands, together with their national self-determination and cultural values embedded in the sunken land.[21]

I shall identify RSs as the primary agents that hold the relevant obligations in cases of Climate-exile. However, circumstances represented by the category of Climate-exile are so unique and extreme that we will give greater weight to other considerations when

[19] Some SIDS have already started to initiate such programmes. Kiribati's government has bought land in one of Fiji's islands and has a program (titled 'immigration with dignity') that supports applications to emigrate to countries like New-Zealand (Caramel 2014).

[20] See the news report by Holpuch (2016) and the website dedicated to the case of Kivalina (http://www.relocate-ak.org).

[21] These unique challenges are identified and addressed by some of the leading political philosophers writing on this topic; see in: Bell 2004; De-Shalit 2011; Zellentin 2010; 2015; Nine 2010; Kolers 2012; Ödalen 2014; Vaha 2015. It is important to note that the risk to cultural values is also imminent in cases of the relocation of entire communities and not only when a whole nation-state has to relocate.

we deliberate adequate solutions. For example, we might think that an entire national community should regain something like its sovereignty within a different state or that it should receive a new territory from another state.[22] This is a cost that due to its very nature cannot be shared by all states, not even among those we hold responsible for creating dangerous climate change. And it may be a high price to pay, too. Only a few states can then bear such a cost and possible fair solutions should be found together with other RSs. In principle, all RSs share obligations towards Climate-exiles, but practically only a few can pay the heavy costs of such relocation solutions. This represents additional reason for not focusing on Climate-exile cases. That said, in later parts of this dissertation I discuss how RSs can and ought to share obligations towards climate migrants, which may provide insight into this challenge as well.

I do not wish to elaborate further on the possible implications my argument has for the other categories of climate migration I identified (Emergency climate migration and Climate-exile), as it will steer us away from the focus of this dissertation. Instead, I will point out that the distinction between all three categories is fuzzy at best. Some movement related to Emergency climate migration and Climate-exile will be more like Climate-induced migration scenarios. Some natural disasters are part of the local weather cycle. When they become more severe or frequent, they may induce a more permanent pattern of out-movement. Cases of reoccurring floods and tropical storms can gradually erode the ability to forge a decent life in the exposed region. This will not be an emergency flight situation, but rather a decision to leave the hazardous region for good and to go and seek a safer future elsewhere. And at times such a journey will take people across national borders.[23] Then, it might be better to think of such cases in terms of Climate-induced migration.

In addition, Climate-exile is the end-result of a long process, such as the rise in sea levels or desertification. Before Tuvalu loses its territory, it will lose its population due to the hazards associated with climate change and rising sea-levels (high tides, sea water intrusion, coastal erosion, and coral bleaching) that will make it impossible to live on

[22] See: McAdam (2012, Chapter 5) for an informative and interesting discussion of these kinds of solutions and their value.

[23] Cases of emergency climate migration can lead to climate-exile as well. Sometimes, permanent relocation from a region with high exposure to climate extremes will be the best solution. When a planned relocation of entire communities is required, then the case will have more in common with the Climate-exile category.

the retreating shoreline.[24] The increasing emigration from SIDS will start well before a concluded solution for the relocation of the entire community has been reached. People will relocate to other states if they are able to do so. The Climate-induced migration framework can better explain how to respond to such movement and what the relevant obligations of RSs are when it comes to such early migratory trends. So, in Emergency climate migration and in Climate-exile, we find cases at the margins where crossing international borders will be a way to adapt to declining living conditions, which are better addressed in the discussion on Climate-induced migration I develop here. So, it is time to turn to the main category of movement I focus on in this thesis—Climate-induced migration

Climate-induced migration

The migratory scenarios in this category are the least likely to be directly linked to climate change. Unlike climate emergency migration or Climate-exile, the causal role environmental change plays in the decision to leave is less direct and salient. Climate change effects are mediated through other drivers (socio-economic conditions, politics, age, gender) that together impact the decision to stay or leave. Still, climate change does have an impact on human mobility in this category.[25] It will have an incremental impact on stressors that make livelihoods less secure (IPCC 5AR WGII, 12.2). Droughts and rising temperatures that reduce land productivity have already been shown to have an effect on migration trends in rural parts of African countries like Kenya, Ethiopia, Burkina Faso, and Nigeria (Foresight 2011; Morrissey 2009). Changes in precipitation patterns will lead to water shortage in dry regions and to water overflow (flooding, coastal erosion) in low-lying coastal areas and riverine settlements. Climate change will also impact the composition of marine ecosystems, reducing biodiversity and inducing species migration. These changes will damage the economic activities that rely on such natural habitats.[26] Such types of threats increase the likelihood of migration.

[24] This can be inferred from current immigration trends and immigration plans (Shen and Gemenne 2011), as well from the past experience of other small island settlements that were abandoned (Gibbons and Nicholls 2006).

[25] In a recent working paper focusing on these mobility scenarios, Maria Waldinger (2015) works through different environmental events that impact mobility. For a complex conceptualization on the interaction with other drivers, see Perch-Neilsen, Bätting, and Imboden 2008 and Black et al. 2011.

[26] For good illustrative examples of research findings on the way different types of climatic events can impact on human mobility see the tables in: McLeman and hunter 2010; IPCC 5AR WGII, Assessment Box SPM.2 Table 1, Table 12-2.

I want to flag up a few features of Climate-induced migration that deserve some special attention. First, in these scenarios, it will be difficult to distinguish between those who move due to economic reasons and those for whom climate-related stressors are the prime motivation. Climate-induced immigrants will move because of reduced economic opportunities where they reside and the prospect of better ones elsewhere; the same as any other economic immigrant. The patterns of movement will be more mixed in terms of their underlying reasons than the other two categories of movement. Therefore, it is difficult to substantiate a completely distinct category of Climate-induced migration. Second, most the movement induced by climate-related weather events will be internal. Nonetheless, some of the incremental and long-term effects will lead people to cross international borders (IPCC 5AR WGII, 12.4; McLeman 2014; Obokata, Veronis and McLeman 2016). This prediction shows the importance of immigration, as a movement across borders, to the obligations of RSs. The third feature I want to identify adds to this concern. Not everyone will emigrate as a response to such negative effects on life opportunities. Some may have the resources to cope with these losses without relocating, while many others may lack the funds to make their way out of these hardships by searching for a better place to live. The poorest do not have the capacity for such mobility and will be 'trapped' in the impacted regions. Unsurprisingly, they are the most vulnerable to climate change hazards (Foresight 2011).[27]

A full answer to such concerns will be given as this and the following chapter unfold. In sketching the outlook on climate migration I suggest we adopt, I will explain why relocating for economic reasons or due to climate-related stressors is not as damaging to my argument as it may seem at first. For similar reasons, it can explain the focus on international movement without denying or ignoring internal migration. Last, I take seriously the problem of immobility and the perspective I promote accommodates this. Since there is some way to go until we reach an explanation of this, let me add two points here to quiet some of the worries I have brought up.

First, I remind the reader that I am not arguing that Climate-induced migration is exclusively the outcome of climate-related weather events and processes, and nor do I argue this regarding the two other categories. Furthermore, there is no need to define a distinct group of 'pure' climate migrants in order to argue for special obligations

[27] Also see in: Black et al. 2013; Fritz 2010; Hugo 2010; IPCC 5AR WGII, 12.4; Renaud et al. 2007; Wyman 2011.

towards migrants for whom climate change is part of the driving force for their movement. The account of responsibility for creating risk that I put forward does not require that immigrants cite climate change's adverse impact as their reason for relocation. As I showed in Chapter 3, the scope of RSs obligations also covers those who are unaware of the risk they face. This means that my standard is external to the motivation of immigrants, at least to some degree. Therefore, I can assign responsibility and obligations based on an assessment of the risks faced in vulnerable locations, from which people emigrate.

Second, there is something different about international movement. It is not like other forms of adaptation, including internal relocation. Moving from one jurisdiction and political or national community to another is a big step. Freedom of movement is an established norm regulating internal migration, but not for international migration. How to address and treat those relocating across borders, therefore, requires further and perhaps different explanation and justification. I think that moving from one state to another deserves special attention. A state is the administrative authority that shoulders the obligation to protect and provide services to its public. Included in such obligations are domestic adaptation duties.[28] However, the adaptation plans of states are typically designated to the local population of a state, and those who emigrate to some extent fall outside of their scope. This is not true for internal migration, nor for those who cannot relocate in response to climate hazards.[29] These reasons should motivate us to explore international mobility under climate change, even if such migratory scenarios will not encompass most of the human movement climate change will induce.

Turning the focus to this third category of movement, we are now ready to explore the obligations of RSs towards those who move due to hazardous climate change in this somewhat narrower field. My claim is that RSs bear shared responsibility for creating a more dangerous climate; they are responsible for the harms and wrongs involved in climate risks. This responsibility grounds their obligations to repair the adverse impact climate change will have on others. They must reimburse adaptation costs and restore lost safe options, preferably in ways that express a commitment to correcting the exploitative relations that led to such harms and wrongs. Relocating to another state

[28] See Chapter 2, section 2.4.

[29] Though, as claimed in the previous chapter, this does not mean that every state must shoulder the obligation to address the adaptation needs of vulnerable affected individuals in its public. RSs have an adaptation duty towards non-members who live in states that cannot meet these needs and whose degree of adaptation duties does not demand this from them.

might be an important adaptation option for those in need of a safer place to live. So, we might think that a direct conclusion of my argument is that RSs ought to make admission a live option for all those at high risk of climate hazards.

In a sense, I do think that admitting climate immigrants is one of the RSs' obligations, but accepting this as the last word would be too hasty. At first glance, the derivative obligations are not directly linked to immigration. If people suffer from food shortages because of crop failure, for example, then preventing such loss or securing food availability seems to be the primary concern. A better auxiliary safe option would be to make food security where they live more robust and resilient to such environmental stressors. Furthermore, restoring safe options by opening a relocation possibility may fall short of the required response. If not all affected persons choose to move or have the ability to choose mobility as a response to the risks and losses associated with climate change effects, then for them relocation does not constitute a substitute for their compromised safety.

We see that immigration is a complex phenomenon, not only in terms of what drives it, but also with regards to the positive and negative impacts it can have. Therefore, it is not a simple matter to rule, or rule out, admission as a way for RSs to redress the risks and harms of climate change. This will depend on how we perceive immigration: is immigration good or bad? In other words, Climate-induced migration (henceforth: climate migration) can be a way of adapting to climate change, but it can also be a form of maladaptation. In the next section, I discuss these two views, thinking through how we should perceive climate migration.

4.3 Different views on climate migration: Migration-as-maladaptation, Migration-as-adaptation, and Migration-for-adaptation.

The aim of this section is to explain the perspective of climate migration I adopt for my argument. The strategy I employ is to examine two competing perspectives of climate migration, show the shortcoming of each and suggest a third, improved, perspective. Let me start with the two candidates I will later criticise and reject.

There are two possible contrasting views on climate migration. One can perceive mobility in a positive way, taking migration to be a form of adaptation; one can also perceive it negatively, as a failure to cope with the adverse impacts of climate change. I

call the first Migration-as-adaptation and the second Migration-as-maladaptation. How can we decide between the two views? Should the RSs invest in programs and schemes that will render emigration unnecessary or should they encourage mobility as a way of reducing the vulnerability of those affected by climate change hazards? Maintaining this binary divide between the two outlooks is somewhat misleading, as climate migration can include losses as well as being a good way to response to climate risks. Nonetheless, exploring these contrasting views helps expose the shortcomings of each and their important inputs for a more suitable perspective on climate migration.

Migration-as-adaptation

I start with *Migration-as-adaptation*, the 'positive' outlook on climate migration. On this view, migration is a way to reduce vulnerability to climate hazards and alleviate the potential damage. It is an adaptation strategy. Faced with increasing stress on their livelihoods and reduced safe options where they reside, people may decide to relocate elsewhere to avoid the foreseeable deprivation that will result if they stay. In this way, relocation brings down the level of risk for the valuable aspects of their life that have been made less safe. Understanding climate migration as an adaptation option enables us to see the obligations of RSs in a different light. The obligation to restore safe options can be pursued *via* migration. If migration can be an effective way to reduce risks levels, then enabling and supporting it could be a good way to discharge this obligation.

But let us consider a case where a policy embraces the 'positive' view but takes it to its extreme. Imagine that an entire region is highly vulnerable to climate change effects and the offer on the table is relocation as a replacement for lost safe options.

> *'Drylandia'*: In Drylandia, the rise in temperature, reduced precipitation, and longer droughts will make it harder to earn a living and increase risks to health and the possibility of malnutrition. It is possible to lower the risk level to such important aspects of life by relocating everyone under this threat. The local population can immigrate to one, some, or all RSs, where their livelihoods and health will be better secured.[30]

[30] Maybe such important needs cannot be guaranteed in every RSs or within each region of an RS. Some areas in RSs can be highly vulnerable to climate change and do not have enough resources to adapt to future environmental changes and resettle the newcomers from Drylandia. However, many of the RSs can secure such needs; so, in this hypothetical example, they will immigrate to these states.

This option, which is open and accessible to every risked individual in Drylandia, substitutes the safe options they no longer have where they reside. Problem solved. But maybe not entirely.

Not all climate change harms can be obviated in this way. There are significant losses involved in relocation. Redressing the risk-harms created by RSs through 'removing' people from affected locations does not address their vulnerability in full. Part of their vulnerability is exactly that they will have to leave their homes because of climate change effects. I started exploring this dimension of movement in the previous chapter when I discussed relocation as an auxiliary option that leaves behind residual losses. It is an adaptation option that can to some extent replace the safe options removed from an agent's set of options, but because it is not a close substitute the individual will have to sacrifice many things she values. Emigration involves such a loss because people are attached to their homeland and to the community or society they live in, and they value these ties and relations. This does not mean that all people have such strong attachments, or that they ignore the positive sides of relocation. However, accepting that people do have such attachments and their life plans are based on and intertwined with them, they should not be forced to break these ties and relocate (Angeli 2016, 271-4).[31] They deserve a plausible opportunity to better deal with the risks where they reside, free from such dramatic disruption to their expected course of life. Therefore, offering a perfect or close replacement for the lost safe option is better than remote substitutes (Goodin 1991b, 277-81).

When an entire community relocates, there will be some additional losses. Imagine that everyone in Drylandia has decided to pursue the new adaptation option and relocate, but to different states. In this case, immigrating will restore the safe option for each individual, but at the same time they will lose their connection to their homeland, risk losing the integrity of their community, and the chances of returning to rebuild their society become slim.[32] It could in effect become a case of Climate-exile. Putting all of

[31] Oliviero Angeli (2016) ties the losses associated with such attachment to a place with the autonomy of individuals, which together ground this moral conclusion: people should not be forced to relocate. I return to this 'ought' shortly under the heading 'the right to stay'. Some testimonies of those facing the risk of forced relocation due to climate change effects provide some tentative empirical support for this view. While those individuals may state their need for a relocation option, they will insist that they will only use it as a last resort (if at all); see in: Shen and Gemenne 2011. There are also those how do not perceive the possibility of relocation as a tragedy; see in: Farbotko and Lazrus 2012; Arnall and Kothari 2015.

[32] For a paper in the context of climate change migration on collective relocation, cultural loss, and justice, see: Zellentin 2015.

our eggs in the basket of the Migration-as-adaptation perspective may lead to big losses for affected individuals, losses that should be avoided when possible.

In less extreme scenarios, when not everyone abandons Drylandia, we are confronted with a different concern. Offering relocation option as a way to redress the risk-wrongs of climate change may leave behind those most vulnerable to climate change. Envisage now that only the majority or a large portion of the population (but not all of it) take up the new adaptation option and leave Drylandia to resettle elsewhere. It is reasonable to assume that many of those who stay in Drylandia are among the most vulnerable to climate change. Usually, those who lack the resources to adapt to climate change are those who cannot afford to relocate (Foresight 2011). By providing the option of a more secure and better life elsewhere to many, RSs might restore the previous level of risk for immigrants, but leave some of the most vulnerable hung out to dry (almost literally). Moreover, a high volume of outwards movement could even make the situation worse. The locals who stay might find it harder to maintain the economic and social supporting structures without the people who emigrated.[33]

Considering the losses relocation entails and the obligation RSs also have to those who stay put, it seems reasonable to follow the view that migration is a form of maladaptation that we should aim to obviate.

Migration-as-maladaptation

The 'negative' view of climate migration, *Migration-as-maladaptation*, takes the increase in migration as one of the predicted losses associated with climate change, a form of potential L&D.[34] This outlook portrays migration as an undesired result of climate change, something we should prevent if possible. Therefore, the RSs' obligation should be to reduce the risk of additional departures by addressing the vulnerability indicators that induce migration. The obligation of redress, then, will be to restore auxiliary options that secure the same or close enough substitutes to the options put at

[33] The negative impact of outwards migration on sending societies is well documented in the study of immigration and development. For review of the scholarly debate, see: Commander, Kangasniemi, and Winters 2004; Docquier and Rapoport 2012; Terzi 2015. In the context of climate change adaptation, see: Afifi 2011. I come back to this point in the next chapter.

[34] This is slightly different to the IPCC definition, but my view is compatible with it. In the IPCC report, maladaptation is "[a]ctions that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future" (IPCC 5AR WGII, Annex II, 1769).

higher risk (or reimburse the costs of adaptation plans that do so), so people can remain where they are. Understanding their obligation this way, we can say that RSs should build up climate change resilience that will enable adaptation *in-situ* in order to preclude the need to emigrate from affected locations in search of a less precarious life.[35] How we specify this obligation will change according to local contexts, but to name a few examples it can include diversification of labour, improving preventive measures against water stressors, and introducing more resilient crops (IPCC 5AR WGII, SPM.2 Table 1).

Underpinning this outlook is the thought that individuals should have something akin to 'the right to stay', as Kieran Oberman (2011) has recently argued.[36] Oberman does not include environmental changes as one of the threats that can cause displacement. However, I do not see any principled reason not to add environmental change as a fourth threat, alongside expulsion, persecution, and desperate poverty.[37] Since RSs are compromising this right with their emissions, they are under obligation to rectify the higher risk to safe dwelling in affected locations. In some sense, mass outwards movement from such location can serve as a warning sign of a failure to carry out an obligation of redress successfully. According to this outlook, RSs should make migration a choice that vulnerable affected individuals can do without. Being pushed out of one's home is a climate change L&D that adaptation efforts aim to prevent.

This sounds very compelling, but let us take another stylized example to examine the upshots of embracing this view as the sole framework for how to address climate migration.

> '*Coastalia'*: The majority of Coastalia's population resides near its main river, around its delta and along the coastline. This location is highly susceptible to water stresses and hazards, such as coastal erosion, high tides, and reoccurring floods. In order to protect Coastalians from the increasing environmental hazards there is a need to invest in costly projects: to build seawalls along the shores, erect

[35] I use the term resilience here because it is significantly different from adaptation. The IPCC describes resilience as "to resist, absorb and recover from the effects of hazards in a timely and efficient manner, preserving or restoring its essential basic structures, functions and identity" (IPCC 5AR WGII, Annex II, 1772). Resilience is more about the ability of a system to cope with external pressures without changing too much. Adaptation is a far more open term that allows small, big, or transformative changes as a way of coping. This is another reason why in most of my thesis I use the term 'adaptation'.

[36] For additional and more recent defence of this idea, see: Angeli 2016.

[37] For Oberman (2011), the duty to protect the right to stay in principle falls on all states, as it is universal in nature. However, he suggests something similar to my responsibility-based argument when he writes on the connection of some states to global poverty (Oberman 2011, 262).

> dikes along the riverbanks, strengthen houses and buildings against storms, and improve the water supply to areas around the coast that suffer from saltwater intrusion.

These projects are, as mentioned, costly, especially the engineering project of building seawalls and dikes alongside all populated areas. Coastalia is not a wealthy state and it does not have the internal resources to pull off such huge projects without external funding. If RSs finance these projects, they will have significantly fewer funds to invest in other important projects, among them plans and programs that discharge other important moral obligations that these states have.

Can the people of Coastalia demand the huge sums that will enable every Coastalian to stay and adapt where she resides from RSs? Does the redress RSs owe them only ground the in-principle restoration of such a possibility (or recovery of the costs it requires), or does it also command the high price it necessitates? Oberman (2011, 262-3), for example, admits that there are cases where high costs provide reasons that justify preferring immigration over assisting people in their current location. The priority of adaptation *in-situ* is not absolute. Like many other demands on finite resources, it must be balanced against competing claims. Among such claims are those of others under higher risk of climate hazards. Investing big sums in protecting the Costalians may come at the expense of protecting others. And there are of course other highly important objectives that may have priority over financing such projects. If RSs will not support the protection of the Coastalia riverbeds and coastline, then they should restore the safe options of the affected population in another way, which in this example will include relocation. In other words, judging adaptation *in-situ* as too costly in some cases does not free RSs from their obligation to make redress for the climate risks they create. It just means that we will have to settle on less ideal solutions for the people of Coastalia.

We can imagine a more moderate situation where it is possible to support some of the protective measures against the water stressors Coastalia is facing. Parts of the shoreline will be defended, residences alongside it will be elevated, and other dwellings will be strengthened. In a similar fashion, alongside some waterside villages, dikes will be erected and ditches tunnelled to divert excess water in times of flood. These measures will not be put in place, or not to a sufficient degree, everywhere in Coastalia. So, with time dwellers along the seashore and in the delta region will relocate inland,

putting more pressure on the limited livelihoods and resources of other cities or villages. Villagers that suffer reoccurring floods will eventually decide to abandon their homes and head to regions of higher altitude. Among them, some will probably seek relocation outside of their state and other may start to look into this possibility with the increasing pressure on livelihoods such internal movement creates. Trying to contain our response to Coastalia's boundaries may conceal the strong need for relocation across borders.

Migration-for-adaptation

Reflecting on the examples of Drylandia and Coastalia, we can conclude that both migration-as-adaptation and Migration-as-maladaptation are too narrow and each of them overlooks important ways of addressing the challenges of climate migration. I suggest that we combine and balance different elements of these outlooks, acknowledging the 'negatives' and 'positives' of climate migration through the lens of a third perspective—Migration-for-adaptation.[38] The crux of this outlook rests on taking migration not merely as an adaptation strategy that can reduce the vulnerability of immigrants, but also as a way to support the local adaptation of the immigrants' communities back home.[39] The outward movement can reduce the pressure on local resources and remittances sent back can be a crucial additional source of income for those struggling to sustain their lives in the impacted region.[40] So if I coined Migration-as-adaption the 'positive' view and Migration-as-maladaptation as the 'negative' view, we can call this perspective the 'supportive' or 'supplementary' view. This approach avoids the shortcomings of the two extreme cases of Drylandia and Coastalia as it allows immigration, but as part of a broader framework of building the adaptive capacities of affected regions.

On the Migration-for-adaptation view, the obligations of redress for climate risks target the vulnerability of affected individuals, with an emphasis on the importance of local adaptation coupled with an acknowledgment of immigration's advantages. This way of thinking climate immigration takes into consideration the losses immigrants may

[38] I borrow this title from Scheffran, Marmer, and Sow 2012.
[39] This view of climate migration is a rising trend in the literature (Gemenne and Blocher 2016). It shares the conclusions of and is based on research in immigration and development. In recent years, some political philosophers writing on immigration have considered this literature in their arguments (Brock and Blake 2015; Cheneval and Johan Rochel 2012; Oberman 2013; Sager 2014; Ypi 2010, 2016).
[40] IPCC 5AR WGII, 12.4; Gemenne and Blocher 2016; McLeman and Hunter 2010; Scheffran, Marmer and Sow 2012. This is an important observation from the study of migration. I mention it in several other places in this chapter, and discuss its relevance to my normative analysis in greater detail in Chapter 5.

experience as part of their relocation as well as the adverse impact of their outwards movement on non-migrants in their society of origin. Such damaging consequences of movement could be overlooked by strictly following the 'positive' view. This framework suggests a nexus between immigration and local adaptation and accepts on the one hand the importance and priority of supporting adaptation *in-situ*, and on the other hand goes beyond it by showing the ancillary role immigration plays in strengthening local adaptation to climate change's adverse impacts.

4.4 Redress and climate immigration

In the next chapter, I explore the relations between local adaptation and climate immigration and how RSs ought to balance between the two goals of their adaptation duties. In the rest of this chapter, I will say a bit more about how the obligations of redress I introduced in Chapter 3 can be specified in the context of climate immigration. In other words, what the last chapter's implications for the obligations of RSs towards climate immigrants are.

Exposure to expected climate hazards that will render living where you do extremely taxing constitutes a climate risk-wrong, as it removes safe options that were available to you in conjunction with staying where you live. This, we have seen, gives rise to obligations of redress: reimbursement, restitution, and repair. I think the most obvious obligation of redress pertinent to climate immigration is the obligation to restore the lost safe options. One possible way to carry out this obligation is to enable relocation to locations where such valuable options are again safely available. This will be a substitution of safe options that is far from a perfect replacement, but at times it might be all we can achieve. Therefore, opening such migratory pathways is part of what is owed to those at higher risk of the relevant losses.

Now, based on my argument for risk-wrongs, the obligation to restore safe options is not restricted to those currently trying or expressing a desire to relocate due to environmental stressors. As I have shown, awareness of being subject to risk is not a requirement for being eligible for such forms of reparation. If we can identify relocation as an adaptation need, even without everyone with such a need explicitly

acknowledging it, and relocation as a suitable adaptation option, then it is a candidate for an auxiliary safe option.[41]

Costs of reimbursement are more pertinent to adaptation *in-situ*, the measures taken to enable affected vulnerable individuals to adapt to climate change where they reside. Nonetheless, immigration has tangible costs, for example in relation to travelling—transport, visas, different services fees, and resettlements costs—which RSs can fund. This does not mean that RSs must pay climate immigrant's flight tickets (though this is a way to reimburse travel costs they can expect to incur). More plausible ways to carry out the obligation to reimburse costs will be to reduce the administrative costs of immigration. For example, a state could offer to waive visa fees. Another possibility is to provide a direct application route for visas and work permits that render the services of a middle-man, for example an agency specialising in the process of admission, unnecessary (currently this is sometimes the only way to get into the desired destination state, and such people charge excruciating sums).

Admission could also be a way to perform the obligation to repair the damaged relations; it can communicate concern and a willingness to make amends for the deleterious impact of climate change. When relocation is an adaptation need, RSs can respond to it with inclusion. Beyond the material aspect of providing an alternative safer option for where to reside, it can welcome the immigrant into a new political community. It can tie the admitting society's future together with the fate of newcomers as they enter a civic and political relationship of cooperation and (so we hope) mutual respect. Ultimately, immigrants should become full members of society, with equal rights and duties. Even with temporary migration, or short-term hospitality, the same message can be conveyed. The admitting states still take in the immigrant, enabling her to overcome challenges and hardships within the state's territories, and harvest opportunities and gains through interacting with the host society and institutions. It can express some level of care that simply sending money does not.[42] Offering such an

[41] In the following chapter I qualify this claim. I show that sometimes relocation has a damaging impact on those who do not move and cannot move. Then I argue that simply opening the possibility of relocation into a state territory does not comprise the total responsibility of RSs.

[42] Admittedly inviting labour immigrants can also serve the interests of the hosting state's society. Immigration can benefit the society that admits them as well as the immigrants themselves. This does not necessarily clash with the message of hospitality. However, exploitative attitudes and practices towards those coming to work on a temporary basis cannot be a way to repair the exploitative relations formed by putting others at higher climate risks. I address these concerns in the last part of the dissertation, when I discuss balancing and trading the obligations of emitting states.

option is like saying to those who struggle to live where they reside: ‘you can come here and we will work it out together’.

Nonetheless, relocation can have a high price for the immigrant, not necessarily in economic terms. Immigrants leave behind a home—a dense term that entails family, friends, community, a known culture, and a socio-political order. As just mentioned, relocation is not a perfect replacement for a safe option, and it may entail some significant residual losses. Nonetheless, admission may still be an appealing auxiliary safe option, because it can potentially be a response to such losses. Immigration policy can be more than an adaptation option that matches vulnerable affected individuals’ adaptation needs; it can be an *adaptation opportunity*. Adaptation opportunities are understood in the IPCC report as options that open the door to further valuable options, which increase the ability to cope with the impacts of climate change (IPCC 5AR WGII, Annex II, 1758). We can adopt a wider notion, though, that is attuned to the vulnerability of potential immigrants, their needs, and aspirations. In this broader sense of opportunity, RSs can offer better life chances to the newcomers. Relocation into an RS will not only be about reduced vulnerability to climate change in terms of restoring the previous safer level of risk. Following Goodin (1991b), I claim that when close enough substitutes for lost options are unavailable or not offered, redress can target broader aspects of the individual’s wellbeing. Let me briefly suggest what this can mean in the context of climate immigration.

As I argued in the previous chapter, one way RSs can make good on their obligation to repair damaged relations is to do more in terms of their other obligations of redress, such as restoring options. Suitably, RSs can offer potential climate immigrants a *good quality immigration package*. With admission and immigration policies we think of ‘quality’ in terms of the rights, opportunities, services and benefits immigrants can expect in receiving states. Relocating into an RS, which in many cases will be wealthier and more developed, with better democratic institutions, can mean entrance to a society with a stable rule of law, strong protection of rights, including immigrants rights, with better social and economic opportunities, and a generous welfare system. Getting access to such a full range of advantages can deliver more than the minimum that is owed based on the obligation to restore safe options.

Another possibility is to include in this *good quality package* specific features addressing the particular vulnerability or losses involved in the relocation. Tailoring

solutions to the types of vocations newcomers used to have is one example. Another possibility would be helping to connect immigrants with cultural and national communities that already live and have established themselves in the receiving state. A third example is to offer guidance, support, and education to overcome the potential disorientation that so often accompanies immigration experiences. In general, to do *more* in terms of an inclusive integration policy.

This is not an exhaustive list of the specific policy options available for RSs when they come to carry out their obligation of redress in the context of climate immigration. It nonetheless explains in what ways immigration can play a role in discharging such obligations. RSs will have to fit their admission and immigration policies into the broader approach I opt for, migration-for-adaptation, which will be a complex matter. But it is now time to bring this chapter's discussion to a close, so I leave this challenge for the next chapter.

4.5 Conclusion

In this chapter, I have discussed the adaptation duties of RSs in the context of climate migration. I started by mapping the field of human mobility under climate change, stating my focus on a specific type of migratory movement. I then moved on to examine possible ways of perceiving the nexus of immigration and adaptation, revealing their complex relations. I ended with a review of the applications of Chapter 3's results to climate migration, showing how admission and immigration policies can fulfil the reparative obligations triad: reimburse, restore, and repair.

In this chapter I added a few significant steps to the overall argument, developing some of its components which will be further explored in the next chapter. The key points were:

(i) My argument focuses on a category of movement I coined *Climate-induced migration*.

(ii) We need to adopt the *Migration-for-Adaptation* approach, which considers immigration as a way to advance the adaptation capacity of all vulnerable affected individuals, those on the move and the immobile.

(iii) Admission and immigration policies can be a way for RSs to carry out their obligations of redress. With admission, RSs can restore safe options to

immigrants, namely those they had in their place of origin; RSs can reduce the costs of movement; and RSs should offer a good quality immigration package to make good on their obligation to repair damaged relationships.

These are to some extent three independent claims, but they come together to paint a clearer picture of the context and content of the obligations of RSs. We can see how climatic impact can drive human mobility in more subtle (but still harsh) ways than the extreme cases that occupy the media, the public, and political philosophers. In addition, we should understand immigration as part of a wider adaptation effort that includes all affected vulnerable individuals.

I suggest focusing our attention, as I do here, on a specific type of migratory movement that I call 'Climate-induced migration'. I distinguish this from Emergency climate migration and Climate-exile. Climate-induced migration is movement induced by gradual environmental changes associated with climate change that, coupled with other factors, significantly restricts life prospects where vulnerable affected individuals reside (point *i*). However, not everyone will decide to relocate because of climate change hazards. RSs have obligations to all vulnerable affected individuals, not only to those who will be pushed to relocate due to climate change's adverse impact. I illustrated this commitment by exposing the limitations of the migration-as-adaptation approach. Based on this analysis I stated that vulnerable affected individuals ought to be given the chance to cope with climate change without the need to relocate. In other words, RSs have an obligation to support and advance adaptation capacity in affected locations.

When we take this position to its extreme (taking an uncompromising migration-as-maladaptation outlook), we come to see its shortcomings as well. One important lesson was that we should not perceive immigration as a bad outcome that we ought to avert at all cost. Immigration is an adaptation strategy that can reduce the risk for the immigrant and support local adaptation in the affected location too. By reducing the pressure on resources in the vulnerable location and through remittances, immigrants can advance the adaptive capacity of their sending community. Therefore, the main guideline for RSs is to pursue policies that combine admission and support for local adaptation efforts. The general goal of mixing admission and local adaptation policies is to strengthen and advance the adaptive capacity of all those affected by climate change hazards (point *ii*).

The outlook I take up here, migration-for-adaptation, points to a complex duty that combines two complementary policy areas: admission and local adaptation. Moreover, the need for reimbursement and repairing relationships suggest that RSs need to go beyond relaxing their admission regulations. They should reduce mobility costs as well as offering a good quality immigration package (point *iii*). This conclusion paves the way for Chapter 5, where I elaborate on the implications of this nascent claim. But before I move on to this next step of the dissertation, I want to offer a few reflections on my argument and its relation to the broader conversation on immigration in political philosophy.

In the final pages of this chapter, I want to return to general debates in political philosophy concerning immigration. Different topics are discussed today in the literature, but one cause of disagreement is still the state's contested right to exclude outsiders.[43] There are two main opposing positions. The first, sometimes called the 'closed borders' position, holds that states have a right to determine their border and immigration policies; they should be able to exercise discretion when it comes to deciding who is in and who is out, so to speak. The second, sometimes called the 'open borders' position, contests this right and argues for a right to emigrate across national borders. Let me briefly comment on the relation of my argument to these two positions, taking them in reverse order. Beyond situating my argument within this literature, the discussion helps to clarify a few points regarding my own position.

The approach I advocate, Migration-for-adaptation, calls upon RSs to take *a proactive* approach to immigration policy. This imperative can show why a position advocating an 'open-borders' regime cannot fully answer the demands that the case of Climate-induced migration brings to the fore. Though my argument is premised on a state's right to exclude outsiders, I think that even proponents of 'open borders' will have to supplement their position with further demands against RSs. Their main solution is to remove any restrictions on international movement. This will not be enough in the case of climate migration. Permitting entry at the borders will not exhaust the obligations of redress RSs have. Thinking that eliminating all (or almost all) border regulation is a silver-bullet is mistaken. To start with, it overlooks the obligations towards immobile vulnerable affected individuals—those who cannot or are not willing to emigrate in response to the risks and harms associated with climate change hazards.

[43] I briefly review some of the main relevant points from this literature in the Introduction.

There might be good reasons for the world to abrogate national borders and allow international free movement. But even with this outlook, RSs still need to complement free admission with actions that fulfil their obligation to support local adaptation. This point will be reinforced in the next chapter, where I show that outwards migration can sometimes have a negative impact on the sending society's adaptive capacity.

Moreover, I claimed that RSs should do more than making admission an option of which potential climate immigrants can take advantage. Unlike in the case of other 'regular' immigrants, RSs stand in a particular moral relation with those relocating due to climate change effects. RSs owe climate immigrants some redress for the residual losses involved in relocating. I suggested that RSs can address this aspect of their obligation by offering a good quality immigration package or a tailor-made policy for immigrants' specific needs or interests. Such policies can also convey the reconciliatory message that is part of the RSs' obligation to repair broken relations. These further obligations are not in conflict with an 'open border' position. Nonetheless, they are not a direct upshot of it either.

To sum up, there is obvious appeal in the argument that international mobility should be an option open to everyone. One compelling feature of this position is that we can stop making distinctions between different immigrants and their claim for admission, typically between refugees and 'economic' immigrants. Everyone is welcome. But claims against the admitting state are not the same for all, and so we should not strive for a catch-all simple solution.[44] Even in a world without borders, or at least with only light regulation over borders, my argument will still call for a more pro-active approach. RSs have to be more involved in the human movement induced by climate change and its consequences for those on the move and those who stay put.

My argument, however, is not an unequivocal defence of states' privileged position in deciding on their border policies either. I assume in this work, without any attempt to defend it here, that, in principle, states have the right to exclude. We should bear in mind that this is not a minor assumption; most of the debate over immigration in political philosophy deals with justifying or contesting it.[45] So, I start from the 'closed borders' position, but this is not where the argument ends. I do accept that under regular circumstances states are not obliged to accept foreigners who want to enter their

[44] Cf. Wilcox 2007, 274-6.
[45] See Introduction, n. 6.

territories and become part of their society. But then, climate change and its adverse impact are by no means 'regular circumstances'. There are limits to the state's discretionary power over its borders. For example, duties towards refugees, as I mentioned earlier in this chapter, can condition or overrule any right to exclude that states may have. The duty to admit refugees is not the only moral constraint on the right to exclude. For example, claims for family reunification or special unique ties or attachments to the destination state can, at the very least, be weighty moral considerations for immigration policies.[46]

My argument is similar to this latter group of claims: it brings forth moral demands that put pressure on the discretionary power states have over their borders and immigration policies. More specifically, I tie obligations towards immigrants to RSs' broader duties of adaptation. Admission is in the service, in some sense, of this duty. This is one of the main features of the Migration-for-adaptation outlook. Admission is part of what RSs ought to do in order to discharge their adaptation duties. Therefore, on my account the state's right to exclude is limited and the source of this constraint is its other moral obligations. This way of understanding the normative imperatives for immigration policy has an affinity with a class of arguments in the political philosophy literature on immigration, namely, those arguing that wealthy states should amend their admission policies to meet their duties of global justice. I have in mind a particular group of political philosophers who tie the issue of immigration to global distributive justice. I will call this argument 'the distributive justice argument'.

Proponents of the distributive justice argument start from a global egalitarian commitment to the moral equal status of each individual and an obligation to equal treatment across borders, at least in principle. Some political philosophers that argue from this standpoint are critical of any defence of the right of states to place barriers on the international movement of individuals seeking valuable opportunities outside their state of origin.[47] However, based on the same moral standpoint, some writers provide a qualified defence of the state's right to exclude. They argue that a broader global egalitarian position should include the impact of movement on sending and receiving societies alongside improvement for immigrants themselves. As a result, we might find

[46] References to papers that also discuss family reunification and other attachments: Carens 2013, Chapter 9; Miller 2005, n. 2; 2016, Chapter 7.
[47] See in Bader 2005; Seglow 2005; Wellman 2015. Two known proponents of the claim are Joseph Carens (1987) and Ayelet Shachar (2011).

that there are good reasons (grounded in the demands of justice) to maintain some level of control over immigration.[48]

There is a structural and substantive similarity between my argument and this latter type. Both arguments perceive immigration in a similar way. Admission is part of a broader moral commitment (duties of adaptation or distributive global justice). Therefore, the justification of relevant immigration policies depends on how well they promote the objectives of the wider moral commitment of which they are part. Then, the question 'What kind of immigration policies do we need?' takes the place of the question 'Do states have the right to exclude outsiders or not?' There are a few important differences between my argument and this kind of distributive justice argument. The first and most obvious one is a dissimilarity in focus. I am writing on human mobility under climate change, while the parallel argument is about immigration in a world of profound global inequality. But beyond this more trivial distinction there are more substantive contrasts.

The first difference is about the direction of the argument. The arguments start from the opposite poles of the debate. Scholars who find some justification for borders control from the perspective of global distributive justice take the right to international freedom of movement as their starting point. I, on the other hand, assume that states have the right to exclude and instead suggest that such a right can be limited.[49] The second difference is the source of the obligations towards immigrants. In the global distributive argument, what underpins the moral obligations is a universal duty each individual has to each other individual as part of a global egalitarian view of justice. My argument on the moral obligations of RSs is not committed to such a high standard of global justice. On my account, what generates the adaptation duties of RSs, and the obligation towards immigrants that are part of these duties, is their outcome responsibility for creating dangerous climate change.

Following these distinctions, I would suggest that my argument can be seen as an extension to what David Miller (2015; 2016) has recently coined 'particularity claimants': "immigrants who have what we might call a particularity claim against the

[48] For example, see: Brock 2009, Chapter 8; Higgins 2013, Chapter 5; Seglow 2005; Valadez 2012; Ypi 2010; Yuksekdag, 2012.

[49] Straehle (2012) also argues that states should admit immigrants from poorer states as a way to discharge duties of global distributive justice. There are structural similarities between her argument and the argument from global distributive justice I have presented here. However, Strahele accepts, at least in this paper, the sovereignty of states over their borders. In this respect, it is not only structurally akin to my argument, but also substantially.

state they are trying to enter. Such claim may be backed up by different kinds of reason" (Miller 2015, 394). The examples Miller gives are fairly specific (mainly those who have served in the military of a different state) and somewhat limited in their power to ground a claim for admission in his view (Miller 2016, Chapter 7). Nonetheless, as a general class of claims for admission, it is fairly broad and its structure is compatible with my argument. In terms of substance, again, the reason for admitting climate immigrants is RSs duties of adaptation and the supportive role immigration can have in achieving the objectives of such duties.

In the context of global distributive justice and immigration, the argument most similar to my argument in terms of structure and substance is provided by Shelly Wilcox (2007). Wilcox accepts that under certain conditions, which seem to hold in the real world, we should work under the assumption that states have a right to regulate their borders. She then argues for the outcome responsibility of developed wealthy states for the human rights deficit that the international economic order brings about. Based on this responsibility-based account, she claims that providing admission can be a mandatory or a desirable way to compensate individuals suffering from the relevant human rights deficit.[50]

Some differences to my argument should be noted, though. First, the difference in focus—global economic order as opposed to climate change—mentioned above might not be so trivial. There are those who contest the claim that developed rich states are outcome responsible for harmful effects of the global economic order (Cohen 2010; Patten 2005). I am not suggesting that my argument about the responsibility of states for bringing about a dangerous climate change will not be contested by others. Nonetheless, climate change is a clearer case of inflicting net losses and harms on others. Second, if we think that Wilcox's responsibility-based argument for a harmful global economic order holds, or want to grant it for the sake of argument, then my work can add to the position she puts forward. The responsibility of states for the harms produced by the global economic order is a shared responsibility. Wilcox does not say much about this, and my discussion in Chapter 2 can complement her account. Furthermore, in several places in her paper, Wilcox rightly points that often we are concerned with the risk to relevant human rights deficits and not only with actualized ones (2007, 280). The notion

[50] The obligation to admit will be mandatory in cases where relocation is the only way to compensate immigrants and is desirable when affected individuals prefer relocation over other options (Wilcox 2007, 287).

of responsibility for creating risk I develop in Chapter 3 and continue to discuss in this chapter explains more precisely what the derivative obligations are that such responsibility entails, and what the relation of such an obligation to admission and immigration policies might be.

An additional minor (and merely potential) difference is the way Wilcox and I consider the role of immigrants' preferences. Wilcox is not clear enough on this point. She writes that in many cases individuals suffering from the relevant human rights deficit could be compensated in different ways, one of which will be admission to a different state. On the one hand, Wilcox claims that adhering to immigrants' preferences over these options is *desirable but not obligatory*. On the other hand, she writes in the same place that if they prefer to be admitted, then this preference *should* be honoured (Wilcox 2007, 287). As such, I am not entirely sure if for Wilcox the preferences of immigrants are (i) a moral consideration that leaves open the question of its weight in states' deliberations when determining their immigration policies; or perhaps those who favour international relocation have (ii) the ground for a claim-right against the states that brought the relevant human rights deficit upon them. That is, states will be under an obligation of justice to admit those immigrants. I discuss a similar matter in more detail in the next chapter, where I make my position clearer. Here let me just restate one of this chapter's conclusions to clear my argument from the ambiguity I found in Wilcox.

My argument arms potential immigrants with a claim for admission, but unlike a refugee's claim for admission, it does not have the power to override a state's presumptive right to exclude. At the same time, it challenges this. The justification for exclusionary immigration policies must answer to the claims of climate immigrants as well. Such a demand is derived from RSs duties of adaptation. But the demands of adaptation duties from immigration policies are complex. On the one hand, duties of adaptation are what limit the discretionary power of an RS over its borders. But on the other hand, adaptation duties place constraints on the claim for admission. In a similar fashion to the argument from global distributive justice I presented, states should admit more immigrants if this positively contributes to the objectives of the wider moral duty of which admission is part. For our purposes here, the objective is to advance the adaptive capacity of all affected vulnerable individuals. And despite the rosy prospect of immigration reducing climate vulnerability, it is important to emphasise that immigration is a mixed blessing.

Besides the non-economic residual losses I have mentioned in this chapter, relocation also has a potential tangible price, one that goes beyond travelling costs. The immigrant might not move to a safer location (safer in terms of the exposure to climate hazards or in terms of some other indicators of vulnerability). And for the community immigrants leave behind, such outwards movement can represent a loss of useful and important members that diminishes the community's ability to cope with climate change. For the admitting states, a high volume of newcomers can sometimes place excessive pressure on resources and infrastructures. It can undermine the ability of the state to function well and fulfil its obligations to its public.

These potentially negative impacts of climate immigration bring us back to the dual facets of the duties of adaptation: admission and local adaptation. In the next chapter, I continue to discuss the complex relation between the two, what it can allow and how it restricts RSs when they come to carry out their duties of adaptation within the context of human mobility. This discussion also provides a fuller account of the relation of my argument to the right to exclude of states. It details under what conditions, for what reasons, and in which ways RSs are permitted to exercise discretion regarding the admission of climate immigrants. In other words, exposing the normative space in which RSs can balance admission and local adaptation also makes the trade-offs between the RSs' rights to exclude and the claim for admission explicit.

5. Balancing and Exchanging Obligations

> *Just swapping money is no good. You have to swap families or human beings, or give them accommodations, or give them a right to migrate to the countries which are causing these problems in the first place*
>
> —Rabab Fatima (The International Organization of Migration)
>
> *So instead of the people moving, it might be a much more sustainable solution to find some sort of measures for them right there; whether by providing them land there or some sort of livelihood option there, so they don't actually have to make the move*
>
> —Atiq Rahman (executive director of the Bangladesh Centre for Advanced Studies)[1]
>
> *Every man thus lives by exchanging*
>
> —Adam Smith (*Wealth of Nations*, Book 1, Chapter 4)

5.1 Introduction

There is a growing awareness among researchers, civil society organisations, and policy makers that mobility under climate change is an important issue that should feature on the global agenda; something states need to discuss and act upon. In a statement regarding the recent international negotiation in Paris, the International Organization for Migration Director General William Lacy Swing said:

> Now that climate change and migration are an integral part of the Paris agreement, we can justifiably speak of 'climate migration' and 'climate migrants'. […] We face major migration and refugee movements, and climate change is among the root causes of the record number of persons forced to migrate. By taking action to harness the positive potential of migration as an adaptation strategy to climate change we can support those who might need sooner or later to migrate with dignity.[2]

My argument leads to a similar conclusion. In the previous chapter, I suggested that we should perceive Climate-induced migration as a potent way to support local adaptation as part of the commitment of Responsible States (RSs) to redress the more dangerous climate they have created. Though people should not be compelled to leave their homes due to environmental stressors, migration is neither necessarily bad nor necessarily good. When mobility helps to reduce vulnerability to climate hazards for both immigrants and individuals from their sending society, it is a good way to discharge the adaptation duties of RSs. Nonetheless, merely reducing the barriers to

[1] Both quotes above are taken from Joanna Kakissis's report 'Challenges Facing Climate Migrants' in *International Report Project* (December 15, 2009), available at: https://internationalreportingproject.org/stories/view/challenges-facing-climate-migrants.

[2] Cited on IOM Website (https://www.iom.int/news/iom-welcomes-inclusion-climate-migrants-climate-migration-draft-paris-cop-agreement).

admission for immigrants from vulnerable locations will not ensure such goals on its own. As a result, I argue that RSs need to adopt a more *pro-active* approach to immigration in the context of climate change in order to fulfil their obligations of redress. In this chapter, I elaborate on what such a proactive approach entails and how RSs should discharge such obligations.

The two key words that ground this chapter's inquiry are 'complexity' and 'balancing', as I explore how states can work out different combinations of the two main aspects (local adaptation and admission) of their adaptation duties. I do not attempt to provide a full-scale or fine-grained analysis of the issues explored. The goal is to provide general frameworks that should be taken into account when we move from a high level of abstraction to an implementation mode of thinking on climate *cum* immigration policy.[3] There is still a gap between the work I present here to conclusions akin to 'policy recommendations'. To fill this gap, we will need far more context-based research that closely examines each case-study, states or group of states, and immigration routes.

Here is how the chapter will unfold. It is divided into two main parts. The first elaborates on what a proactive approach to immigration means. I show how it involves a balance between supporting local adaptation and admission (section 5.2). In the second part, I move from this internal balancing act to an external one, when I explore obligation-sharing among RSs with the possibility of trading between different types of obligations (section 5.3).

5.2 Striking a Balance

In the previous chapter, I claimed that we should embrace the Migration-for-adaptation perspective. Endorsing this outlook means taking seriously the *supportive* role Climate-induced migration plays in advancing the adaptation capacity of affected vulnerable individuals and their communities. Following this view, we should consider emigration as part of the local adaptation efforts of sending societies. Emigration can reduce the level of climate risk for the immigrants themselves and for vulnerable affected individuals who cannot or will not relocate. However, simply opening the gates for

[3] By *framework* I simply mean a set of considerations and principles that can be grouped together and serve as a guideline. There are connections between the different components of the frameworks I suggest, but they are not logically connected or co-dependent in a strong sense.

immigrants from vulnerable countries far from guarantees this two-fold goal; it can sometimes even be a double-edged sword. The impact of immigration on those vulnerable to climate change can be positive or negative, as the examples explored in Chapter 4 illustrated. States need to take a *proactive* approach to climate immigration to harness its positive impact[4] on reducing the risk levels facing climate immigrants as well as those who stay in vulnerable locations. Another way to express this is to say that the policies RSs enact need to strike a tricky balance between two different but potentially complementary policy areas: immigration and local adaptation.[5] I will offer a framework for balancing the two.

The Internal Balance Framework

RSs' duties of adaptation are composed of two parallel obligations: admission-related obligations and local adaptation-related obligations. The question RSs face is how to balance the two to minimise the risks and losses for climate immigrants and maximise the contribution of their mobility to support the adaptation capacity of sending societies. This question is not an easy one to fathom, as immigration and adaptation are highly complex and context-dependent.[6] They are also in some sense a 'moving target'. Many external influences, as well as internal feedback mechanisms, can influence the decision to relocate, and as a result the type and magnitude of the challenges to local adaptation. But it is possible to utilise a general framework that helps to develop guidelines that can inform both policies and our judgment of existing practices and new policy proposals. For the internal balance between admission and local adaptation-related obligations, this framework identifies several considerations drawn from the study of environmental migration, with specific relevance to this dual-aspect duty. I discuss these insights in relation to who moves, the impact of this movement on the places people leave, and in relation to where they move to.

The identity of the immigrants: The individuals RSs will admit do not necessarily have to fit the description of climate-induced immigrants I have given here. This is a surprising insight that follows the first observation of the immigration-adaptation nexus

[4] Positive in normative terms, not as a positive correlation between variables.
[5] Immigration is part of the adaptation arsenal, but here I will present it as an opposing pole of this dual obligation to make the difference more discernible. This is just to emphasise the balance I explore here and I do not renege on my endorsement of the migration-for-adaptation perspective.
[6] For a recent paper raising challenges for the uprising paradigm of migration as part of adaption to climate change, see Gemenne and Blocher 2016.

I want to present. The observation tells us that people with more capital (economic and social) are those expected to relocate in response to external stressors (IPCC 5AR WGII, 12.4, Figure 12-1). This means that unless states actively recruit the most vulnerable individuals, they are not likely to be the ones voluntarily relocating. Interestingly, this is not necessarily an unworkable problem for my suggested framework. Based on the *supportive* view of climate immigration, it is not necessarily for those who emigrate to be the most vulnerable to climate change hazards. It is possible that less vulnerable persons (or in theory even the least vulnerable individuals) will emigrate and support local adaptation through remittances (that is, money or its equivalents sent back to people in the country of origin).[7]

The implication for the internal balance framework is more flexibility in how RSs can carry out their admission-related obligations. They can pursue their obligations of redress by supporting the relocation of the highly vulnerable affected individuals directly. To do so, RSs will need to invest in making admission an accessible adaptation option, a substitute for the safe options such vulnerable individuals no longer have at home. However, they may be allowed to carry out such obligations in a less direct manner. RSs can influence the positive impact of immigration on the adaptive capacity of sending communities regardless of the risk levels the immigrants were exposed to in their state of origin. I classify this greater degree of discretion as a *licence* under the internal balance framework. However, this is a provisional classification because the following observation will suggest some qualification of it.

The impact of immigration on sending communities: I will review here further observations from migration studies, focusing on remittances, that should be incorporated into the internal balance framework. Typically, remittances are seen as the major payback of immigration to the sending society.[8] Nonetheless, there is no guarantee that remittances, or other forms of transfer from immigrants to countries of origin, will have a positive impact on local adaptation in vulnerable locations. More cash alone might not boost the adaptation capacity of affected vulnerable individuals in

[7] Financial flows are one way in which immigrants can support local adaptation in their sending societies. In addition there is information and technology transfer and the varied skills the immigrant brings back (when and if she returns). When I write remittances, I also mean these potential positive contributions to local adaptation; sometimes I refer to these directly by writing 'remittances and other forms of transfer'.
[8] See for example, the Migration Policy Institute policy brief states that "Migrants' remittances to their country of origin […] represent a major vehicle for reducing the scale and severity of poverty in the developing world" (Ratha 2013, 1). For more data, see World Bank 2016 (including the cited fact that remittances are three times the amount of official internal aid).

the state of origin. Remittances are typically direct transfers to family members. Immigrants that are less vulnerable to climate change effect may come from geographical locations far removed from regions that will be severely affected by climate change hazards. In such cases, it is not obvious that the money they send back to their families will have a ripple effect across the country. And so, the impact of additional funds will have a minute impact (if any) on the lives of those who reside in affected regions and are highly vulnerable to climate change hazards. So while such remittances can improve the lives of those directly benefiting from them, maybe even improving their adaptation options, the extent to which they in effect assist in restoring the removed safe options of affected vulnerable individuals remains unclear. That said, sometimes immigrants are involved in specific programs to promote development in their state of origin, and some of them do so in cooperation with hosting states and local government back home (Scheffran, Marmer and Sow 2012).

The take-home lesson from this observation is the indeterminate impact of remittances on the adaptation capacity of those at higher climate risk. It is possible that remittances will positively contribute to local adaptation in affected locations, but this is by no means guaranteed. Such uncertainty indicates a *qualification* of the above-mentioned permission—allowing RSs to pursue their admission-related obligations by also admitting immigrants that fall outside the definition of climate-induced immigrants. If RSs want to admit individuals who are not among the vulnerable affected individuals, they are probably at liberty to do so. But if they wish to pursue such an admissions policy as part of their duties of adaptation, it will be on the condition that such migratory movement will positively contribute to the adaptation of vulnerable affected individuals in the state of origin. Facilitating to positive impact of remittances is also a general *consideration* for RSs. Even when they admit climate immigrants that are highly vulnerable to climate change effects, directly discharging their admission-related obligations, they should think about how they can maximise the benign influence of remittances. The guidelines of the internal balance framework will suggest that RSs should take additional action in order to channel the flow of remittances to support programs that will advance the local adaptation capacity where it is most needed.

A third observation is a well-discussed phenomenon in the study of migration and development—the ‘brain-drain’. The term ‘brain-drain’ describes the outwards migration of skilled workers essential to the functioning of the society of origin

(International Organization for Immigration 2004). While the literature is generally optimistic regarding the beneficiary impact of remittances, it is more divided regarding the impact of the 'brain-drain'. At the centre of the debate is the question of whether the negative impact of the brain drain is offset by the positive impact of the remittances such outwards movement yields.[9] In normative political philosophy, the phenomenon is attracting more and more attention.[10] Usually, scholars relate to high-skilled workers (in normative political philosophy the example of the health sector is usually employed). However, in the case of environmental changes, the *e*migration of low-skilled workers can also have a damaging impact on the adaptation capacity of local communities. The outwards movement of the young and able might reduce the labour-force that is required in order to adapt to the changing climate (Afifi 2011). Some possible adaptation pathways depend on the skills of the people who may *e*migrate, and the vacuum their parting leaves increases the level of risk for individuals who remain in the affected region.

This observation shows that accepting immigrants from locations affected by climate change may not only fail to advance the adaptation capacity of vulnerable individuals, but even impair it. So RSs should be wary of making things worse for immobile vulnerable affected individuals in their attempt to redress climate change harms and wrongs *via* admission. Therefore, the internal balance framework suggests that RSs should be sensitive to the identity of potential immigrants in a different way. The new focus on identity considers the potentially significant drawbacks to the movement of some individuals from affected vulnerable locations. This should be a *consideration* for RSs when they try to put admission-related obligations and local adaptation-related obligations into practice. RSs admission policies, then, should be informed by the possible negative impact of immigration on sending societies and aim to offset them. They can either achieve this indirectly, by making sure that the net impact of immigration (remittances and brain-drain effect) is positive, or more directly

[9] The literature on this topic is vast, for a few examples that review or explore the debate, see: Beine, Docquier and Oden-Defoort 2011; Commander, Kangasniemi, and Winters 2004, Docquier and Rapoport 2012; Lien and Young 2005.

[10] The discussion in such literature goes beyond the implications of such movement on the sending society and explores what states are allowed or obliged to do in response to such eventualities. For example: Oberman 2013, Sager 2014, and Brock and Blake's (2015) recent book. For broader treatment of the issue, see the recent symposium in *Moral Philosophy and Politics* 3.1 (2016) dedicated to 'Brain Drain and Emigration'.

with programs and policies addressing the deficit in local adaptation capacities such outwards movement creates.[11]

Of course, immigration may have a negative impact on the receiving society as well (Nannestad 2007). For example, lowering wages and higher competition on low-skilled jobs.[12] While immigrants compose a small fraction of the overall population, they tend to concentrate in a few locations across a country.[13] That means, that some places may feel some of the effects of immigration more than others. And if there are any negative effects to the population influx, their residence will be those suffering from them. If this will be the situation in a RS, some members of its citizenry may think that they unfairly burdened with the heavy costs of the obligations towards climate immigrants. At the end of Chapter 1 I pointed that each state can and should decide how to distribute internally the derivative costs of its responsibility to the harms of climate change. This apply to possible costs (as well as benefits!) of admitting more immigrants as part of the state's adaptation duties.

Destinations: two distinct insights have been offered regarding the question of where migrants move to. Researchers claim that the majority of climate-induced migration will probably be internal (fourth observation), and when climate migrants do cross borders, many will move into neighbouring states, which in many cases are not among the high emitters (fifth observation) (Gemenne, Brücker and Ionesco 2014).[14] Both observations point to a gap between the predicted pattern of movement and the allocation of admission-related obligations I argue for here. If RSs have an obligation to restore removed safe options, and if this partly comes in the form of providing relocation options, then it seems that they are the states that should admit climate immigrants. 'Letting immigrants fall where they may' seems like letting someone else do the work of emitting states. Here, I mainly focus on internal mobility; in section 5.4, I discuss the significance of international movement into states that are not RSs.

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[11] For an elaborate discussion on how states can and are allowed to respond to the brain drain phenomenon, see Brock and Blake 2015.

[12] This is a worry often raised, but in reality, the impact on wages is complex, see: Borjas 2003, Edo and Rapoport Friedberg 2017; Friedberg and Hunt 1995; Kerr and Kerr 2011.

[13] On immigration locational choices and patterns, see: Åslund 2001; Chiswick and Miller 2004; Zavodny 1999.

[14] These predictions should be taken with a pinch of salt. They assume that border regulation and immigration policies will be similar to those we have today; meaning, moving to wealthy states, which are RSs, is highly restrictive and costly. It is safe to assume that more (though how many more is not clear) people will choose to move into RSs if the latter make this easier and less expensive. However, this may only lead to marginal change. It is difficult to tell.

To see how an RS can discharge some of its obligations towards climate immigrants in another state, we can use the distinction between *Admission* and *resettlement*: both are part of the relocation process. They typically come together when a state accepts new people. But they can also come apart, not only conceptually, but in practice. While one state hosts those on the move, other states can help, mainly financially, in the effort to resettle them. Part of RSs obligations, therefore, can be to target resettlement where the admission will be performed by a different state. This might include internal migration, when people move from one region into another within the jurisdiction of the same state.

I will not dwell on patterns of internal mobility here; I simply frame it as one potential form of local adaptation. As such it is an auxiliary adaptation option RSs can financially support, directly or through the actions of the relevant local administration. In other words, it falls under the purview of their local adaptation-related obligations. However, RSs should work to make relocation within borders a good substitute for lost safe options. As with international movement, internal migration should reduce the risk to affected vulnerable individuals, those who move and those who stay in the affected region. Moreover, internal migration should not make the individuals already residing in the relocation destination more vulnerable to climate change. This would mean failing to properly carry out local adaptation-related obligations. Fulfilling these obligations, that is, managing successful relocation, requires a big investment: improving infrastructure in receiving locations, increasing services to match the growing population, maybe even helping with smoother transition and integration in the local economy, and so forth.

On this view, RSs should shoulder the costs involved in making internal migration a good enough option under higher climate risk, either prospectively by funding new programs or retrospectively by reimbursing their costs. The prospective engagement in financing internal relocation will partly fulfil their obligation to restore safe options. Retrospective financial transfers will partly fulfil their obligation to reimburse adaptation costs. Supporting internal relocation can also be part of RSs obligations to repair damaged relations. To express that they are now putting the proper weight on the needs and interests of vulnerable affected individuals, RSs can, for example, ensure better opportunities in immigrants' destinations or promote policies and programs designed to accommodate the specific needs or preferences of internal migrants. I have

called this pathway of redress ‘a good quality immigration package’, the core claim of which can be relevant to internal migration as well. RSs can support the relocation of climate migrants and promise meaningful improvements for affected vulnerable individuals, even when they only move within their state’s borders.

However, balancing the need to advance the adaptation capacity of internal migrants and those who cannot or will not move is not the whole story when it comes to RSs local adaptation-related obligations. Such considerations are not in fact an integral part of the internal balance framework. Optimising the positives of internal mobility and minimising its negatives is predominantly the responsibility[15] of local government. The obligations of RSs will mainly concern financing such programs. But maybe when the governing capacity of local administration is weak, RSs should be more directly involved and strive to achieve the best solution for internal migration and adaptation.

In this section I have fleshed out different elements of the internal balance framework for climate immigration policy-making. Let me sum up the discussion. The internal balance framework emerges from the Migration-for-adaptation outlook I proposed earlier, and the proactive approach to migration policy such a view demands from RSs. We saw that each RS has a portfolio of adaptation duties that can be pertinent to climate mobility, which consists of two types of obligations they must balance; I called these admission-related obligations and local adaptation-related obligations. Through five observations on climate migration, I explored the licence, qualifications, and considerations that this balancing-act suggests.

RSs have a licence to design admission policies that target specific groups. They can make an effort to assist the relocation of those most vulnerable, for example. We have also seen that an opposite admission policy might be possible as well: opening up relocation options for immigrants from risked locations that are not vulnerable to climate hazards can indirectly advance local adaptation through remittances and other transfers. Nonetheless, such policies are conditional on some qualifications. Namely, RSs should ensure that remittances will be channelled into projects and programs that will advance the adaptation capacity of affected locations. This requirement is also a general consideration: RSs need to account for this even when they admit *bona fide* climate immigrants. In addition, RSs should make sure that opening up immigration

[15] I mean here the role responsibility the state has toward social justice. I point this out to emphasise the use of the word ‘responsibility’ here, which is different from the sense in which I generally employ the term in this work.

options does not lead to a damaging 'brain-drain' effect on sending societies, increasing instead of reducing the vulnerability of affected individuals. I have also explained that internal migration faces similar pros and cons and the relevant policies should try to make the most of such relocation for migrants and vulnerable affected individuals in sending communities. RSs should be tuned in to the complexity of internal climate mobility, but in principle successful internal m igration will be the purview of the domestic government.

The internal balance framework provides a set of matters that ought to inform RSs' policies. But beyond them, states will have to follow a moral principle that can guide their choice between different possible policies. I presented and discussed important aspects of climate migration that should be accounted for in policy-design, but in the end, RSs must decide what policy to pursue. I suggested that the obligations of RSs are to all those adversely affected by climate change and that immigration should be part of how state discharge these obligations. But there is more than one way to achieve this overall objective. For example, a RS may have to choose between two competing policy bundles. One bundle will be more pro-admission—will encourage more immigration, lead to increase in remittances, but will risk more negative impact of emigration in sending communities (due to brain-drain effect). A second bundle will be more pro-local adaptation—will be less permissive regarding immigration, but includes investment that advance the adaptation capacity in vulnerable locations. My analysis explains why RSs ought to address these different considerations in deliberating what policy to design, but it will not be conclusive regarding what policy bundle to choose in every case. Such a choice can be guided by a separate moral principle that a RS endorses.

The moral principles that can guide their decision do not emerge from the analysis of climate migration; they are moral principle that we think should guide policy generally. Therefore, I am not planning to discuss them here or argue for one of them. I will only mention two potential principles to illustrate the point, and let the reader fill-in her preferred principle. For example, some may see public-policy as the realm of utilitarian thinking. For them a principle of *maximisation* should be the overarching guide that we should supplement the internal balance framework with. In this case, the RS should choose the bundle of policies that maximises the adaptation capacity of all affected individuals, or in other words minimises vulnerability to climate change.

Alternatively, others may think that some sort of prioritarianism is the appropriate approach to public policy. Then, the RS should choose the policy that *advances the worst-off*, or in other words, a policy that protects and improves the situation for those most vulnerable to climate change adverse impact. In some cases, both moral principle will recommend the same policy bundle, but in others they will differ. Let us say that in the example above the pro-admission policy can reduce overall climate vulnerability and the pro-local adaptation policy can better target the most vulnerable to climate hazards. Then, those in favour of a maximisation principle will opt for the first option and those supporting a prioritarian principle will opt for the second.

Back to the internal balance framework, we can summarise it in a concise way: the framework is sensitive to the 'who', 'how', and 'where' of climate immigration patterns. The framework considers the identity of *who* immigrates, *how* their relocation impacts the adaptation capacity of the location they leave, as well as *where* they immigrate to. Now we have a grip on what the internal balance framework includes, I want to move on to explore a second framework that tries to achieve an external balance between local adaptation and admission-related obligations. To an extent, with an external trading of obligations it is possible to relax some of the limitations of the internal balance framework. Nonetheless, this gives rise to new challenges as well.

5.3 Trading obligations

The external balance framework

In some sense, the internal balance framework can be thought of as a constraint on the degree of discretion an RS has in discharging its adaptation duties. RSs must balance their obligations portfolio so the combination of admission and local adaptation-related obligations will advance the adaptation capacity of all affected vulnerable individuals. However, we saw that the internal balance framework also leaves some flexibility in the way RSs are permitted to carry out their two-dimensional duties of adaptation. I now turn to discuss how the possibility of some external balance enlarges the normative space for how RSs can themselves strike this balance. We can imagine a 'division of labour', where one RS admits climate immigrants and another RS finances local adaptation. Such external balance can be a way to interpret the *shared* responsibility of RSs. In this part, I explore how RSs can arrange to discharge their duties of adaptation so that some states can carry out most or all of their relevant obligations by only

performing admission-related obligations or local adaptation-related obligations, but together try to achieve the best solution in terms of advancing adaptation capacity.

I will start the discussion with a brief explanation of the external balance framework. We can envisage a framework for an obligation-exchange that coheres with the understanding of the shared responsibility of RSs I have argued for here. Discharging the obligations of RSs involves many different possible actions; there are multiple ways in which they can put their admission and local adaptation-related obligations into practice. Based on what is required, that is, what can be done to reduce climate vulnerability through adaptation, we can envisage a 'pool' of actions that RSs ought to take on themselves; each state according to its degree of obligations. Most local adaptation-related obligations will be projects and policies that require funding. Therefore, such obligations can be cashed out in monetary terms, or 'adaptation finance', as it is usually called in the climate regime. Admission-related obligations, though they may have monetary costs, cannot be translated entirely into cash. Some states will have to physically host and resettle climate immigrants in their territory. So, one type of action in the 'pool' of what RSs have to do will concern how much money each has to transfer directly or through a global funding mechanism to support local adaptation projects. And there will be another type of action: the different ways in which states reform and amend their admission and immigration policies.[16]

RSs have a shared responsibility to redress the adverse impacts of climate change. This means that together they should empty this 'pool' of actions. Aside from the question of how much each state should do, we also need to consider which of the two types of action (admission and local adaptation) each state should undertake. Let us assume that each RS receives a portfolio of adaptation duties according to a fair and just allocation matrix. Now, each RS can work out the composition of this portfolio according to the internal balance framework. They will arrive at a mix of admission and local adaptation-related obligations, specifying how much of each type they ought to undertake. At this stage, states can go over the range of actions they ought to perform and deliberate about which they prefer to do and which they might want to exchange with other states. In this case, the exchange will pit admission-related obligations

[16] I will stay silent on the possibility of other types of actions which, like admission, cannot be reduced to monetary transfers. If there are such actions pertinent to adaptation, then we should try to analyse them along the lines of my discussion here, with attention to details that can make their case different to the case of admission.

against the amount of funding the state ought to transfer according to its local adaptation-related obligations.

The result is something like a barter market for actions that represents ways of fulfilling RSs' shared responsibly and adaptation duties. This will be a bilateral exchange within a certain budget of the admission-related and local adaptation-related obligations held by the trading parties. Think of two states, RS_1 and RS_2, with the following portfolios of adaptation duties (LAO stands here for local adaptation-related obligations; AO stands here for admission-related obligations): state RS_1 [*x*LAO, *y*AO]; state RS_2 [*m*LAO, *n*AO], when *x, y, m*, and *n* are variables describing the respective amount each state has to do of LAO and AO. RS_2 is willing to take half of RS_1's AO if in return it will do half of its LAO. If state RS_1 is interested as well, they can strike a deal. Their portfolio will now look like this: state RS_1 [(*x*+0.5*m*)LAO, 0.5yAO]; state RS_2 [0.5*m*LAO, (*n*+0.5*y*)AO].[17] This is just a simplistic way of explaining the general idea.

The possibility of such exchange is the key feature of what I call the external balance framework. It relaxes some of the limitations of the framework I developed earlier in this thesis, but it does not forsake it altogether. The main facets of the framework remain the same. Mainly, the core commitment to reducing the vulnerability of affected vulnerable individuals by advancing their adaptation capacity and the need to balance admission and local adaptation. The external balance framework is merely a different way RSs may be allowed to reach this balance. This framework of sharing the obligations through exchange or trade has merits but it is not free from challenges. The main goal of this part is not to defend obligations trade at all costs, though I will certainly raise objections and reply to them. Nonetheless, I explore such challenges and discuss potential moral concerns in order to delineate the perimeters of such a framework *if* we want to allow such external balancing to be part of how states share and carry out their obligations toward climate immigrants. And I do think there are good reasons to allow it, so I start by presenting them before I move on to examine potential challenges for the idea of obligations trading.

[17] The exchange rate of AO to LAO can be different of course. In any case, the variables can represent different numbers, so even if in this simplified example it looks as if they exchange equivalent values, this does not have to be the case.

Reasons in favour of obligations trading

The reason why we might want to allow such external balancing can be traced to some of the values or benefits we find in markets more generally. The market can enhance the degree of freedom of those participating in it, improve the efficiency of distribution, and by that increase welfare.[18] A market helps to reveal the preferences of participants and how much they are willing to pay for them. This is similar to the trading scheme I suggested above. A trade often represents an improvement (in economics it is called a Pareto improvement) in initial distribution, whereby each participant's welfare is increased because there is something else that they wanted more (or more of). By trading, then, participants have greater flexibility regarding what they own and they can exercise their freedom through exchanging goods and services that fit better with their preferences.

With the necessary caveats, due to the differences between trading goods and trading obligations, similar advantages could be found in the external balance framework. RSs have different capacities and preferences and it could be reasonable to accommodate them. One state might be happy and more capable of accepting newcomers on a permanent or temporary basis. Another state might not possess a similar capacity for hosting and resettling many new immigrants but it might have measurable financial resources with which to fund local adaptation in vulnerable locations. These differences in capacity and preferences may not be captured by the general matrix of assigning climate duties based on responsibility and capacities. Likewise, the internal balance framework will probably be too rigid to match it well. Then, the tool of external exchange can help us think how we can optimise the allocation of adaptation duties. For example, states such as Luxembourg or Belgium have less available territory than Canada.[19] Maybe Canada is more equipped to admit immigrants, and let us assume that Luxembourg has a strong preference not to add to its population by accepting more immigrants.[20] Luxembourg is wealthy enough to take on

[18] On freedom and markets see Caney 2010c; Satz 2010: Chapters 1 and 3. For a canonical inquiry to the value of exchange as part of a commercial society, see Adam Smith's *Wealth of Nations* (1970).
[19] Only Russia has more territory than Canada, while Luxembourg and Belgium are ranked 179 and 141 (https://www.cia.gov/library/publications/the-world-factbook/rankorder/2147rank.html#lu. Canada has four people per square kilometre—considering that density is an important factor beyond size. Luxembourg and Belgium have 215 and 341 people per square kilometre, respectively (http://data.worldbank.org/indicator/EN.POP.DNST).
[20] In 2016, 46.7% of the population of Luxembourg was composed of foreigners, with the vast majority of them coming from EU member states (from Luxemburg's official website: http://www.luxembourg.public.lu/en/index.html). This may be an indication that they will not be keen to

more of Canada's local adaptation-related obligations in exchange for its own admission-related obligations.[21]

This exchange of local adaptation-related obligations for admission-related obligations is a good distance from selling duties towards climate immigrants on the free-market. Nonetheless, it faces similar moral concerns to those raised in the political philosophy literature about regulating certain practices, goods, or services according to the free-market mechanism. The general worry is that when certain practices are opened to the logic of free exchange, we may open the door to a noxious market that compromises the values and moral principles we care about.[22] Here I shall discuss some potential problems and challenges to the idea of obligation exchange, most of them drawn from debates over trading emission rights or refugee quotas.[23] The list of challenges is not short, but it is probably not exhaustive; there might be additional worries and challenges to this framework of external balance. However, the discussion represents the chief potential objections, which ultimately, I will argue, do not lead to a complete rejection of the idea of obligation exchange. By addressing these objections, it is possible to form a useful guide for regulation of such a trade. I cluster the moral worries into two groups, which I discuss in turn. The first concerns the preferences of immigrants and how they should be considered. The second pertains to the treatment of immigrants and unfairness.

Preferences

Preferences over destinations

One possible charge against obligation exchange between states is that it disregards the choices and preference that climate immigrants may have about destinations. A state can shut its gates so that no climate immigrant can enter, as long as this state enters the

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increase the level of newcomers, but it may be indicative of their relatively open attitude towards immigrants.

[21] Luxembourg is the wealthiest state in the world based on GDP per capita (based on World Bank data for 2015 (available at http://data.worldbank.org/).

[22] In the background of my discussion is the elaborate work on the problem of some markets by Debra Satz (2010) and Michael J. Sandel (2013).

[23] On the issue of emission rights trading, see: Caney 2010c; Goodin 2005; Gosseries 2015; Page 2011; Sandel 2013, Chapter 2. There are two proposals in the literature that point to trading refugee quotas under burden-sharing schemes; see Peter H. Schuck (1997) and James C. Hathaway and R. Alexander Neve (1997). These texts and other general concerns about such trade are examined in Anker, Fitzpatrick and Shaknove 1998; Gibney 2007; 2015; Kuosmanen 2013; Miller 2016, Chapter 5; Sandel 2013, Chapter 2.

relevant exchange of admission-related obligations for local adaptation-related obligations with another state. If the external balance framework allows this, it de-facto robs immigrants of freedom and choice.[24] This worry compels us to think about the preferences of potential climate immigrants when it comes to possible destinations and whether they can in some way restrict how RSs may exchange obligations.

But first, let us note that one possible advantage of the external balance framework is its ability to accommodate the preferences of climate immigrants regarding destinations. I will explain in what way and to what extent. Much future immigration will follow established routes of movement. Therefore, it is likely that some states will face a high demand for admission while other states will receive low numbers of applications. Now, instead of trying to redirect the mass movement of climate immigrants, the external framework allows admitting states to trade some of their obligation towards local adaptation with other emitting states that do not face a similar increase in immigration levels. Exchange of admission-related obligations for local adaptation-related obligations could be a way to amend the distribution of obligations without the need to relocate immigrants a second time.

Working with the way immigration patterns will develop, and letting RSs work out the differences by exchanging local adaptation-related obligations around them, could better accommodate the preferences of immigrants. Immigrants chose the specific RS for a reason, and, all things considered, it is probably better to respect their choice than deciding for them. There are some good reasons to think that in many cases established immigration routes into RSs will reflect preferences that match some important interests immigrants have. At least some of the established routes will be into developed rich RSs with well-ordered societies, governed by the rule of law, with many economic and social opportunities as well as a functioning welfare system. Therefore, relocating into one of these states can reduce vulnerability and restore the safe options they had in their state of origin.[25] Moreover, immigrants may know people in the destination states; people of their own nationality (maybe even family members) that came in earlier waves of immigration. Even if they do not know such people, they might come to know them. There is an existing community that they can form relations with and that can

[24] Such a concern is raised and examined with respect to refugees by Kuosmanen 2013 and Miller 2016, Chapter 5.

[25] This is not to deny that immigrants will face new vulnerabilities as foreigners. Such vulnerabilities may come from the marginal status of immigrants and minorities, alienation from the dominant culture, cultural and lingual disorientation, and more.

help them take their first steps in the new country. Immigrants may prefer such states because of existing diaspora communities that can provide them with cultural and religious ties akin to those of their place of origin, give them a sense of 'home away from home'.

So, the problem cannot be the very idea of obligation exchange. Maybe, then, what drives the worry that the preferences of immigrants will be completely ignored is how critics think it will be put to practice. In other words, the external balance framework could potentially widen the gap between the preferences of climate immigrants and accessible destinations. States that are a popular destination, or would be one, may trade away their admission-related obligations in exchange for more local adaptation-related obligations. This can change the set of possible destinations for climate immigrants, leaving out many of the 'best' or most desirable options. Then the distance between a potential immigrant's preferences and her actual choices will significantly widen. It is always a possibility that immigrants might prefer to relocate to states that are currently out of their reach, either financially or procedurally. Therefore, for practical reasons they may choose a destination that ranks lower in their preferences order.

This is not a unique feature of immigration; not getting what you want is, unfortunately, a ubiquitous phenomenon. What makes this case normatively important is the fact that one of the reasons for specific states to be out of an immigrant's reach is the barriers those states place on entering their territories. For example, someone from Bangladesh may prefer to relocate to Australia, but based on the current admission system she cannot obtain the required skills to earn a working visa.[26] Instead, she chooses to immigrate to the United Arab Emirates, which, in recent years, has begun to accept low-skilled immigrants and is a popular destination for Bangladeshis.[27] Trading obligations can contribute to such exclusionary admission policies that compel climate immigrants to pursue second-best destinations. So, should we disallow the exchange of obligations on these grounds?

I start my reply with a strong statement, soon to be weakened: it is not clear at all that RSs must accommodate the preferences of climate immigrants regarding destinations. Similarly to what some argue in the case of refugees, the claim for admission is against all states that owe redress to potential climate immigrants and

[26] For a brief explanation of Australia's point-based system, see the BBC news article (Donald 2016) available online: http://www.bbc.co.uk/news/uk-politics-29594642.
[27] Malit Jr. and Al Youha 2013.

limited to what is owed to climate immigrants (for refugees this basically consists in a safe haven). If a potential immigrant's claim for redress is met in a state she can actually enter, her desire to receive the same treatment in another state has no force. However, those presenting this stance tend to moderate it.[28] Some preferences represent fundamental needs or important interests that ground a strong claim for the chosen destination. Such preferences will be about reuniting with family or about the opportunity to practice religion, express cultural traditions, or other things that allow newcomers to participate in the new society. Sometimes having a cultural or national diaspora in destination states can help with such important interests and aid smoother and easier integration (Gibney 2015; Kuosmanen 2013; Miller 2016). Admittedly, what counts as an important interest that requires such consideration is a matter of dispute. In general, we can say that immigrants should relocate into states where they will not be vulnerable to climate harms in the way they were in their home region. Those states should also provide the opportunity to build a successful life that can reflect back on the adaptation capacity of their states of origin through remittances and other forms of transfers.[29]

Most preferences over destinations do not substantiate a claim to be admitted to *a specific* state; rather, it substantiates a claim of admission to a cluster of RSs that will provide climate immigrants with what they are owed—states that can accommodate the important needs and interests that relevant preferences represent.[30] An exception might be the preference to reunite with family members when all of one's kin live in the same state. Such an important interest can only be accommodated by that specific state. But aside from that, immigrants have a claim to be admitted to states where the important interests and needs described above can be met, where they will have socio-economic opportunities that can compensate some of the irrecoverable aspects involved in their relocation as well as contribute positively to the adaptation capacity in their sending societies.

The takeaway from this discussion is a *qualification* for the external balance framework. Trading of admission-related obligations is restricted to exchange between states where climate immigrants will receive what is owed to them; at the minimum this

[28] This is captured nicely in Gibney 2015, 458.
[29] The reasons why states that admit refugees ought to provide them with more than minimal security can be construed differently; for example see Gibney 2015.
[30] Cf. Miller 2016, Chapter 5; Kuosmanen 2013.

means securing their lost safe options.[31] It is important to get the function of this qualification right. I am not restating the obligations of RSs towards climate immigrants. I argue that when an RS fails to uphold such obligations there are implications for exchanging obligations with that state. Consider the following example; it can help illustrate the point.

> *Saudi Arabia*. Saudi Arabia, one of the big emitters, hosts many immigrant workers. Most of them are from countries highly vulnerable to climate change, such as Bangladesh, the Philippines, Sudan, Eretria, Yemen, and Pakistan.[32] Saudi Arabia can claim that it is already doing a lot in terms of admission and maybe it is willing to do more if another state is willing to take on some or all of its local adaptation-related obligations.[33] The US or the UK want to invest more in local adaptation instead of admitting more immigrants from Bangladesh and the Philippines, for instance (the US and the UK are a relatively popular destinations for immigrants from these countries too). By entering into such an exchange, the US or the UK can do less in terms of admitting climate immigrants and instead invest more in adaptation programs in vulnerable locations. In return, Saudi Arabia reduces the amount of money it transfers to global adaptation efforts.

Saudi Arabia's claim is not far-fetched, acknowledging that foreigners comprise almost a third of Saudi Arabia's population. Therefore, it seems that Saudi Arabia is doing more than its share of the global 'pool' of obligations with respect to how many immigrants from climate vulnerable regions to admit.[34]

Now let us take a closer look at the treatment of immigrants in Saudi Arabia. The sponsorship system operating in Saudi Arabia (known as the Kafala system) is criticised

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[31] A similar concern is raised regarding the resettlement of refugees in a third state as part of burden-sharing schemes (Hathaway and Neve 1997, 149-50; Gibney 2007, 64, 70; 2015, 458).

[32] This is based on the Migration Policy Institute data set and interactive maps, available online at: http://www.migrationpolicy.org/programs/migration-data-hub. Saudi Arabia hosts more immigrants from other highly vulnerable countries like Chad, Ethiopia, and Afghanistan, but in smaller numbers. (I base the level of a state's vulnerability on the ND-GAIN index, available online at: http://index.gain.org/).

[33] This is perhaps an abstraction from reality and not an assumption that is well-grounded in current state of research. The trend of immigration might change, as there is local pressure to replace foreign workers with locals and recently the government has acted to reduce the number of immigrants in the country (though this mainly involved targeting undocumented immigration from Yemen and Ethiopia); see: Ghafour 2011; Hill 2009; Peebles 2013 (the situation with Yemen has dramatically deteriorated since 2015, when Saudi Arabia began its military intervention in the country). Therefore, this stylized example should be taken as such—a case that more than trying to depict current reality, attempts to illustrate the normative principle examined.

[34] Saudi Arabia hosts around 10 million immigrants and was in 2015 the fourth biggest hosting state in the world (United Nations, Department of Economic and Social Affairs, Population Division 2016).

for leading to exploitation and abuse.[35] The circumstances of those employed as domestic workers have been described as 'slavery-like' by a Human Rights Watch report (2008). Acknowledging these facts and without any expectation of improvements anytime soon, we can judge that Saudi Arabia is failing miserably in meeting its obligation to reduce the vulnerability of affected individuals. What follows is a 'trade ban' with Saudi Arabia. The US or the UK should not exchange obligations with Saudi Arabia when immigrants (that in principle the US or the UK have the obligation to admit) face exploitation and abuse.

By stating that the US or the UK have an obligation to admit the immigrants coming to Saudi Arabia I am not claiming that those immigrants should have relocated to the US or the UK. The focus here is on the exchange of obligations and the claim is that RSs who want to trade their admission-related obligations must consider the prospect of maltreatment of immigrants in admitting states. Trading such obligations with a state that is known for its deficient treatment of immigrants (to put it diplomatically) is a complete sell-out of the obligation. A state cannot say that the conditions of immigrants in another state are not its business and responsibility if in virtue of entering into the obligation exchange it shifts part of the admission-related obligations to that state. The state cannot get itself off the hook because the failure to fulfil this obligation rests with the state traded with; not whether it was known or could be foreseeable that this would be the result of the trade. Otherwise, such a trading system could be an easy way to evade responsibility by exporting more challenging types of obligations to states that will only fulfil them in a corruptive way.

A basic premise of the external balance framework is that the entire 'collective pool' of obligations is taken care of. I do not discuss what RSs ought to do in general cases of non-compliance, but this is a specific scenario that has direct implications for obligation exchange.[36] I am not arguing that each RS should 'take up the slack' and do more under such circumstances, rather, I warn against a specific way in which an RS can misuse obligation trading to do less than its fair share. By exchanging their admission-related obligations, knowing what type of poor immigration package can be expected by climate immigrants in the states with which it is trading, an RS leaves a deficit of responsibility. There are now unfulfilled admission-related obligations and

[35] This was mentioned in many news items covering the predicaments of immigrants in Saudi Arabia, as well as by organizations such as Human rights Watch (Burke 2011; Aljazeera 2013; Human Rights Watch 2013; 2015).

[36] I state this omission in the introduction; see the part on non-ideal theory.

unmet claims of climate immigrants. In the absence of this exchange, the state that traded away its admission-related obligations will have to discharge its admission-related obligations in its own territory. Therefore, an RS that trades obligations with another RS where dire exploitation and abuses can be expected, cannot be said to restore the safe options its emitting actions removed. In addition, it expresses the same erroneous treatment of affected vulnerable individuals. Again, the important interests of affected vulnerable individuals are ignored or disregarded for the convenience of RSs. Therefore, maltreatment of immigrants in a destination RS constitutes a strong qualification on the trading of admission-related obligations for local adaptation-related obligations.

I will end the discussion by emphasizing a few points. Again, the point is not to criticise the practices and treatment of immigrants in Saudi Arabia or in any other country, though there is much to condemn. It is also not about what outsiders or other states and the international community ought to do in face of such severe abuses. The example provides a more vivid picture of the conditions under which RSs can engage in such trading and with which states. Nevertheless, the qualification is not directly about the preferences of climate immigrants. We saw that consideration for the destination preferences of climate immigrants is not sufficient to annul the discretion of RSs over how to carry out their admission-related obligations. Specifically, I showed that we should care about the important interests of climate immigrants and the quality of the immigration package they are offered. This only narrows the scope of RSs that can be part of the external balance framework. It is reasonable to assume that an immigrant will prefer to be admitted to a state that provides a good package, but this is not the main reason for restricting the trade of obligations with states that treat immigrants in a manner that falls below this minimal standard. However, respecting the preferences of climate immigrants can also be defended in a different way, to which we now turn.

Obligation to preferences as such

The demand that RSs should respect the preferences of climate immigrants regarding destinations can be backed up with a stronger claim than the one reviewed above. Here I present it and examine its power to constrain the discretion RSs have in carrying out their duties of adaptation. The core claim is that climate immigrants have a right to choose their destination as a form of compensation for the impairment of their

autonomy. Unlike the previous claim, what grounds this claim is not immigrants' preferences for a group of states or maybe a specific state. Climate immigrants, so the argument goes, are owed the choice itself (Heyward and Ödelan 2013; Eckersley 2015, 17; Gibney 2015, 460-1). Of course, an immigrant's choice will match some specific preferences she has over the destination, but what is important is granting the choice itself as a form of compensation. Therefore, advocates of this newer claim will reject the previous suggestion to narrow down the range of suitable destinations where immigrants' important interests will be met but deny her a choice within this set (Heyward and Ödelan 2013, 14-5).

This argument is made for what are known as 'climate refugees' in popular discourse.[37] However, the logic of the argument is akin to my responsibility-based account. Therefore, it is sensible to examine whether the claim can be extended to cases of Climate-induced migration, which I focus on. Here, in brief, is why I think my argument leads to a strong demand to respect the choice of immigrants regarding destinations. One of my core claims is that climate immigrants are owed a sort of compensation or redress because of the effect that climate change risks have on their lives. More specifically, I argued that vulnerable affected individuals lose, to some extent, the power to determine aspects of their future by being put at higher risk. I also suggested that RSs should also compensate for losses that cannot be fully restored and that the actions of redress should convey the message that RSs are willing and in fact trying to repair the damaged relationship. This is similar to how the argument for climate immigrants' right to choose their destination is grounded (Heyward and Ödelan 2013, 8-10). By showing where the original argument fails, I hope to show what it can achieve in scenarios of Climate-induced immigration.

In arguing that a sufficient set of suitable relocation alternatives is not enough, Heyward and Ödelan (2013) mainly claim that narrowing down the range of choices will always miss out some of the interests applicants have. Such interests could be fulfilled in a state that is left outside of the limited set of relocation destinations. This is a strong claim, as it obliges RSs to respect *any* preference a climate immigrant may have and not only preferences that correlate with what I earlier called important interests. This means that climate immigrants have an unlimited right of choice over

[37] In my terminology, Climate-exile, and in the margins also cases of Extreme climate migration.

destinations. I do not think this stronger position is warranted, and I do not think RSs' obligations of redress necessary lead to it.

I will try to articulate the best argument in favour of the unconditional right for climate immigrants to choose the destination may have and then examine if it holds. In Chapter 3, I briefly mentioned that giving a voice in decision-making can be a way to restore some of the power over their life that is lost through climate change risk.[38] Climate change risks compromise an agent's level of control over a range of options because some important safe options were removed from the option-set. But the affected individual did not have an unlimited range of options to start with. The life options of most individuals who are highly vulnerable to climate change are fairly restricted regardless of the excess risks of climate change. So as far as restoring safe options goes, providing the choice to relocate to any state in the world would be to offer much more than what has been lost. That said, relocation is a solution that leaves climate immigrants with some significant unrecoverable losses; it is not what I called a 'close enough substitution'. Therefore, RSs obligations of redress also require actions that can satisfy potential immigrants with respect to other meaningful aspects of their lives.[39] Such a redress does not aim to replace what is lost but to leave climate immigrants in a situation close to what they had, though perhaps in a different form. Not least, it is also a way to express that the interests of immigrants are now being given proper weight, which is required in order to repair the damaged relations. Perhaps unrestricted choice over destination can be mandated based on these elements of the obligation of redress.

However, these aspects of redress do not necessarily lead to the right to choose a destination. First, there are different ways in which an RS can carry out these aspects of its obligations. As suggested, a good quality immigration package is one option. When climate immigrants can expect such conditions in a destination state, or in some narrow set of RSs, then the strong claim for the right to choose seems to go beyond what redress requires. Offering a good or high-quality immigration package already addresses

[38] I have also suggested that as part of the obligation to repair damaged relations a shift from exploitative behavioural practice should be expressed. One of the things RSs should convey is a commitment to non-repetition. I suggested that giving a voice to vulnerable affected individuals can serve such a function, because it will make the repetition of the wrong less likely. And since in my account the gesture ought to be expressed through actions, institutional changes to decision-making procedures that provide this voice can convey the right message. However, this is mainly relevant to climate mitigation policy and not to admission-related obligations as part of RSs' adaptation duties.

[39] This is based on Goodin's (1991a) distinction between end- and mean-replacements discussed in Chapter 3.

the obligations of redress. Tailoring solutions to specific needs or desires could be another form of redress that conveys the right message. RSs can try to follow this path of redress without providing immigrants the right to choose. They must obtain some particular knowledge about the preferences of potential climate immigrants, and most of the time there is no better way to get this than by simply asking them. But inquiring about their preferences and accommodating them does not mean granting them the full-blown right to choose their destination.

Second, giving immigrants some of the control over their future, which was stripped away by climate risks, does not get us all the way to a full-blown right of choice over destination states. What is required is some sort of inclusion. RSs need to give potential climate immigrants a voice and influence that can express recognition of the wrong involved. Participatory rights or inclusion in decision-making are not the same and do not necessary lead to the unconditional right to relocate to an RS of the immigrants' liking. Representatives of potential climate immigrants (state official, civil society, and international organizations) can negotiate admission procedures and immigration treaties (bilateral, multilateral, and international). It is important to note that in such possible deliberation, the demands of potential climate immigrants will not always have the upper hand. What redress requires here is to give voice, influence, and genuine consideration to the interests of immigrants; it does not promise to offer the destination state a climate immigrant prefers. This is how we usually think of voice and influence over decision-making procedures. For example, being included in a democratic process as an equal participant does not entail always get the outcome one wants.

This understanding of what inclusion means answers an additional worry raised by Heyward and Ödelan (2013, 15). They argue that disallowing full discretion over the alternative destination is disrespectful because it is to make a judgement over the personal life of immigrants and what they value. However, if an immigrant's interests are included in a proper way and for the right reasons, there is no disrespect if in the end she does not gain access to her first choice of relocation destination. Actually, I do not see why we should think of this as a judgement over immigrants' lives at all. Considering competing legitimate interests in the decision-making process is not a derogatory judgement of others, it is a reflection of the plausible clash of legitimate claims. In such cases, not everyone can have it their way. For some acceptable reasons

an RS's desire not to admit more immigrants will be judged as stronger than the interests of some potential climate immigrants in relocating to that state's territory. I do not see how this shows disrespect. I will have more to say later about what sort of reasons RSs are permitted to use to justify trading away their admission-related obligations. But as long as such reasons are of the permissible kind, they can be weighed against the interests of climate immigrants. That, of course, does not guarantee that RSs will always have it their way either. This will depend on the importance of the interests at stake. Last, if the interests of potential climate immigrants are never accommodated in decision-making processes, we cannot say that inclusion in such procedures is being used to express that RSs try to repair the damaged relations. Then, some reflection on the decision-making process is due, so the formal inclusion will not merely pay lip service to RSs' obligations of redress.

In conclusion, the preferences of climate immigrants matter, but to a degree. They give rise to an important *consideration* for the external balance framework. The negotiation and deliberation involved in obligation exchange should accommodate the preferences of climate immigrants. Nonetheless, this does not amount to an unlimited right to choose their destination. In other words, it does not directly override the discretion of RSs over their admission and immigration policies. Nonetheless, giving a genuine voice to climate immigrants in the relevant decision-making procedures is a significant concession to such discretion.

Commodification and wrongful treatment

Some are worried that by making some good or service marketable, we undermine or sully the original intrinsic meaning attached to that good or practice.[40] We may encounter this type of objection when we evaluate in monetary terms something that can have a non-market value. Now, it is important to notice that this is not exactly what is going on under the external balance framework. States do not establish a trade in climate immigrants; they exchange admission-related obligations for local adaptation-related obligations. So it is not the case that persons are treated as commodities with price tags on their heads.[41] Nonetheless, there are still some adjacent concerns that fall under the heading of commodification. For example, Gibney (2007) points to three

[40] For an elaboration on such worries see: Sandel 2013, Chapters 2, 3.
[41] Gibney 2007 and Sandel 2013, 61-4 present such a worry. For a rejection of this idea in the case of trading refugee quotas that runs along similar lines to what I write here, see Kuosamanen 2013.

main worries about trading refugee quotas in the form of 'negative evaluation', the message expressed, and eroding the norms that underpin the asylum regime. In broad strokes, the structure of this section follows these three worries, adapted to my own focus on Climate-induced migration.

The negative view of immigrants

The danger of a negative evaluation of climate immigrants is present even when what is traded are obligations and not persons. In the context of protecting refugees and sharing the burden of hosting them, Matthew Gibney (2007) claims that trade can lead to a wrong and wrongful way of perceiving refugees.[42] Or as Sandel writes, "think of refugees as burdens to be unloaded […] rather than as human beings in peril" (2013, 64). In a similar manner, people can claim that trading admission-related obligations opens the door for states to treat climate immigrants as an unwanted commodity, undesired outcasts, a global pariah, to be tossed away for others to deal with, as rich states do when dumping toxic waste. This is a considerable worry. Actually, it is a double challenge. First, it can erode the limited capacity of political action needed for RSs to carry out their obligations towards climate immigrants. It will be more difficult to initiate and implement immigration policies that accommodate the needs of climate immigrants. Second, on its own, it represents the wrong outlook towards climate immigrants. If RSs try to pass on admission-related obligations like a hot potato that no one wants to deal with, this can deliver a pungent message to potential immigrants: you are not welcome.[43]

The obligation to repair the damaged relations with affected vulnerable individuals introduces a further *qualification*: not every reason for transferring admission-related obligations to another RS will be acceptable. One of the gestures that can go some way towards fixing the damaged relations could be hospitality, opening the door for immigrants to work out the challenges climate change has brought upon them together. Trying to perform fewer admission-related obligations can deliver the opposite message

[42] See a reply to Gibney's claims in Kuosmanen 2013, Miller 2016, Chapter 6. I owe much to Kuosmanen's systematic treatment of the issue, but I disagree with him on some points—in part his reply to Gibeny, that does not take seriously enough the danger of negative evaluation and discrimination.
[43] A similar claim is sometimes raised in debates over the criteria liberal democracies can have for selecting between applicants. Two recent re-statements of two long-standing rivalry positions can be found in Carens (2013, Chapter 9) and Miller (2016, Chapter 6).

and undermine this aspect of RSs obligations. So, does the obligation to repair relations block the possibility of trade? I think that would be a hasty conclusion.

It is true that the reasons an RS has for trading admission-related obligations matter, and RSs may have good or at least acceptable reasons. A trade assumes a 'buyer' as well as a 'seller'. So, we should assume that for a system of exchange to take place, there will be states that want or are willing to do more in terms of admission-related obligations. Instead of focusing on the hostility end of the exchange, maybe we would be better off looking at the hospitality end of it. If there is an amount of admission-related obligations that ought to be undertaken, then the fact that some states do more than others can reflect how far immigrants are welcomed. This could counteract the impact of the less pleasant message that some state wishes to do less. The exchange can actually show that some states, those willing to do more in terms of admission, have such a hospitable attitude.

However, some individuals will be systematically unwanted.[44] Some RSs will provide relocation options to climate immigrants from one state but not from another. This is a logical possibility coming from the nature of the obligation-sharing scheme I envision. Though climate immigrants can pay more attention to the welcoming message of states that are willing to admit more immigrants, an RS that wants to transfer admission-related obligations ought to have good or acceptable reasons for doing so. From the perspective of RSs, they may still fail in their obligation to repair damaged relations if they do not perform them in the right way and for the right reasons. Let me go over some of those reasons.

RSs may have some specific need for certain skills to bolster their economies or fill-in gaps in the labour force. This is a legitimate interest when it is done within the limitations given earlier under the internal balance framework. For other RSs it might be more difficult to host and resettle newcomers than it is for others. For example, New Zealand is smaller than Australia, in terms of territory as well as economy, and in comparison it could be more difficult for it to receive large immigration waves. A lesser ability to admit immigrants is another acceptable reason for entering obligation exchange. Reducing immigration based on such reasons may not only be permissible but sometimes desirable as well. A better match between the needs of the receiving state and the newcomers can yield better results in terms of reduced vulnerability to

[44] This is one of the main concerns for Gibney (2007) with trading refugee quotas.

immigrants and their communities back home. There is nothing wrong in the attempt to optimise solutions based on the comparative advantage of some RSs. On the contrary, it can reflect the correct approach towards repairing the relationship, because it aims to bring the best solution to affected vulnerable individuals. The fact that it also tracks the preferences of states regarding its admission policies should not speak against such exchange.[45]

What cannot be used as reasons for trading admission-related obligations are claims that directly undermine the obligation to repair the damaged relations. Some motives or explanations cannot be squared to fit this aspect of the obligations of RSs. Some reasons will fail to show that states have changed their ways and started to take the interests and needs of affected vulnerable individuals seriously. Some immediate examples that come to mind are racist attitudes and the perception of immigrants as parasites on the local welfare system without any capacity to contribute to the receiving society. These, unfortunately too familiar, sorts of reasons should not motivate the trade of admission-related obligations. They are simply the wrong kind of reasons. A less clear-cut example is the unwillingness to share the existing welfare of the society with newcomers. It will be less repugnant than the former examples, but problematic nonetheless. But an RS may have a good explanation beyond simply being stingy. Accepting more newcomers can be more challenging to one society and economy in comparison to other RSs, and as we have seen it can be a legitimate reason to enter into obligation exchange.

To conclude, RSs may try to optimise solutions through obligation exchange, which is permissible and sometimes even desirable. This is what we want to achieve with the external balance framework. It is no problem if the exchange is motivated by the preferences the trading parties have over admission policies as long as they do not send a message that clearly undermines the obligation to repair the damaged relations. It is easier to see the permissible reasons when the obligation exchange is driven by the demand for admission-related obligations. When it is pushed by RSs that want to off-

[45] There is a possible complication: to what extent can RSs use their citizens' negative attitudes towards immigration as a constraint on their capacity to implement more inviting admission policies? Does this constitute a legitimate reason to enter an exchange of AO for LAO? I think that if there are grounds to believe that such hostility towards immigrants poses a real significant political barrier, then in a first step an RS can use it as reason to enter such obligation trade. This will not go against its obligations to repair broken relations. But there is a caveat. RS that wish to use it as a reason must work to change the attitudes of its members to reduce the political constraint, so that in the future it may amend its admission policy if required. What should be done and how should they do it (states officials, morally motivated citizens, civil society) goes beyond the scope of this work.

load their admission-related obligations, we need to pay more attention to the reasons they have and what they express. In other words, another *qualification* for the external balance framework is the exclusion of wrongful reasons for entering the obligation exchange.

Cheap obligations and unfair exchange

Another set of concerns is tied to the idea that by exchanging admission-related obligations states are paying their way out of a duty they owe. In the case of the external balance framework, an RS is not paying someone else to perform a duty it has,[46] because states are exchanging obligations; RSs simply alter their adaptation-duty portfolio through exchange. Therefore, the worry is about how easy it may be for one RS to pass one type of duty (admission or local-adaptation obligations) to another RS. To be more precise, what some may find objectionable is that some RSs can relatively easily avoid their adaptation-related obligations by trading them away. I will start exploring this worry by explaining why we should not misunderstand the claim this worry represents, and then address what I take to be the core of the problem: unfairness.

The first misguided way to perceive this worry is to think that a trade in obligations allows RSs to get away on the cheap, so to speak. The possibility of exchange can have the effect of reducing the costs of fulfilling adaptation-related obligations for each RS. A central aspect of a trade, which makes it *prima facia* desirable, is the benefits that come from utilising the comparative advantage of parties to the exchange. Admission-related obligations will be transferred from an RS with relatively higher costs associated with admission to RSs with relatively lower costs associated with admission. On its own, there is nothing problematic about this 'exchange rate' between trading RSs and with conceding to the possibility of reducing the costs of carrying out adaptation-related obligations.

However, these reduced costs of admission are not the cause of concern. Some are worried that it will be cheaper for states (and typically the charge is against wealthy states) that do not want to admit climate immigrants to let someone else perform their obligations. Considering that the 'currency' of exchange is the obligations themselves there is no reason to think that we will end up with this result. Let me explain why. If

[46] I will return to such a case in the following section.

the worry is that many of the RSs will not want to perform their admission-related obligations, then we should assume that they are willing to exchange them for a fair amount of local adaptation-related obligations. More so if such preference is commonplace and there are not many states willing to take on more admission-related obligations. On this scenario, admission-related obligations will actually be 'expensive'. Only if we assume that many RSs are willing to do more in terms of admission should we expect admission-related obligations to be 'cheap'; when an RS can get trade away a lot of admission-related obligations and in return only do a little bit more in terms of local adaptation.

However, this neat analysis of obligation exchange is perhaps too superficial an account of what is going on. It might be better to take another look into the Pareto improvement the exchange describes. Though on the surface we observe a reduction of costs to all parties involved, some of the background facts to the exchange and its possible consequences may suggest that trading is ultimately undesirable.

Parties to trade can come from unequal backgrounds. This can put some RSs at a disadvantage as their bargaining power is limited and they are vulnerable to accepting any terms. So they may accept an exchange that in some aspect or in the short-term makes them better off, but at the same time exacerbates their disadvantageous position and makes them worse off in the long run (Satz 2010, 98).[47] There would have to be deep inequalities between RSs to see such vulnerability in adaptation obligations trade. The circumstances of some RSs would have to be severe enough that they would prefer to reduce the direct costs involved in carrying out local adaptation-related obligations and in return take on more admission-related obligations.

There are four interrelated problems here. The first is the wrongful way in which some states can take advantage of other states in such circumstances. They can dictate terms of trade that suit them best, disregarding the potential hardship it may bring to the parties they trade with. This will be unfair and unjust, mainly as we think of the shared responsibility of RSs as a joint endeavour, as a task they need to carry out together, though each state is doing its bit. This relates to the second problem: this wrongful way in which an RS can treat another state can wear away the norms of cooperation and the

[47] See discussions on this worry in the context of emissions rights (Caney 2010c) and refugee quotas (Gibney 2007).

sense of shared sacrifice that sustains the joint effort to fulfil adaptation duties.[48] The third problem points to the consequences of such an unfair trade of obligations. If an RS were to take on more admission-related obligations out of acute financial hardship, then it is more than likely that such a state will find it difficult to offer the protection, opportunities, and welfare services that climate immigrants should receive. This problem suggests a further one. Acknowledging that unfair trade will lead to poor conditions for immigrants in hosting states, we can judge that both trading states fail to give prominence to the interests of potential climate immigrants in the deliberation over obligation exchange. Thus, it is also an indicator that the reasons for entering the trade are not of the right kind; they will not express the message of reconciliation and changing of ways that the obligation to repair damaged relations requires.

For these reasons, I accept that unfairness in trade is a serious concern that should be part of the external balance framework. The third and fourth problems of unfair exchange present a breach of the qualifications to the external balance framework discussed above, namely the qualification against engaging in obligation exchange with another RS that does not provide climate immigrants with what they are owed, and the qualification not to enter such exchange for the wrong reasons. In a sense, if the exchange follows the guidelines I propose, then we avoid the problem of unfairness in trade. But we can also introduce a separate *qualification* that should guide the trade of obligations—states should not unfairly overburden a fellow state.

After accepting that unfairness in trade is a considerable worry, I want to downplay its significance for the external balance framework. It is less likely that we will find deep inequalities among RSs, the states that will make others vulnerable to take disadvantageous exchange of obligations. The reason for this is that on my account the degree of obligations each state is assigned is also a function of its capacity to carry it out. As I suggested in earlier parts of this work, the identity of the RSs, as the group of states that shoulder adaptation duties, is sensitive to indicators relevant to the ability to burden the costs of such duties. Such inequalities are more likely to give rise to problems discussed here when an RS wants to exchange admission-related obligations with a developing poor state who is not among the group of RSs. This, however, goes beyond the external balance framework, which is restricted to obligation exchange

[48] This is part of the concern in the context of inequalities in hosting refugees, which led some states to admit fewer or provide less protection to refugees (Gibney 2007).

among RSs. I will now explore this possibility of exchange beyond the scheme of responsibility and obligations RSs share among themselves.

5.4 Admission into developing states

Much climate immigration could be to developing states that have contributed very little to creating the hazards associated with climate change. For example, the majority of those emigrated from Burkina Faso moved to the Ivory Coast and most of those emigrated from Niger moved to other countries in the region such as Benin, Nigeria, and Chad.[49] These destination states are not among the highest emitters and not among the wealthiest either; in other words, they are not RSs.[50] This likely pattern of immigration can create big gaps between how much each RS should do in terms of admission and between the actual number of newcomers they face. Acknowledging such predictions, should we allow an RS to discharge some of its admission-related obligations in a third state, which is not part of the external balance framework? Based on the distinction between *admission* and *resettlement* I presented above, I want to examine whether instead of admitting climate immigrants, an RS can pay for the resettlement of immigrants in a developing state that is not an RS.

There are two main objections that must be considered here.[51] First, the 'unfairness in trade' objections discussed above return, and in a more robust form, as what they warn us of is a likelier possibility when parties enter exchange with starkly different bargaining positions. Second, I will examine the claim that some obligations of redress can only be discharged by the responsible agents, otherwise we cannot consider them as having been fulfilled at all.

I start with the objection regarding unfairness. The power relation between poor states that are not RSs and rich RSs could lead to an unfair trade, as discussed above. This has two worrying aspects: the wrongful way one state takes advantage of the vulnerability and dependency of another state and the immigration package climate immigrants can expect. These two concerns are related, as the first can lead to the

[49] This is based on the International Organization for Migration (IOM) website as presented in its interactive map (https://www.iom.int/world-migration).
[50] Data on states' wealth, emissions levels, and vulnerability were collected from CAIT Climate Data Explorer (http://cait.wri.org/equity/).
[51] The discussion is informed and inspired by the debate on refugee burden-sharing schemes. See: Gibney (2015, 449-50) and Hathaway and Neve (1997, 126 and 141) for similar concerns to those I discuss here. For replies to such concerns, see: Miller (2016, Chapter 5) and Kousmanen (2013, 115-8).

second. A developing state which is not among the RSs can be compelled to accept terms of exchange that are not favourable, at least not in the long run. It can agree to admit and resettle climate immigrants in large numbers even if this will overburden it, adding to its hardship and lowering its ability to advance its level of development. We can also expect it to provide an inadequate immigration package for climate immigrants, as it already struggles with instability and poverty.

While there is a lot of truth to the objection, it does not consider the financial support the resettling state will receive from the RS. We also need to think about the impact of such financial transfers. RSs will pay for resettlement, and beyond offsetting the excess costs for hosting states, the inflow of money can help turn the population growth induced by immigration into economic growth. Nonetheless, the positive contribution immigrants can make to hosting societies, including to their local economy, will not ensue when the magnitude of immigration or its pace is too much for the receiving state to deal with. Given that we are discussing movement into developing states, which in many cases have lower governing and economic capacities, this is a genuine risk. The additional demand for jobs, housing, transport, education, and welfare will have a destructive impact on domestic affairs. Getting the funds from RSs for more houses, classes, and buses will not solve the problem of overpopulated cities with soaring unemployment rates and an inadequate infrastructure for the pace of growth of the population. In addition, social tensions and frictions that may arise in such conditions, which is not something financial transfers for resettlement can address.[52] Under such circumstances, it is likely that climate immigrants will suffer increased vulnerability due to such instability, the deficit in protection, and insufficient services. In other words, the obligation to restore safe options will not be met and it is likely that such relocation will contribute little through remittances to the adaptation capacity of sending societies.

This brings me to the second objection. Some forms of redress can only be carried out by the agent responsible for discharging them. Sandel (2013, 75-6) claims that there are some actions, and performing an obligation you have to someone is one of them, the agent has to do herself in order for the action to be considered performed at all.[53] An exemplary case is an apology. An apology must come from the wrongdoer in order for

[52] There is some evidence of the negative impact of human mobility. This should be taken as a strong signal that the concern is genuine; see Reuveny 2007; Raleigh, Jordan and Salehyan 2008.
[53] For a discussion of a similar concern see Goodin 2005, Caney 2010; Gosseries 2015 in the context of pollution and emission.

it to be considered as having been performed.[54] In my analysis, the obligation to repair damaged relations fits this description. Making gestures and actions that aim to reflect the responsible agent's change in attitudes or pattern of behaviour is something that in essence cannot be outsourced.[55] I have suggested that admission can be a way to convey this kind of message. Paying for the resettlement of climate immigrants in a developing state may deliver the opposite message. Despite the financial support for resettlement, the hosting states can still struggle with resettling and integrating newcomers. Then the RS's attempt to discharge part of its obligation by funding resettlement will fail. As shown in similar scenarios above, when climate immigrants can expect to receive an immigration package that falls well below the standard they are owed, RSs should not enter into an exchange that allows this. The same is true here. This example shows that the RS fails in discharging the obligation they have to restore safe options, as well as embodying the wrong kind of treatment of vulnerable affected individuals. It expresses that the RS continues to disregard the important interests of immigrants in favour of their own convenience. In other words, the RS also fails to undertake actions required by the obligation to repair relations.

What we can conclude from this short discussion is that there is another important *qualification* to be made, like the one I described for the external balance framework: RSs ought not to overburden weaker states. This means that they cannot use their relative position of power to create further disadvantages for poor states, by pushing agreements pertaining to admission and resettlement that will make a weaker party worse off. Underpinning this constraint are two norms presented above in the similar discussion on unfairness in obligation trading. The first is about the relations between states and how a state should treat a fellow state. The second is about the relation between RSs and vulnerable affected individuals. When this qualification is not upheld, the proposal I examine here will only alter where climate immigrants experience vulnerability. Instead of living up to its obligation to reduce the vulnerability of climate-affected individuals by restoring their safe options, an RS engaging in such an agreement facilitates their on-going misery.

Again, this is a qualification and not a complete rejection of such exchange: paying for resettlement in a non-RS. Some manageable level of climate immigration into non-

[54] A third party can apologise in the name of the wrongdoer in some cases. Still, even here the wrongdoer is the person apologising, just through another person.
[55] Miller (2016, Chapter 5) accepts that admitting refugees could be said to be a form of redress because a state was involved in creating their need for asylum.

RS developing states will be permissible under this qualification if the financial support provided sustains reasonably good practice that can deliver a good enough immigration package. Even large numbers of climate immigrants may not challenge the capacity of the resettling state if it is well prepared. In addition, by paying for resettling and not admitting climate immigrants themselves, RSs are not necessarily failing to repair damaged relations. Admission is just one way to express that an RS is attempting to repair relations. For example, RSs can find direct ways to secure better opportunities for climate immigrants in other destination states, and with this express an effort to accommodate the important interests of immigrants in their decision-making processes. In sum, if all the different aspects of this qualification are respected, RSs are permitted to discharge some of their admission-related obligations by paying for resettlement in a non-RS developing state.

5.5 Conclusion

The main goal of the chapter was to devise two complementary frameworks that can serve as a guide for how RSs should and can carry out their two duties of adaptation: admission and local adaptation. The internal balance framework explained what considerations each RS has to take into account when it aims to discharge its obligations towards vulnerable affected individuals, those on the move and those who stay put. The external balance framework explores the possibility of expanding the scope of this tricky balancing act, by exchanging admission-related and local adaptation-related obligations between RSs. I ended the discussion with a few remarks on another expansionary move—letting RSs pay for the resettlement of climate immigrants in states that do not have duties of adaptation on a global level. The main contributions of this chapter can be summarised in the following points:

(i) The internal balance between admission-related and local adaptation-related obligations should account for the identity of who immigrates, how relocation impacts the adaptation capacity of the sending societies and its impact on the where they immigrate to.

(ii) RSs can engage in obligation exchange, but under some qualifications and with some considerations that account for how to do it and with whom.

(iii) An RS may discharge some of its admission-related obligations in other states, even states that are not RSs, but under more restrictive conditions.

The frameworks I have suggested here are not a cohesive blueprint for policy. My theoretical analysis and its conclusions do not pave the way for a clear-cut policy recommendation. What it gives us is a set of concerns that should be part of any deliberation over relevant policies. I discussed the internal and external framework in order to provide some structure to these concerns as a helpful guide when we evaluate policy proposals, when we criticise existing practices, and when we design new policies or even enact new laws and regulations. The discussion of the two frameworks, as well as the additional option of funding the resettlement of climate immigrants in a state that is not an RS, shows the possibility of expansion and restraint.

We postulate that each RS starts with some obligations that include admission and local adaptation-related obligations. Each RS needs to balance them, or in other words find a combination of the two that will advance the adaptation capacity of vulnerable affected individuals, whether they are immigrants or immobile. This requirement limits the discretion RSs have in carrying out their duties of adaptation as they see fit. They cannot just decide to take on one type of obligation and not the other—not without good reason, at least. From here, each section of the chapter explored the possibility of granting RSs further flexibility in the way they discharge their adaptation duties. The inquiry has shown us that alongside this movement of expansion regarding the discretion given to RSs, there is an accumulating set of constraints. I will briefly summarise the main parts of this tangled development.

In section 5.2, I extrapolated from the study of climate migration some key insights for the internal balance framework. First, we learned that RSs do not have to design their policy to target only the most vulnerable affected individuals. Immigration is important for its supporting role in advancing adaptive capacity, which can be achieved through the movement of individuals that are not necessarily highly vulnerable. It is a *licence* that allows RSs some flexibility in discharging their admission-related obligations. This is the first movement of expansion regarding the discretion RSs may have and I followed this by detailing several requirements. I started by explaining that the immigration policies of RSs should also address remittances and try to channel them to achieve their main objective (from the perspective of RSs): advancing the adaptive capacity of vulnerable affected individuals in sending societies.

This is a *consideration* for policy-making in RSs. This involvement in the outcomes of remittances is also a *qualification* on the licence just mentioned. RSs are allowed to be less sensitive to the identity of immigrants only if the immigration of less vulnerable individuals is expected to be effective in advancing the adaptation capacity of vulnerable affected individuals in the sending society. Another *consideration* for immigration policy addresses the negative impact of outwards movement. Looking at the 'brain-drain', I discussed how the emigration of skilled individuals can impede the adaptation capacity of sending societies. RSs should be aware of this possibility and seek to avoid or offset it when they balance admission and local adaptation. Last, the framework also touches upon the topic of internal migration and classifies it under the local adaptation-related obligations of RSs.

The external balance framework introduces the idea of exchanging obligations as a way in which RSs can carry out their obligations. In essence, it is a *licence* that relaxes the internal balance framework; a second expansion to the discretion of RSs given at the start of section 5.3. It allows RSs to achieve a good mix between their two obligations—admission and local adaptation-related obligations—together with other RSs, so they are not bound to their own adaptation-duty portfolio. I then explored several worries regarding this method for carrying out states' obligations and uncovered a few additional lessons: an additional set of requirements that contravenes the initial flexibility the framework grants.

First, I examined whether the preferences of climate immigrants can grant them a universal right to choose their destination. Having such a right would place a strong qualification on the external balance framework because any individual climate immigrant can override the RS's decision to deny her entry. That could frustrate any attempt on the part of an RS to trade away much or all of its admission-related obligations. I concluded that the preferences of climate immigrants do not place such strong constraints on the discretion of states. Nonetheless, the discussion did bring up an important *qualification*. Climate immigrants ought to get a good (or good enough at the minimum) quality immigration package. Therefore, RSs should not trade with a state that will not treat climate immigrants according to this standard. In some cases, an RS can provide resources to overcome the deficiencies in the immigration package offered by hosting states. In other cases, where severe right-violations and abuses await climate immigrants in a destination state, this constitutes a prohibition on the exchange. A trade

with such a state is unacceptable from a normative perspective. This qualification re-demarcates the scope of obligations trading, narrowing it to only those RSs that can deliver a good enough immigration package.

Second, the discussion of the preferences of climate immigrants also taught us that some demand for inclusiveness in decision-making regarding immigration policies is warranted. Climate immigrants may not have a strong right to decide on their preferred destination, but as part of restoring control over their future and as a way of making good on the obligation to repair relationships, they should have a voice in decision-making procedures that affect them. This is a requirement for policy-making; however, it is exogenous to both the internal and external balance framework. This requirement for inclusiveness is not part of these frameworks but can create further considerations and qualifications for them. By giving climate immigrants more power to influence decision-making in forums that will shape immigration and adaptation policies, we might end up with different policies. Nonetheless, the internal and external framework still portrays the normative space of such policies and outlines what should guide the decision-making process. In other words, the inclusion of climate immigrants in such decision-making forums is important but does not affect the guidelines that the internal and external framework put forward.

Third, we learned from examining the worry of negative attitudes towards immigrants that some reasons for entering exchange are permissible, others are undesirable, and there are some that are strictly unacceptable. Regarding the latter kind, I claimed that some reasons cannot be squared with the obligations of RSs, namely their obligation to repair damaged relations. Xenophobic, racist, and other abhorrent derogatory attitudes fuelling an RS's attempt to avoid taking as many newcomers as possible directly clash with the message RSs ought to express when they carry out their duties of redress. These types of wrong reasons for entering obligation trade are an additional *qualification* for the external balance framework.

Fourth, considering the worrying possibility of unfairness in obligation exchange, I suggested a moral imperative as another *qualification* for the external balance framework: RSs ought not to overburden a fellow state by transferring more admission-related obligations to it than it can handle. The need for such qualification is strengthened by the undesired but likely consequences of such unfair obligation exchange. Namely, that climate immigrants will end up with a poor-quality immigration

package in states that lack the resources to provide them with what they are owed. In section 5.4, I claimed further that this limitation is relevant, even more relevant, if we want to allow RSs to discharge some of their admission-related obligations in developing states that are not RSs. RSs may be allowed to pay for the resettlements of climate immigrants in states that in principle have no obligations to admit them. However, the problems encapsulated in the 'unfairness in trade' objection are likelier and more acute in this case. Therefore, we should pay greater attention to this qualification and be wary about potential breaches.

The considerations discussed in the section on the internal balance framework persist and are still relevant for the external balance framework and the option of resettlement in a non-RS state. The effectiveness of remittances in advancing the adaptation capacity of vulnerable affected individuals, and the potentially damaging effect of the brain-drain, are issues that an RS has to address at every stage in creating an internal balance, but also when letting other states (whether or not they are among the RSs) discharge some or all of its admission-related obligations.

From the discussion on permissions, considerations, and qualifications, I established the form and content of the two proposed frameworks. As the chapter evolved, I explored different ways to expand the discretion RSs have in carrying out their two adaptation duties. Each expansion came with some accompanying shackles, showing the limits of such potential discretion. This should not come as a surprise; it is reasonable that as we expand the normative space in which states are permitted to choose how to design their policies, we will also encounter more moral concerns that we will want to fence against. Seeing the architecture of the chapter as a tangled movement of expansion and restraints helps to understand why the internal and external balance frameworks are more of a set of requirements than a cohesive theory. Nonetheless, taken together these two frameworks provide general guidance for policy making. They do not give us precise answers and recommendations regarding how each RS ought to design and amend its immigration policies, but this is not what they are supposed to do. The discussion is still at a level of generalization and abstraction that lacks the necessary contextual knowledge and information for policy recommendations. What it does give us is an overarching normative guideline for work that moves in that direction. This part of the dissertation adds, to our thinking on *who* bears the obligations and *what* the obligations are, the dimension of *how* they should be carried out. In this

way, it completes and brings to an end the cluster of questions my dissertation set to answer.

Conclusion

Early in the start of 2017, the World Economic Forum released the 12th edition of its annual Global Risks Report. The report shows that:

> [A] cluster of interconnected environment-related risks—including extreme weather events, climate change and water crises—has consistently featured among the top ranked global risks for the past seven editions of The Global Risks Report. Environment-related risks again stand out in this year's global risk landscape. […] Environmental risks are also closely interconnected with other risk categories. […] [I]neffective management of the "global commons"—the oceans, atmosphere, and climate system—can have local as well as global consequences. For example, changing weather patterns or water crises can trigger or exacerbate geopolitical and societal risks such as domestic or regional conflict *and involuntary migration*, particularly in geopolitically fragile areas. (World Economic Forum 2017, 16; *my emphasis*)

In terms of likelihood, in 2017, as well as 2016, involuntary migration is the leading global risk alongside extreme weather events.

In September 2016, the UN held a summit for refugees and immigrants and adopted the New York Declaration. At the start of the Introduction, it is stated that:

> Since earliest times, humanity has been on the move. Some people move in search of new economic opportunities and horizons. Others move to escape armed conflict, poverty, food insecurity, persecution, terrorism, or human rights violations and abuses. Still others do so *in response to the adverse effects of climate change*, natural disasters (some of which may be linked to climate change), or other environmental factors. Many move, indeed, for a combination of these reasons. (United Nations 2016b, I.1; my emphasis)

Climate migration has become a prominent issue in international politics, with academics, civil society organizations, international organisations, and representatives of states all acknowledging the need to take action. With the tools that normative analytical political philosophy provides, in this thesis, I have examined normative issues relevant to climate migration. The analysis I conducted aims to improve our understanding regarding responsibility and obligations in the context of climate change and human mobility. Let us recap what the argument on the responsibility and obligations of states towards climate immigrants, review what it achieves and what its limitations are, and think about where we can move from here.

A review of the thesis

Summary

The main goal of the thesis was to explore obligations towards climate immigrants: what they are and who is responsible for performing them. My argument substantiated the claim that developed states that cause the adverse effects of climate change are those that ought to address the plight of climate immigrants. Or in other words, I put forward the most plausible argument in support of this claim. The argument had three main steps. The first identified the responsible agents and established the nature and scope of their responsibility. The second step investigated the derivative obligations of this responsibility and its application to the case of human mobility under climate change. Last, a third step explored how the relevant obligations can and should be carried out by the responsible agents. This is the core structure of the argument. Now, let me recap the main points and the conclusions of my analysis.

I started the thesis with an analysis of the concept of responsibility that I then applied in my argument. I explained my choice of states as agents to which I assign responsibility, and opted for the concept of 'outcome responsibility' as the account of responsibility we should use to hold states responsible for the harmful effects of climate change. I showed that we can tie this concept of responsibility to two core norms of the climate regime and international environmental law: the Common But Differentiated Responsibilities and the Polluter Pays Principle.

The concept of outcome responsibility appeals to a common intuition that agents causing a bad outcome are responsible for putting things right. More formally, three necessary conditions will make an agent responsible for bad outcomes according to this notion: (i) the agent's action causally contributes to an outcome; (ii) she can reasonably foresee that the action will causally contribute to the outcome; and (iii) she can reasonably avoid performing the action. When (i–iii) obtain, the agent is outcome responsible. This responsibility entails three kinds of duties. The first is to stop acting in a way that contributes to the bad outcome. If the agent's action has already set in motion a causal chain that will bring about the bad outcome, when and if possible, she also has a duty to prevent the bad outcome from materializing. If these two duties fail to avert the bad outcome, then the agent also incurs a duty to compensate for the harms the outcome brings about.

I understand this formulation of outcome responsibility along the lines of a corrective justice outlook. This means that my argument does not appeal to a demanding or controversial theory of justice to ground the duties of states. In my account, in virtue of their doing, agents incur the responsibility to redress the adverse impact they have caused and these claims are not limited to extreme cases of deprivation. This view of responsibility is important for the focus of my argument on Climate induced-migration. This type of movement is not about extreme scenarios of displacement, for example rapid onset environmental disasters or when a territory becomes permanently uninhabitable. I described the category of climate induced-migration as *the movement of individuals or communities from their regions, due to gradual environmental changes (associated with climate change) that, coupled with other factors, significantly restrict life prospects where they reside*. Though I have briefly discussed such movement scenarios within a state's territory, I predominantly address the border-crossing aspect of climate migration.

There are some challenges to applying outcome responsibility to climate change and human mobility. When trying to establish the first condition, a causal link between the agent's actions and a bad outcome, we are confronted with the fact that by emitting, states bring about climate change *together*. Climate change is a collective outcome that is difficult to disaggregate in order to assign a portion of it to each state that contributes to its creation. I have shown that we can hold each state responsible as part of the set of states that is necessary for bringing about the adverse effects of climate change. This allows us to use each state's contribution to this deleterious outcome, measured by its emissions level, as a proxy for its degree of responsibility.

Nonetheless, I showed that we need to supplement outcome responsibly with other normative sources for ascribing obligations to states, because we cannot use such a notion of responsibility for all of the adverse effects of climate change. This is because there are some limitations of scope with respect to each of the conditions for ascribing outcome responsibility. The first condition of outcome responsibility, a causal link, cannot account for the non-anthropogenic drivers of climate change. The second condition, the ability to foresee, is not met for pre-1990 emissions, regarding which states can claim ignorance of their consequences. The third condition, the ability to avoid, does not hold for emissions that are necessary for the satisfaction of fundamental needs and interests of individuals. I have suggested filling this gap, between what my

responsibility-based argument can capture and the full scale of the adverse impacts of climate change, with other normative principles, such as the ability of states to assist those adversely affected. I have assumed that we can have a matrix that shows the different principles and that provides an answer regarding how much responsibility and which derivative duties we ascribe to each state.

At the last stage of identifying the group of states responsible for climate change's adverse impact, I narrowed down my field of inquiry to responsibility and duties towards climate change adaptation. I introduced a distinction between domestic and global adaptation duties. I argued that only states with a greater degree of responsibility and duties than the adaptation needs of their public will have duties of the global kind. They will be the states that support the adaptation efforts of states that are less responsible for climate change and lack the capacity to address all of their public's adaptation needs. In other words, they will be the Responsible States (RSs), those who in principle have obligations towards climate immigrants.

After having identified the group of states that should shoulder adaptation duties and obligations towards immigrants (and for what reasons), I started examining the nature of possible moral obligations. This inquiry started with another challenge to applying outcome responsibility to the case of climate change—the fact that an adequate way to understand each state's contribution to the collective bad outcome is in terms of risk. In response, I developed the notion of responsibility for risk creation. We can understand the risks of climate change as a bad outcome that states bring about, and we can hold them responsible for it. The 'badness' of risk is threefold. First, climate risks impose excess adaptation costs. Second, climate risks remove the safe options agents had before their exposure to a higher level of risk. Third, creating a dangerous climate represents an exploitative treatment of those vulnerable to its impact. Being responsible for these aspects of climate change leads to three corresponding obligations of redress: the obligation to *reimburse* adaptation costs, the obligation to *restore* safe options, and the obligation to *repair* broken relations. The last kind of obligation, regarding relations, is discharged through the way an RS perform the first obligations. RSs need to convey the right message, namely one expressing an understanding of the wrongful action and an effort to make amends. RSs ought to express this message in the way they reimburse the losses and costs vulnerable individuals suffer and in the way they restore the removed safe options.

After describing the nature of the obligations RSs incur, I discussed what they entail in the context of climate change and human mobility, focusing on the pattern of movement I classified as Climate-induced migration (hereinafter: climate migration). I suggested several ways in which RSs' admission and immigration policies can fulfil the three duties of adaptation: reimburse, restore, and repair. RSs can reimburse adaptation costs and restore safe options by opening immigration routes to those vulnerable to climate change's adverse effects as well as making such options less costly. But they can, and should, do more than that. Since there are some unavoidable losses associated with relocation that do not have a suitable replacement in the hosting state, RSs should compensate climate immigrants by offering what I coined a *good quality immigration package*—providing economic and social opportunities in the destination state or tailoring immigration and integration policies to the needs and interests of climate immigrants. This sort of reception in the admitting state also plays a role in fulfilling the obligation to repair relations. It is one way in which an RS can express that it is making an effort to change the former exploitative character of the relations; the state now gives proper weight to the interests of climate immigrants in its policy-making processes.

I also proposed to perceive climate immigration as an adaptation strategy that not only reduces the vulnerability of immigrants but can support the adaptation efforts of vulnerable individuals in sending societies. I coined this outlook on climate immigration Migration-for-adaptation. This outlook urges us to acknowledge the complementary and supportive role immigration can have in advancing the adaptation capacity of immigrants and those who cannot, or will not, emigrate. This view of migration under climate change sits well with the moral commitments RSs have towards all those adversely impacted by climate change. The obligations pertinent to immigration are part of a broader duty to support adaptation that the outcome responsibility of emitting states commands. As a consequence of adopting the migration-for-adaptation outlook, I have suggested splitting the adaptation duties of RSs into two complementary components: admission and local adaptation. RSs should find a combination of the two that advances the adaptation capacity of all affected vulnerable individuals. They need to strike a balance between their admission and local adaptation-related obligations.

I have introduced two frameworks to orient our thinking on such a tricky balancing act. The first, called the internal balance framework, discusses how states can and should strive to build their own portfolio of adaptation duties. It assumes that each state

ought to take on a portion of the global adaptation duties. In principle, RSs can have some discretion over how they carry out their duties, in deciding how to balance admission and local adaptation-related obligations. However, features of climate immigration suggest some considerations and qualifications for this discretion. The need to ensure the positive impact of remittances on sending societies and of avoiding the negative impact of the brain-drain should guide the way RSs design their policies to satisfy a good internal balance between admission and local adaptation. At the same time, the internal balance framework introduces further flexibility to the way RSs can carry out their obligations. That is, we might still say that an RS is doing its duty when it admits immigrants that are not vulnerable to climate change's hazardous effects if such immigration advances the adaptation capacity of affected vulnerable individuals in sending societies.

The second framework, the external balance framework, represents an additional way to provide RSs with greater choice on how to combine admission and local adaptation-related obligations. RSs can engage in an exchange of these two types of obligations. Such exchange, or trade, enables an RS to perform more of one kind of obligation, for example, local adaptation-related obligations, while another RS will perform more of the complementary type, admission-related obligations. Together they maintain a good balance between admission and local adaptation. Nonetheless, there are also considerations and qualifications to the external balance framework. RSs cannot exchange obligations with a state that does not provide a minimally good immigration package. They also should not overburden a fellow state with admission-related obligations beyond what a fellow state can cope with. I showed that these two qualifications also apply when an RS wants to discharge part of its admission-related obligation by financing resettlement in a state that is not a member of the group of RSs. Another qualification for the external balance framework constrains the kind of reasons RSs can have for entering into obligations trading. Some derogatory attitudes are excluded as they contrast the demands of the obligation to repair relations, namely that RSs convey a reconciliatory message in the way they perform their actions of redress. For example, racism against specific groups of potential climate immigrants is not a legitimate reason to trade away admission-related obligations.

Alongside the internal and external frameworks, I have claimed that climate immigrants should have a voice and influence over decision-making procedures that

significantly impact their lives. Part of being exposed to dangerous climate change is to lose a degree of power over one's future. Through more inclusive decision-making procedures climate immigrants may regain some of this decisional authority over their lives. This suggestion and the frameworks I propose for the way RSs should carry out their obligations, are not clear-cut policy recommendations nor a cohesive doctrine. Rather, they are sets of requirements that guide the move from the conclusions of the theoretical discussion to its implementation. They are the last step in my argument and bring the inquiry to its conclusion. We now know which states are responsible for taking action on climate migration, what their obligations are, and how they can and should carry them out.

What we have achieved

Having recapped the main moves of the thesis, it is time to review its contribution. I will highlight three main advancements: two in the literature on immigration and one in the literature on climate change.

The main contribution of this thesis is its subject matter: climate migration, or more precisely Climate-induced migration. It becomes clearer that climate migration will be a major challenge for international politics, yet in political philosophy, the issue has received scant treatment. In papers dedicated to the normative questions raised by climate migration, the focus, thus far, has been on the extreme scenario of permanent displacement as the result of the loss of territory, epitomised in the case of the low-lying small island states Tuvalu and Kiribati (a Climate-exile case, in my typology).[1] I do not underestimate the importance of investigating the challenges of such cases, and they present are interesting and challenging questions for political philosophers. Nonetheless, the field of human mobility under climate change is broader than such scenarios and my thesis turns the spotlights on under-investigated questions relating to Climate-induced migration. I develop a nuanced argument that captures the complexity of this type of movement and its bearing on normative questions regarding responsibility and moral obligations. This is, to my knowledge, the first thorough normative analysis of Climate-induced migration, and putting this type of movement at centre stage is the first contribution my research project makes to the political philosophy literature.

[1] See on the existing literature on the topic in pages 15-7 in the introduction and in 4.2.

The thesis not only adds a new subject matter to political philosophy research on migration, it also develops a specific type of argument within this literature. I situate obligations towards immigrants as a part of a wider duty towards all affected individuals, including those remaining in sending societies. And I ground obligations towards immigrants and non-migrants in a backward-looking notion of responsibility (outcome responsibility). It is possible to generalise this and to claim that the normatively significant causal relation between the actions of states and the underlying drivers of immigration can generate an obligation to admit those on the move. To my surprise, few have argued for the duty to admit immigrants in this way. In the context of refugees, this has been raised occasionally,[2] but with respect to immigration, often called 'economic migration', such an argument has been rarely advanced, but most obviously by Shelly Wilcox (2007). I discussed her argument in the conclusion of Chapter 4, and here I merely restate how my argument advances the kind of points she makes.

To an extent, Wilcox's argument is still captive to the refugee-scenario imagery. While she discusses responsibility for creating a harmful global economic order as the reason why states incur obligations toward potential immigrants, in her argument there is a direct link between a state's actions and the rights deprivation inflicted by that economic order. This is misleading in two ways. First, the kind of responsibility states have for the global economic order and its harmful consequences is a 'shared responsibility'. Second, much of the problem with the global economic order is the imposition of risks that can be described as exploitative.[3] I have discussed both aspects in detail, and these discussions can inform and develop this type of argument. This constitutes a further contribution to the political philosophy literature on migration.

This leads me to my next contribution, the introduction of the concept of responsibility for creating risks. Firstly, my discussion is an addition to the literature on the ethics of risk. Recently, there has been growing interest in the moral significance of risk.[4] I add another layer to this literature with my discussion on the relational aspect of risking, namely the wrongful treatment that may be involved in risk imposition. Furthermore, the concept of responsibility I use connects the moral significance of risking with different kinds of moral obligations, namely the three obligations of

[2] See in Carens 2013, 195; Gibney 2004, 49-56; Souter 2014, 330-1; Walzer 1983, 49. For a more nuanced account along this lines. See Blake 2013b.
[3] Wilcox mentions the aspect of risk but does not elaborate on it.
[4] For examples, see: Hayenhjelm 2012; 2016; Hayenhjelm and Wolff 2012; Kumar 2015; Oberdiek 2012.

redress: reimburse, restore, and repair. I explained what obligations a responsible agent incurs in virtue of each aspect of the 'badness' of risk she brings about. The theoretical innovation does not come from the different elements of the argument; it is found in the way I bring them together in a cohesive argument that is also novel. In addition, I applied this to the case of climate change, which opened a new way of looking at responsibility and duties in this context. Such an outlook can be fruitful beyond the relatively narrow focus on adaptation and climate migration. It is also good to note that current writing on the ethics of risk has yet to be applied to many cases. In this regard, my work is also one way to test the value and validity of ideas emerging from this area of inquiry.

Limitations of scope and constrained optimisation

Like any other research project, my thesis does not cover every relevant aspect of climate migration. In the Introduction, I presented topics that I excluded from this inquiry in order to make it a manageable project. Here, I will point to two additional areas that can and should be addressed in future inquiries. One way to move forwards will be to work out a more specific scheme of allocation that shows what each state has to do in terms of adaptation and admission.

The second area for development is the global justice and immigration nexus. I mentioned in the Introduction that some philosophers think that climate justice should be considered alongside global justice issues such as poverty and development.[5] There is more work to be done on how my argument can be integrated into climate justice at large. My argument is focused on adaptation and obligations towards climate immigrants. This is only part of a complex set of duties and obligations that states have. It is interesting to investigate the relations between my conclusions and other arguments for different obligations, find out where they overlap, where different claims reinforce a similar conclusion, and where clashes demand some trade-offs. Consider, as an example, the parallels between my argument and an argument on global justice and immigration I brought up it in the conclusion of Chapter 4. Beyond the structural similarity I have discussed, some convergence of content could exist too. Climate immigration can positively contribute to the adaptation capacity of sending societies. It does so by increasing the resources of individuals back home, who become less poor

[5] For example, Caney 2014; Moellendorf 2014.

and can prompt the development of their communities. In other words, advancing local adaptation and addressing poverty and a lack of development can overlap. Climate migration, then, reveals a significant but complex intersection between global and climate justice, whose implications stand in need of further scrutiny.

Aside from these limitations of scope, I would like to reflect on the limits of my argument in a different way. Not everyone will agree with some of the main normative positions I take, and rely on, in my argument. Mainly, I have in mind the backward-looking account of responsibility I employ—outcome responsibility—and the presumptive right to exclude I grant to states. Here I want to review what my argument achieves even without these—what can we learn from it even under such constraints?

Rejecting outcome responsibility. My argument rests heavily on this backward-looking notion of responsibility and I dedicate much of the thesis to analysing and discussing it. Nonetheless, in climate justice literature there are those who object or who are at least sceptical towards such a concept of responsibility. This is mainly expressed through criticism of the Polluter Pays Principle. This is not the place to go over the reasons for such objections.[6] The purpose of this short commentary is to see what is left of my argument when we fully embrace such criticism. Hence, instead of a backward-looking responsibility, we will endorse a forward-looking kind, something along the lines of the Ability to Pay Principle. I will demonstrate that even without this cornerstone concept of my argument, many of its claims and contribution still come through.

To start with, the notion of shared responsibility is still relevant, as climate change is a global challenge that no state can tackle by itself. Collective action on a global level is needed, in which all states take part, each according to its capacity. We will still have differentiated degrees of obligations, but the matrix of allocation will be simpler as it only uses indicators of capacity. Risk will remain a core feature of climate change's hazardous effects. Therefore, the discussion on the moral significance of risk and its application to climate change is still relevant—but not all of it. Since the reason for holding states responsible is different, the duties of redress should be understood differently. States should remedy the situation for those exposed to the harms and wrongs of climate change, but because such vulnerable individuals fall under a

[6] For a few examples, see: Broome 2012, Chapter 4 (on state-level responsibility); Caney 2005; Moellndorf 2012, 135.

threshold that triggers moral duties in those states. How much states ought to reimburse and what options they should restore will depend on the justice theory that explains why they have duties to redress the losses and harms individuals suffer under a more dangerous climate. Moreover, the obligation to repair relationships can no longer be part of the picture. If we do not see the past and present emitting actions of states as what grounds their responsibility there is no way to argue that their habits, attitudes, and patterns of behaviour involve treating others wrongly. A forward-looking account of responsibility cannot support the claim that by emitting the way they do, states fail to give the proper weight to the needs and interests of affected individuals. This is the main aspect of my argument that will be lost, and naturally it has some ramifications.

I argued that the obligation to repair relations will be carried out through the way states perform the other duties of redress. It could be by financing more adaptation than they ought to reimburse, tailoring their policies to fit specific important interests of affected vulnerable individuals (immigrants and non-immigrants), or offering a good quality immigration package. States can still do all of this, of course, since they are all worthy and noble causes. But such actions will now fall outside of states' the obligations. In addition, some of the qualifications of the frameworks I suggest come from the obligation to repair relations. With a forward-looking account of responsibility they will not have such obligations, and therefore the framework may not include the qualification regarding the wrongful motivation to enter trade. I write 'may not' because there might be other good reasons to exclude negative and derogatory attitudes against immigrants from the justification of an exchange. We may want to object and try to change such attitudes because they are morally wrong. Nonetheless, the obligation to repair relations provided us with a direct route to exclude such wrongful motivations, as they contradict the message states ought to convey when they carry out their duties of redress. Without this obligation, we will have to import a different argument to explain the relevance of wrongful attitudes towards immigrants for obligations exchange.

Rejecting the right to exclude. Let us move to the second normative position that some political philosophers will be happy to jettison: the state's right to exclude. I have already mentioned that this is a contested international norm within political philosophy literature and commented on what lessons my discussion has for those rejecting it.[7] I

[7] See the discussion on page 13-5, in the Introduction and conclusion of Chapter 4. For examples of arguments and scholars contesting the state's right to exclude, see the list of references in the Introduction, n. 6.

recap some of the relevant points here under the assumption that we reject the right of states to exclude outsiders. In other words, I start by endorsing an 'open border' position, assuming the state has no right to impede international movement and every individual has a right to immigrate into any state. However, recall that the duties of redress states have are for all vulnerable affected individuals. Therefore, 'tearing down the walls' will not by itself be enough. States have duties towards local adaptation and not only towards those able to relocate as an adaptive response to climate change. As such the 'open border' position must be complemented with duties towards immobile vulnerable individuals.

I think the need to add this aspect to states' duty-portfolio will not trouble proponents of the 'open borders' position much. But my analysis suggests a further challenge. We saw that unregulated outwards migration can impair the adaptive capacity of sending societies. In this case, some regulation of international movement might be warranted.[8] Last, when a state faces a high level of incoming migration, which has the potential to damage its political stability and welfare systems, even strong supporters of the 'open border' position concede that some temporary restrictions can be put in place to pace admission.[9] In these cases, the state will have to prioritise some immigrants. Then, moral reasons may play a role in deciding which group of immigrants should be first in line. The duties of redress RSs have and their obligations towards climate immigrants should guide the immigration policies states enact under such circumstances.

What next for climate migration?

I started by identifying existing international norms pertinent to the normative analysis of the obligations states have towards climate immigrants. My argument took off in proximity to existing institutions. From there, the argument rose to different levels of abstraction; here I would like to point out where my conclusions can once again touch the ground and relate to real-world policies and politics. I briefly comment on the different policy areas where the analysis and its conclusion can be used, and point to some recent developments in climate migration within such avenues for actions and

[8] Compare with the argument from global justice I presented in Chapter 4, which pushes the 'open border' position in this direction.
[9] For example, see: Carnes 2013, 278-86.

policy.[10] Detailing the precise policies we should pursue requires more research and knowledge of existing institutions, the political limitations we face, and the trade-offs we will have to make. Hence, I prefer to show here only which clear-cut trends and practices my argument rules out.

Possible ways forward

International climate change negotiations.[11] I start with the complex set of institutions, meetings, and agreements that fall under the UNFCCC; I have referred to this in the dissertation as the climate regime. The latest development at this stage is the inclusion of a direct reference to climate mobility under climate change in the Paris Agreement, which states agreed on in COP21. The text announces the formation of a task force on climate displacement that will be part of The Warsaw International Mechanism (WIM). Currently, the mandate of the task force is primarily "to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change" (UNFCCC 2015, article 50).

The fact that the task force is part of the WIM and the wording of its mandate both suggest that the issue is mainly considered under what I have called the 'Migration-as-maladaptation' perspective. As such, it ignores the important ways in which mobility can be an adaptation option for immigrants that can also support the adaptation capacity of sending societies (Wilkinson et al. 2016, 6). In addition, using displacement may suggest a focus on scenarios I classified as emergency climate migration, neglecting the more subtle impacts of climate change on human mobility that fall under what I called Climate-induced migration. I suggested thinking about migration, or more precisely Climate-induced migration, as part of how people can adapt to climate change; it should therefore be addressed as an adaptation issue in the climate regime. This was also the recommendation given ahead of the COP21 by the Advisory Group on Climate Change and Human Mobility, a body of experts that is responsible for informing and supporting climate negotiations and states on the topic.[12] Therefore, a shift in perspective is

[10] For a good analysis of relevant institutions for climate migration, see McAdam 2012, Chapter 8.
[11] A short history of climate migration within the UNFCCC can be found in: Maguire 2017; Wilkinson et al. 2016.
[12] This group was established following the Cancun Adaptation Framework that specifies its mandate: "*Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional*

required. The task force on climate displacement should address broader patterns of mobility and embrace the Migration-for-adaptation outlook. This might be a plausible development, as some members of the task force are from two of the leading organisations of the Advisory Group on Climate Change and Human Mobility: The United Nations High Commissioner for Refugees (UNHCR) and the International Organisation for Migration (IOM).

I framed obligations towards climate immigrants as part of the adaptation duties of states. Therefore, we should also take a look at forums dealing with climate adaptation under the climate regime. For example, there are recommendations to incorporate migration into the adaptation agenda of each state (Advisory Group on Climate Change and Human Mobility 2015; Warner et al. 2014). Currently few states follow such recommendations, at least as far as their pledges for future actions express.[13] More importantly, the incorporation of climate migration as a part of domestic adaptation plans faces serious limitation. Each state may address internal movement as a part of its adaptation effort, and some even will point to the need for an international movement,[14] but immigration should also be on the agenda of the RSs that should admit climate immigrants. Admitting climate immigrants is, on my account, part of the *global* adaptation duties of RSs, but it is not part of their *domestic* adaptation strategy. In short, in implementing my argument for national adaptation plans it faces a structural limitation, which requires us to go beyond the way human mobility is currently addressed in the climate regime.

Broadening the understanding of commitments of states to global adaptation can be one way forward. Currently, international commitments pertinent to adaptation are financially supporting adaptation programmes, improving the understanding of climate change impact and adaptation, sharing knowledge, and good practice.[15] In recent years, alongside a call for states to scale-up their financial support for climate change objectives, there has been a demand for more clarity, transparency, and efficiency.[16] An

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and international levels" (UNFCCC 2011, Article 14.f). For its recommendations, see: Advisory Group on Climate Change and Human Mobility 2015.

[13] We learn this from the small number of states that include any reference to human mobility in the Intended Nationally Determined Contributions (INDCs) they commit themselves to. When there is such a reference, it expresses a negative view of mobility as something to be averted; see Wilkinson et al. 2016; IOM 2016.

[14] For example, see the INDCs of Kiribati, Tuvalu, Haiti and Guinea (IOM 2016).

[15] We can infer this based on what the Paris Agreement says on adaptation (UNFCCC 2015, Article 7.4).

[16] One can get an overview on climate finance from the UNFCCC website and the relevant documents filed there; for example the last meeting report on long-term climate finance (UNFCCC 2016).

additional step should be the inclusion of immigration options as part of what states should do for climate adaptation.

International and regional immigration. Climate immigration can also be addressed by the institutional setup focused on migration. In this thesis, I have given some examples of changes states can make to their own admission and immigration policies, such as easier admission pathways, reduced costs of admission, and generous, inclusive integration programs. Here I want to point to two developments on the regional and international level where climate migration has been addressed. I start with the most recent development at the international level. In September 2016, the UN held the Summit for Refugees and Immigrants, which resulted in The New York Declaration. The declaration launched negotiations on a compact for safe, orderly, and regular migration.[17] This is an ambitious attempt to constitute a comprehensive document to guide and enhance international coordination over all types of migratory movement; and it includes references to climate migration. However, the compact does not acknowledge the positive contribution immigration can make to the adaptation capacity of sending societies (Wilkinson et al. 2016, 8). Therefore, movement in the direction of the migration-for-adaptation perspective is necessary.

Climate immigration can also be addressed at a regional level, without the need for a comprehensive text that will be endorsed by each and every state.[18] Many of the patterns of movement across borders are and will remain within a single geographical region. Therefore, agreements and policy-making at a regional level are a promising avenue for addressing climate immigration. At a regional level, it will be easier to account for the more specific needs of immigrants as well as the needs and constraints of admitting states. There are already some examples of such meetings and institutions, based on current immigration needs.[19] They can and should include more reference to climate immigration.

Addressing climate immigration at the regional and international levels will, in all likelihood, lack the needed tight connection to climate adaptation. One probable missing

[17] See the UN webpage for the summit: http://www.un.org/en/development/desa/population/migration/events/ga/2016/addressrefugeesmigrantssummit.html.
[18] Cf. McAdam 2012, 211.
[19] For example, The Regional Conference on Migration (RCM or Puebla Process:www.rcmvs.org/Descripcion.htm); Regional Meeting on Climate Change and Migration in the Pacific (http://www.unescap.org/events/regional-meeting-climate-change-and-migration-pacific). See an overview of some regional initiatives in McAdam 2012, 233-5.

ingredient is the relation between the movement of climate immigrants and how it should advance the adaptation capacity of sending societies. We need to find a way to tie these two different aspects together. More precisely, we need some reference to how admitting RSs and sending states plan to facilitate remittances as part of their immigration and adaptation agendas, respectively.[20] A second conjugative element that should be introduced is accountancy for admission and adaptation. RSs that will admit climate immigrants should be credited for fulfilling part of their adaptation duties. There should be a way to acknowledge the actions a state performs on the admission front to judge how much it ought to do on the global adaptation front—more so if we want to work with the external balance framework and allow states to negotiate with each other on how much of each will do in terms of admission-related obligations and local adaptation-related obligations. Therefore, a mechanism must be developed as part of the climate regime that better connects these two complementing elements—admission and local adaptation—of RSs' obligations towards climate immigrants.

The wrong way to go

My conclusions can be also relevant to real world practices as a resource for critical reflection on current policies and trends. While it can be difficult to move from my conclusions to specific policy recommendations, it could be easier to point to potential clear-cut violations of the norms I argue for here. I will quickly go over two examples that are not reactions to climate migration scenarios but nevertheless exemplify what states should *not* do.

Donald Trump took office as the new president of the United States at the start of 2017, and his administration embarked on a series of actions, some of them related to immigration and climate change, though as separate matters. First, climate change. The administration expressed intent and acted to roll back the progress made by preceding administration. This includes weakening institutions and regulations pertinent to environmental protection and climate change policy as well as direct attempts to rescind existing international agreements.[21] Second, immigration. Trump started to act on the

[20] Here Guinea is a good but unique example for explicitly stating this as part of its adaptation plan in its INDCs (IOM 2016).

[21] Indications of this can be found in some reports and analysis regarding action taken regarding the Environmental Protection Agency, weakening regulation and advancing fossil fuel production, and

anti-immigrant promises of his presidential campaign. He issued executive orders that kicked-off the building of a barrier along the US's border with Mexico, aimed to increase the rates of deportation of undocumented immigrants, and suspended entry to the US from a selection of states associated with terror, most of which are states from which refugees are currently fleeing.[22]

These are worrying signs regarding the direction of the US's policies on climate change and immigration. I bring them up here because they represent two trends going in the opposite direction to the obligations of RSs I have outlined here. RSs should not shy away from and attempt to avoid their climate change duties, and certainly should not try to increase their already high emission levels. RSs should also find new pathways for immigration that can address the adaptation needs of vulnerable affected individuals, and clearly not try to minimise such options for those coming from locations exposed to climate change risks.[23]

Now, consider a second example in European politics. Recently the EU member states entered an agreement with Turkey regarding asylum seekers. Facing increasing numbers of asylum seekers, mainly to the shores of Greece, the EU will now return each newcomer that arrives through unauthorized channels to Turkey. As part of the deal, EU member states will increase the numbers of Syrian refugees they admit from camps in Turkey. In addition, the EU promised to relax the restriction on movement in the EU for Turkish citizens and re-engaged in talks on Turkey's admission to the EU.[24] Recently, the EU started to look into a similar partnership with North African states in order to block migration flows across the Mediterranean Sea.[25]

Different objections can be raised against the EU–Turkey deal and the possible new deal with North African states, yet both embody a trend towards making Europe less accessible to immigrants from outside the EU. I want to focus on the nature of the agreement between states, which relates to the external framework I have presented, and consider these as examples of a trend that could be applied to cases of climate immigrants in the future. According to my analysis, these arrangements of resettlement

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statements regarding pulling out of the Paris agreement (DiChristopher 2017; Hirji 2017; Lavelle 2017; Merica 2017; Neslen 2017; Plumer 2017).

[22] See the list of executive orders on the *NBC News* website: http://www.nbcnews.com/news/us-news/here-s-full-list-donald-trump-s-executive-orders-n720796. For reports on immigration-related executive orders, see: Pierce and Meissner 2017a; 2017b.

[23] Mexico is a good example of a state where climate change can exacerbate stressors that will push people to look for solutions across the state's northern border.

[24] Collett 2016a; 2016b; Kingsley and Rankin 2016.

[25] Collett 2016a.

to a different state should be seen as a moral failure. RSs may be allowed to engage in such an exchange when they expect immigrants to receive a good enough immigration package. The condition of refugees in Turkey has been the subject of much criticism, and there are doubts that similar arrangements with Northern African states will lead to different results.[26] Moreover, the motivation of the EU to engage in such deals may be of the wrong kind. It seems that domestic political pressure, that at least partially fuelled by xenophobic sentiments, is a strong driver of this trend, and not the need to enhance well-organized admission procedure.[27] Moreover, these arrangements lead to excessive hosting and resettlement burdens that may destabilize states that are already struggling with internal social and political tensions.[28] I have claimed that this, in turn, fails to respect an international norm of fairness to other fellow states.

This brief review of the examples illustrates the critical function of my argument and how we can use it to assess current and future trends in international and domestic politics.

Final Words

I started my inquiry by citing people calling on developed states, as the primary agents responsible for climate change, to do more for climate immigrants. In a lengthy argument, I have shown that substantiating such a claim is possible but far more complex than the statements we find in public discourse suggest. The obligations of states towards climate immigrants derives from their emitting actions, but in conjunction with other normative principles, and are part of their adaptation duties. We need to understand the obligations as redress for the harms and wrongs involved in creating a dangerous climate change and to embrace a sober outlook on climate migration, considering its positives and negatives. Admission of climate immigrants is one way in which states should meet their obligations, but this does not cover the full range of what they ought to do. Moreover, opening immigration options must be pursued alongside support for the adaptation efforts of sending societies. Therefore, the way states carry out their obligations, either on their own or in coordination with other states, must achieve a balance between admission and support for local adaptation.

[26] Collett 2016a. Human rights Watch 2016; Rankin and Kingsley 2016.
[27] Poushter 2016; Stocks 2016; The Economist explains. 2016.
[28] Collett 2016a.

This thesis resides at the intersection of two subject areas to which it contributes: climate change and immigration. The argument is primarily about the meeting-point of the two, offering an account of the responsibility and obligations of states towards climate immigrants. It broadens the conversation in political philosophy on immigration and focuses attention on an overlooked topic. At the same time, it also adds to the two distinct areas of research. The discussion has also shed new light on risk and climate change, which changes how we comprehend the nature of responsibility and the obligations of states. It also provides an additional resource for understanding the role that outcome responsibility can play in other arguments on the duty of states to admit immigrants. The argument also sits between two opposite standpoints on migration in political philosophy: open and closed borders. I accept the international norm that grants states the right to exclude outsiders, but I try to rethink it in the context of climate change and mobility. My argument does not move us all the way to a vision of a world without borders, but it does not portray a world where sedentarism is the norm either. It does not recommend tearing up international borders or the sovereignty of states over their borders. Out of the obligations of states (and from the features of climate migration) emerges a global order where international mobility is not the ultimate solution but not the problem either. This is a world where more people move as part of an unprecedented effort on the part of humanity to strive for a safer and better future.

While it was not easy to establish the theoretical contribution this thesis represents, trying to push politics closer to our normative conclusions is a different story and a greater challenge by far. Therefore, I would like to end with the uplifting words of Mary Robinson (Robinson 2016, 1, 5) at the 107th session of the IOM council:[29]

> So these are the moral imperatives that have been set out before us, and the tools we can use to incorporate them into the public discourse and into policy solutions. […] We are in a period of transition, transitioning from goal setting to implementation. […] The judgement of future generations will centre on the manner and seriousness with which we undertook the implementation of these agreements. The time for celebration has now past and the time for work and action is upon us.

[29] The different parts of the citation here do not represent the original order of the keynote.

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