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The Governance of Climate-Related Migrations

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Summary

This work tries to answer to the question of why the international community has been until now unable to bridge the normative gap concerning the issue of climate-related displacements. Our hypothesis is that this is due to three characteristics of the global governance system, namely growing multi-polarity, institutional inertia and institutional fragmentation, and one attribute of the problem, its unprecedented complexity. Our four independent variables have been taken from the theory of global governance gridlock designed by Hale, Held and Young, which has constituted our theoretical framework. We have combined it with the model of an adaptive system presented by McLeman. This has been a valid reference point in the second part of our research, where we have scrutinized the complexity of climate-related displacements through three hypothetical scenarios, New York and New Jersey, the Netherlands and Morocco.

In order to demonstrate our hypothesis we have employed content analysis of documents, of the outcome reports of the UNFCCC Conferences of the Parties (COP) from 2007 to nowadays, and the summaries of the different COPs. We considered also the UNHCR and IOM. The deductive analysis was based on four grids, one for each independent variable.

The results of our research have confirmed our hypothesis: all the four independent variables have contributed to the immobility of the international system. In particular, as far as the UNFCCC is concerned, the prevailing elements are growing multi-polarity and fragmentation. Also increased transaction costs resulting from an increased number of countries were frequently recognized. IOM and UNHCR, on the other hand, are mostly characterized by institutional inertia, found in the mandate and scope of action of the two institutions. Therefore, we can inscribe the lack of an international agreement on the theme of climate-related migration to the general gridlock characterizing current global governance. However, two elements resulted more crucial than the others. The first one is the institutional fragmentation of the system of global governance on this phenomenon. The second element is constituted by the characteristics of the problem, which make it of such a complexity that cooperation results hampered.

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Introduction

0.1 Climate Change-Related Migrations

In 2014, more than 19.3 million people have been displaced by natural disasters in 100 countries around the world, among which 92% because of storms and floods. The annual average of displacements since 2008 is 26.4 million people, corresponding to one person every second[1].

Climate change is already influencing the picture, and it is very likely to make it even worse in the future, increasing the severity and frequency of several hazards[2]. The International Organization for Migration estimates climate change to increase both the frequency and the intensity of sudden- and slow-onset events alike. This means more severe impacts from floods and storms as well as droughts and sea-level rise. Desertification, ocean acidification and erosion will be exacerbated, too[3]. These impacts will alter the lives of millions of people around the world, especially in the developing one. However, a specific policy or normative framework to address the phenomenon of climate-related migrations, concerning internal or international movements, does not exist. The first request of environmental asylum ever presented has recently been rejected by New Zealand[4].

The problem is indeed very complex, with the result that there is no general agreement on the theme of climate-induced migrations neither in terms of its definition nor in terms of numbers and predictions. In fact, climate change would probably never constitute the only factor determining the decision to migrate, but only one among many others. Rather, climate change can be considered as an accelerator of already existing patterns, or as a threat multiplier. Furthermore, the majority of these movements often remains within the country of origin, and people fall in the category of internally displaced people. Moreover, migration is only one of the possible responses that a population can put in place in order to cope with climate change, as there are other adapting strategies among which

[1] INTERNAL DISPLACEMENT MONITORING CENTRE, *Global Estimates 2015. People Displaced by Disasters*, Geneva, July 2015, p. 19
[2] *Ibid.*, p. 14
[3] INTERNATIONAL ORGANIZATION FOR MIGRATION, *IOM Outlook on Migration, Environment and Climate Change*, Geneva, 2014, p. 5
[4] LE MONDE, "Ioane Teitiota n'a pas obtenu le statut de premier réfugié climatique de la planète", 21 July 2015, http://www.lemonde.fr/planete/article/2015/07/21/ioane-teitiota-n-a-pas-obtenu-le-statut-de-premier-refugie-climatique-de-la-planete_4691849_3244.html

migration needs to be included, rather than being considered as a failure to adapt[5]. In this work, we will refer to the broad working definition provided by IOM, according to which:

> *Environmental migrants are persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad*[6].

Therefore, climate-related migrations can be considered as a subset of this category. They are defined by Kniveton et al. and recalled by McAdam as:

> *persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment as a result of climate change that adversely affect their lives or living conditions, are obliged to leave their homes or choose to do so, either temporarily or permanently, and who move either within their country or abroad*[7].

Even though it is not universally accepted, we believe this definition best represents the complexity of the issue, considering both internal and international displacements, voluntary or forced, temporary or permanent. A frequent critique to the term environmental migrants is that it seems to establish a direct and mono-causal relation between environmental changes and migratory movements[8], even though we have already presented the blurriness of this link. Hence, we will mainly use the term "climate change-related migrations" or more simply "climate-related migrations", in order to avoid this shortcoming.

In spite of all these difficulties, the lack of a normative or political framework within which to cope with this kind of human displacements remains. For this reason, rather than questioning the nature of climate-related displacements and the causal link at the basis of these movements, this work focuses on the

[5] MCADAM J., (b) "Creating New Norms on Climate Change, Natural Disasters and Displacement: International Developments 2010–2013", *Refuge*, vol. 29, n°2, 2014, p. 11
[6] INTERNATIONAL ORGANIZATION FOR MIGRATION, *Discussion Note : Migration and the Environment*, Geneva, 1 November 2007, MC/INF/288, p. 1
[7] McAdam J., *op.cit.*, p. 160
[8] PIGUET E., PECOUD A., DE GUCHTENEIRE P., "Migration and Climate Change : An Overview", *Refugee Survey Quarterly*, Vol. 30, n°3, 2011,p.17

governance of the phenomenon, asking why the international community has until now been unable to fill this normative vacuum. We will answer this question through four independent variables, taken from Hale et al.[9], and corresponding to four elements of the current system of global governance that cause its shortcomings, or "pathways to gridlock". These are the growing multi-polarity of the system, its institutional inertia, the increasingly harder nature of modern problems and institutional fragmentation. Our hypothesis is that these four elements explain the lack of international cooperation on the issue of climate-related displacements, and that the system of global governance in this field is therefore gridlocked.

Further, we will investigate the nature of the phenomenon itself, in order to demonstrate that the structure of the system of governance is not the only problem. In fact, as already briefly exposed, climate-related migration is an issue of unprecedented complexity and therefore, the "harder problems" variable will receive particular attention. Suffice to think that, because of its nature, climate-related migration brings together climate change and migration, which are among the most complex and debated issues of our times. Being cooperation difficult on these two issues when negotiated separately, this obviously worsens when they are considered together. As we recognize this as a particularly interesting and important element, we will build three hypothetical scenarios, whose objective will also be the questioning of the role of governance in the management of this phenomenon.

0.2 Methodology

In order to demonstrate our hypothesis and explain why the international community has not yet bridged the normative gap concerning climate-related displacements, we have employed content analysis of documents. "Content analysis has been defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding"[10]. Traditionally, it was based on the "objective, systematic and quantitative description of the manifest content of communication"[11], while

[9] HALE, Thomas, HELD, David, YOUNG, Kevin, *Gridlock: Why Global Cooperation is Failing When We Need It Most*, Maiden, Polity Press, 2013, p. 34
[10] STEMLER S., "An Overview of Content Analysis", *Practical Assessment, Research & Evaluation*, Vol. 7, No. 17, 2001, Retrieved July 25, 2015 from http://PAREonline.net/getvn.asp?v=7&n=17
[11] Zaidman-Zait A., "Content Analysis", *in* Michalos A.C., *Encyclopedia of Quality of Life and Well-Being Research*, the Netherlands, Springer, 2014, p. 1258

recently the interpretation of the more latent content and meaning has entered the analysis, and the qualitative method has sided the quantitative one[12].

In our work, we will adopt a macro level of analysis, focusing on the states as actors. Therefore, we have selected the outcome documents of the UNFCCC Conference of the Parties (COP) from 2007 to nowadays. 2007 was chosen as our starting date because COP13 in Bali marked the first inclusion of climate-related migrations topic into UNFCCC negotiations. We have also included the last meeting of the parties that was held in Geneva in preparation to COP21 in Paris in December 2015, in order to be as exhaustive as possible. Then, we will first of all look at whether and how those documents deal with the topic of our research, in order to trace its evolution. Our analysis will be qualitative rather than quantitative.

However, our independent variables concern more the dynamics of decision-making than the final result. That is why we decided to include in our analysis also the summaries of the negotiations that took place during the different Conferences of the Parties. Our study will proceed in a deductive fashion, as we will build four grids, one for each independent variable, in which our indicators will be constituted by the mechanisms identified by Hale et al. for each pathway to gridlock. These are: increased transaction costs, exacerbated legitimacy dilemma and divergence of interests for growing multi-polarity; formal lock-in of decision making authority and entrenchment of cognitive and organizational focal points for institutional inertia; extensity and intensity for harder problems; increased transaction costs, inefficient division of labour and excessive flexibility for institutional fragmentation[13]. The grids can be consulted in the Annexes.

Nevertheless, given the normative gap in which climate-related migrations take place, the UNFCCC is not the only relevant actor in the picture. Therefore, we considered also the role of the UNHCR and IOM.

As we have decided to focus with particular attention on the independent variable represented by "harder problems", we have decided to build three hypothetical scenarios, representing the particularly complex nature of the phenomenon. These will consider three different cases: New York and New Jersey, the Netherlands and Morocco. They have been chosen because these states are in different ways

[12] *Ibidem*
[13] HALE T., HELD D., YOUNG K., "Gridlock: from Self-reinforcing Interdependence to Second-order Cooperation Problems", *Global Policy*, 2013, vol. 4, n° 3, p. 227

highly exposed to climate change and subject to its effects, as sea level rise or increased storms. Moreover, they represent three different levels of analysis: the purely national one in the first case, the national and regional in the second one, and the inter-regional one (as migration from North-Africa to Europe is considered) in the third case. Starting from actual data about past weather events, we will argue that planned relocation of part of their population cannot be excluded in the future, and we will investigate the role of global governance in each of the three cases.

Our theoretical framework is based on the theory of Hale et al., from which we have taken our independent variables. We will only briefly expose it here, as it is widely presented and explained in 1.2.2. The general point raised by the authors is that the increasing number of international institutions and alternative forms of governance has generated a self-reinforcing dynamic, through which growing interdependence became more and more institutionalized and called for new interdependence, favoured by post war institutions[14].

However, interdependence has been growing to the point that it now obstructs cooperation at the global level. The current level of interconnectedness, which is unprecedented, would need a parallel increase of institutionalized multilateral cooperation. Yet, in several domains it is insufficient or completely lacking, causing a gridlock that is common to all issue areas of global governance.[15] It is in this context that the authors identify the four pathways to gridlock that constitute the independent variables of our research.

Furthermore, as our work needs a reference point in terms of theory of migratory movements, we will make reference to the vulnerability model exposed by McLeman in his book "Climate and Human Migration. Past Experiences, Future Challenges". Building on Ravenstein's Laws of Migration and several scholarly contributions, he draws some distinctions between migrants, which can be categorized on the basis of the duration of migration, its distance and the degree of agency of the migrant. He also identifies some common elements in migration theories, as the concepts of path dependency, cumulative causation, human life course and the relationship between agency and structure[16]. Considering the influence on populations of cultural, economic, political, demographic and

[14] *Ibid.*, p. 224
[15] *Ibid.*, p. 226
[16] MCLEMAN, Robert A., *Climate and Human Migration. Past Experiences, Future Challenges*, Cambridge, Cambridge University Press, 2014, pp. 26-28

environmental forces operating at the macro, meso and micro levels, McLeman builds a scheme representing the adaptation of a system to a climatic event. Responses will be first searched for at the macro level: if adaptation fails or is insufficient here, the meso or, in case of its failure, the micro levels would be involved. The last element to be considered and introduced is the reason why people migrate and, in order to do this, McLeman refers to social theories referring to the concept of capital[17]. The consideration of several factors intervening in the final decision to migrate is one of the strength of this model, whose wide description and analysis can be found in section 1.2.3.

[17] *Ibid.*, pp. 72-73

1. State of The Art and Theoretical Framework

1.1 State of the Art

This work focuses on the issue of climate change-related displacements and its governance. In order to draw a state of the art as much exhaustive as possible, we will widely refer to Gómez's literature review on the topic[1].

Our research started from the exploration of the issue of the relationship between climate change and social inequality[2], to arrive to the phenomenon of climate-induced migration. Indeed, environmental hazards are different in different parts of the planet, relatively not only to the place but also to the conditions of people. Climate change is recognized to be a threat multiplier, because it exacerbates already existing insecurities, and it often creates a double vulnerability, since people suffering from it are the less responsible and the less able ones to face it[3]. Therefore, climate change effects intertwining with poverty or other forms of social vulnerability have been studied. Whether it is approached through the concept of inequality, insecurity or poverty, there is general agreement on the fact that poor developing countries are the most vulnerable to the effects of climate change, given that these impact on food security, coastal population and human health and given the lower socio-economic capacity to cope and adapt[4].

1.1.1 Climate change and displacement: brief history of the topic

Among the effects that climate change can have on a community, migration is a particularly sensitive one. The link between environment and migration is not new in the literature, as it first appeared already in the 19th and early 20th century. Nonetheless, it disappeared from the public debate in the 20th century, for reasons that Piguet links to four main trends: (1) the idea that technological progress would lead to a decreased influence of nature over human life; (2) the gained importance of socio-cultural approaches over environment-based explanations of

[1] GOMEZ O., "Climate Change and Migration : a review of the literature", *ISS Working Paper series/General series*, vol. 572, 2013
[2] Beck U., Van Loon J., "'Until the Last Ton of Fossil Fuel Has Burnt to Ashes': Climate Change, Global Inequalities and the Dilemma of Green Politics" *in* Held D., Hervey A., Theros M., *The Governance of Climate Change. Science, Economics, Politics & Ethics*, Cambridge, Polity Press, 2011, p.123
[3] WILLIAMS A., "Climate Change Law: Creating and Sustaining Social and Economic Insecurity", *Social and Legal Studies*, Vol. 20, No. 4, 2011, p. 5
[4] Füssel H.M., "Vulnerability to Climate Change and Poverty", *in* Edenhofer O., Wallacher J., *Climate Change, Justice and Sustainability. Linking Climate and Development Policy*, Dordrecht, Spinger, 2012, p. 13

migrations; (3) the increased importance of economic reasons in migration theory; (4) the fact that forced-migration studies remained based on a political approach according to which it is the State causing migrants and refugees[5].

The theme of environmental influence over human lives came back to the fore in the 1970s and 1980s, embedded in the discussions over climate change[6]. It is in this period that, for instance, the work of Myers is inscribed, with his initial predictions of approximately 150 millions of environmental refugees in a greenhouse affected world in 2050[7]. This approach that considered migrants as forced to leave and climate change as the primary cause, led to a clash between environmental and migration scientists that was overcome only few decades later[8]. Even though the issue had gained new interest, this was not enough to lead migration experts to conduct new research and to propel action. This came only in the first decade of the 21st century, when works on the topic will be mainly characterized, Gómez highlights, by determinism on the terms of the causal relation between environment and migration[9].

This has been criticized by many parties, including Piguet, who demonstrates the complex relation between environmental factors and migration, as usually migration is the result of the intertwining of several different elements that interact with and reinforce each other[10]. "Climate change would thus be an additional burden, which can have a multiplier effect"[11] and this is why, as already mentioned, it has often been called a "threat multiplier"[12].

For this reason, some studies have focused on the environmental phenomena having potential impact on human displacement. Among these, the UK Government sponsored Foresight project identifies six dimensions of climate change that it considers able to impact the drivers of migration. These are:

1. Sea level rise;

2. Change in tropical storms and cyclone frequency or intensity;

[5] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.4
[6] *Ibid.*, p.3
[7] MYERS N., (a) "Environmental Refugees in a Globally Warmed World", *Bioscience*, Vol. 43, n°11, 1993, p. 758
[8] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.6
[9] GOMEZ O., *op.cit.*, p. 4
[10] *Ibid.*, p.13
[11] *Ibid.*, p.13
[12] MCADAM, Jane, *Climate Change, Forced Migration and International Law*, Oxford Scholarship Online, 2012, p. 4

3. Changes in rainfall regimes;

4. Temperatures increases;

5. Changes in atmospheric chemistry;

6. Melting of mountain glaciers[13].

Not all these factors are discussed by all the authors, but they are the starting point of the analyses of the phenomenon of environmental displacements, whose existence is generally recognized and accepted. Nonetheless, it is worth repeating that today the complexity of the phenomenon is generally acknowledged, and that climate change and its effect are rarely presented as the only element influencing the decision to migrate. In this sense, vulnerability is influenced and shaped by different social variables[14]. In particular, people most threatened by climate change consequences are usually those living in developing countries, most dependent on agriculture and on the changes of climate.

McAdam, insisting on the importance of categorization, on which the following response to a phenomenon depends, identifies five possible ways to think about climate change-related movements. The phenomenon can indeed be seen as a protection, migration, disaster, environmental or development issue. In the case of protection and environmental issue, the element of climate change is seen as predominant, and the refugee terminology is often sponsored (we will come back to this point later). The views in terms of migration, environmental or development issue, on the other hand, consider climate change as only one among the other influencing factors, and the responses of the international community differ[15].

1.1.2. Characteristics of climate-related migrations

Gómez identifies a number of broad transverse questions in the literature, which bring to different characterizations of migration. The first one regards the magnitude of the movements, as different works are sometimes based on different estimates and projections of displacements. The second one concerns the nature of migration in terms of voluntary or forced movement, and this is strictly linked to

[13] FORESIGHT, *Migration and Global Environmental Change*, London, The Government Office for Science, 2011, p.38
[14] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.13
[15] MCADAM, Jane, *op.cit.*, p. 213

the emergence of the climate or environmental refugees debate. The third question is about the effects on migration, in particular whether they are direct or indirect, and in this latter case multi-causal. The last two questions concern the nature of the movement itself, namely its distance, as displacements can be internal or across-borders, and its temporal duration, temporary or permanent[16]. Piguet et al. propose two slightly different variables, distinguishing long-term from short-term migration and long-distance from short-distance migration. They also warn on the difficulty that may often arise in trying to distinguish between forced and voluntary movements, as the individual decision-making process in this case is extremely complex and influenced by several social and economic factors[17].

Furthermore, Gómez lists three main themes and debates on the topic, namely the estimates of migrants, the attempt to identify the location of most vulnerable populations and the mechanisms behind migration[18]. As far as estimates on the numbers are concerned, the most frequently quoted projection is the one given by Myers in 2002, of about 200 million people displaced by 2050[19]. Nevertheless, it has been frequently claimed that these kinds of estimates are difficult to be proved. The Foresight Project states that migration is a multi-causal phenomenon and "it is problematic to assign a proportion of the actual or predicted number of migrants as moving as a direct result of environmental change."[20] Moreover, the Project continues, assuming that all people living in an area at threat will migrate means underestimating the constraints under which the decision to move is often taken.

For what concerns location, the Sahel region is often cited as an area particularly vulnerable to environmental changes. These are in fact a cause of seasonal movements of pastoralists depending on grass, or agricultural workers seeking for jobs[21]. Eventual increased droughts would therefore severely impact the equilibrium of the region. Bangladesh too is often considered a state at risk of cyclones and floods, which would engender agricultural production. These phenomena, in combination with demographic growth, would dramatically

[16] GOMEZ O., *op.cit.*, p. 6
[17] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, pp. 14-15
[18] GOMEZ O., *op.cit.*, p.9
[19] MYERS N., (b) "Environmental refugees: a growing phenomenon of the 21st century", *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, vol.357, n°1420, p. 609
[20] FORESIGHT, *op.cit.*, p.10
[21] Black R., Kniveton D., Schmidt-Verkerk K., "Migration and Climate Change: Toward an Integrated Assessment of Sensitivity", *in* Faist T., Schade J., *Disentangling Migration and Climate Change. Methodologies, Political Discourses and Human Rights*, Dordrecht, Springer, 2013, p.35

reduce productivity and access to natural resources[22]. Warner et al. give a comprehensive understanding of climate impacts on different areas of the world, focusing on crucial hotspots as: Asia for glaciers melting (particularly on the Himalaya); Mexico and Central America for drought and disasters; the Ganges, Mekong and Niles Deltas; Tuvalu and the Maldives for sea level rise[23].

Coming to the mechanisms behind migration, Gómez highlights how most part of the analytical literature focuses on a single mechanism, usually in a single location. This literature is not future-oriented, but it rather concentrates on the actual occurrence of environmental migration. The author classifies it in five categories, regarding (1) rapid-onset migration linked to disasters; (2) slow-onset migration, multi-causal; (3) sea level rise; (4) conflict; (5) mitigation and adaptation and health impacts[24]. We can find an example of the two first categories in the 2013 annual report of the Institut du Développement Durable et des Relations Internationales (IDDRI), conducted together with the International Organization for Migration, on the state of environmental migration of the previous year. The Report widely and deeply analyses both rapid- and slow- onset displacements and is in fact structured in two parts, with the first one addressing "Flights and Evacuations", ranging from hurricane Sandy in New York and New Jersey to typhoon Bopha in the Philippines, and the second one, "Mobility and Resettlement", investigating desertification and drought related migration in the Sahel as well as the return of Fukushima evacuees[25]. In line with what found by Gómez, rapid-onset disasters usually result in short-distance and temporary displacements, while slow-onset phenomena have a stronger impact on livelihoods and tend to be more multi-causal, with contested evidence about the role of climate change[26].

Sea-level rise (SLR) is usually considered as establishing a more straightforward link with migration, because this phenomenon appears almost irreversible and with a generally linear development. In the absence of counter-measures, SLR may make displacement the only possible solution. Yet, it is a rather new fact that still

[22] *Ibid.*, p. 46
[23] WARNER K., EHRHART C., DE SHERBININ S.A., CHAI-ONN T., "In Search of Shelter: Mapping the Effects of Climate Change on Human Migration and Displacement", UN University, CARE International, Columbia University and The World Bank, May 2009
[24] GOMEZ O., *op.cit.*, p. 12
[25] GEMENNE F., BRUCKER P., IONESCO D., "The State of Environmental Migration 2013. A Review of 2012", *Institut du Développement Durable et des Relations Internationales (IDDRI), International Organization of Migration*, 2013
[26] GOMEZ O., *op.cit.*, pp. 12-13

remains understudied[27]. Nevertheless, it became one of the most publicized manifestations of climate change, and in fact the disappearance of small island states, like Tuvalu or Kiribati in the Pacific Ocean, is often considered as the perfect case study for climate change- related migration[28].

Climate-related migrations have often been considered as potential drivers for conflict. White, among others, acknowledges a general securitization of environment and climate change, as well as of immigration. The focus on security has also led to the term "environmental conflict", as a kind of conflict generated, for instance, by environmental scarcity[29]. This vision, he affirms, gained relevance in the aftermath of the Cold War but had been anticipated by the report of the Bruntland Commission in 1987, which claimed for an expansion of the traditional conception of security to include also environmental stresses[30]. However, the evidence about environmental conflicts remains contested, and several authors underline the intertwining of numerous causes leading to violent conflict[31].

The last category of migration-inducing phenomena listed by Gómez is the one comprising strategies of mitigation and adaptation to climate change, but research on this issue is still limited[32]. Concerning forced resettlement of endangered populations, Böge analyses the case of the Carterets Islands in the Autonomous Region of Bougainville (Papua New Guinea), which are being relocated to the main island of Bougainville. From the analysis of this case the author highlights some major challenges of this type of resettlements and underlines the need to consider local population not as helpless victims but as characterised by a significant level of resilience and capabilities to cope with the challenges of migration[33].

Further, another important debate to be referred to is the one about the role of migration, specifically whether it can be properly seen as an adaptation strategy rather than (only) as an impact[34]. Wide evidence supports the idea that migration

[27] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit*, p.11
[28] GEMENNE F., "Tuvalu, un laboratoire du changement climatique? Une critique empirique de la rhétorique des «canaris dans la mine»", *Revue Tiers Monde*, vol.4, n°204, 2010
[29] WHITE, Gregory, *Climate Change and Migration: Security and Borders in a Warming World*, Oxford, Oxford University Press, 2011, p.63
[30] UN WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, *Our Common Future,* New York, 1987, Transmitted to the General Assembly as an Annex to *document A/42/427*
[31] GOMEZ O., *op.cit.*, p.16
[32] *Ibid.*, p. 16
[33] Boge V., "Challenges and Pitfalls of Resettlement: Pacific Experiences", *in* Faist T., Schade J, *Disentangling Migration and Climate Change. Methodologies, Political Discourses and Human Rights,* Dordrecht, Springer, 2013, p.181
[34] GOMEZ O., *op.cit.*, p. 17

can indeed be seen as an adaptation strategy. While the dominant view considered it as a failure to adapt to the consequences of climate change, some begun to propose it as a way to cope with it and, therefore, not as something to avoid but rather to plan[35]. McAdam even defines it as a "normal human adaptation strategy", which can increase the resilience of interested populations and allow avoiding dangers[36]. The same is stated by Tacoli, who affirms that mobility has to be seen as part of the solution rather than the problem, for it reduces vulnerability and permits to increase assets[37]. However, Vlassopoulos argues that moving to the idea of migration as adaptation to climate change met a wide and general approval because it allowed to frame the issue in terms of the "development-adaptation approach" to climate change, which she considers as an ambiguous move, for it can dilute the environmental migrants into the broad issue of human development[38].

1.1.3 Climate refugees debate: the proposal to widen the status of refugee

The emergence of the debate over migration as an adaptation strategy follows from the consideration of environmental migration as creating environmental refugees.

Indeed, the necessity of granting the status of refugee to people migrating for the effects of climate change has been claimed by many parts. The status of refugee as defined in the 1951 Geneva Convention relating to the Status of Refugees refers to people persecuted for reasons of "race, religion, nationality, membership of a particular social group or political opinion" [39] and it does not include environmental factors. As Piguet clarifies[40], this leads to two possible answers: the first one is the proposal of broadening the status of refugee in order to include also "climate refugees"[41], while the second one is the refusal to use the term "refugees" in relation to climate change, because of different reasons that we will present later. We will now focus on the first proposal.

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[35] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.15
[36] MCADAM, Jane, (a) *op.cit*, p.2
[37] TACOLI C., "Crisis or adaptation? Migration and climate change in a context of high mobility", *Environment and Urbanization,* vol.21, n°2, 2009, p. 514
[38] Vlassopoulos C.A, "Defining Environmental Migration in the Climate Change Era: Problem, Consequence or Solution?", *in* Faist T., Schade J., *Disentangling Migration and Climate Change. Methodologies, Political Discourses and Human Rights,* Dordrecht, Springer, 2013, p.160
[39] UNITED NATIONS GENERAL ASSEMBLY, *Convention Relating to the Status of Refugees*, Geneva, 28 July 1951, p.14
[40] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.17
[41] Burson B., "Environmentally Induced Displacement and the 1951 Refugee Convention: Pathways to Recognition", *in* Afifi T., Jager J., *Environment, Forced Migration and Social Vulnerability*, Berlin, Springer, 2010, pp.6-7

The term "environmental refugees" was brought into public debate in 1985 by El-Hinnawi in the UNEP Report *Environmental Refugees*, which provides also a definition:

> *Environmental refugees are defined as those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life. By 'environmental disruption' in this definition is meant any physical, chemical and/or biological changes in the ecosystem (or the resource base) that render it, temporarily or permanently, unsuitable to support human life*[42].

According to Bell, adopting this term has some advantages that are not considered by its critics. He argues that, rather than simplifying the causes of migration, the term "environmental" broadens the scope of protection for refugees. He supports the refugee terminology convinced that the sceptics would better refer to new, wider formulations of the term, as the one given by the Organization of African Unity, rather than to the Geneva Convention's one[43]. Marshall too calls for an extension of the meaning of the term refugee, convinced that this would help to provide a more efficient help toward people affected by natural disasters. His definition encompasses also people moving inside their own state[44]. In this way he recalls the vision of Myers, who was one of the first adopting the term, and who defined environmental refugees as follows:

> *They are people who can no longer gain a secure livelihood in their erstwhile homelands because of drought, soil erosion, desertification, and other environmental problems. In their desperation, they feel they have no alternative but to seek sanctuary elsewhere, however hazardous the attempt. Not all of them have fled their countries; many are internally displaced. But all have abandoned their homelands in a semi-permanent if not permanent basis, having little hope of a foreseeable return*[45].

[42] EL-HINNAWI, Essam, "Environmental Refugees" (Nairobi: United Nations Environment Programme, 1985, p. 4
[43] BELL D.R., "Environmental Refugees: What Rights? Which Duties?", *Res Publica,* n°10, 2004, p. 138
[44] MARSHALL, L.W., "Toward a new definition of 'refugee': is the 1951 convention out of date?", *European Journal of Trauma and Emergency Surgery,* Vol. 37, p. 65
[45] MYERS N., (a) *op.cit.,* p.752

Myer's definition presents a human dimension that is often absent in other ones, and the decision to leave is seen as completely obliged and forced, with almost no possibility to come back.

A variant of this approach is the proposal of Burson. Given the intertwining of climate hazards with issues of poverty, inequality and discriminations of various types, he claims that there is no reason to separate climate migrants from refugees. But differently from others, he refers to climate refugees as those for whom an environmental issue provides the possibility to claim the refugee status, falling within the scope of the Geneva Convention[46], and not as those who were forced to leave their habitat as a direct effect of climate change, which is a broader definition.

1.1.4 Climate refugees debate: the need for a new legal instrument

Of course the "climate refugee" proposal has met many objections. Even the Intergovernmental Panel on Climate Change, which used the term refugees in its reports in 1996 and 2001, abandoned it in 2007, referring only to "environmental migration"[47]. Indeed, it has been highlighted that people hit by climate catastrophes often cannot even resort to migrate, and the majority of displaced persons is supposed to remain within the boundaries of their own state[48]. Therefore, the notion of climate refugee as potentially encompassed by the Geneva Convention would touch only a minority of victims. In addition to this, we suggest the idea that another problem is the difference in numbers: according to some predictions, climate refugees would soon be much more numerous than any group of political refugees until now, due to the increased severity and frequency of extreme weather events, water shortages, sea-level rise and other consequences of climate change. Owing to this, the recognition of the status of refugees to climate migrants would create difficulties in receiving countries that they have never met before. But above all, even not considering those predictions, another point emerges: while the admittance of political refugees is usually temporary, because people aim at returning to their home country, climate refugees'

[46] Burson B., *op.cit.*, p.8
[47] Faist T., Schade J., "The Climate – Migration Nexus: A Reorientation" *in* Faist T., Schade J., *Disentangling Migration and Climate Change. Methodologies, Political Discourses and Human Rights,* Dordrecht, Springer, 2013, p. 6
[48] BIERMANN F., BOAS I., "Protecting Climate Refugees: The Case for a Global Protocol", *Environment*, Vol. 50, No. 6, 2008, p. 4. See also Piguet E., "Climate and Migration: A Synthesis", *in* Afifi T., Jager J., *Environment, Forced Migration and Social Vulnerability,* Berlin, Springer, 2010, p. 74

admittance would be permanent, given that in some cases (as the one of small island developing states) their territory would no longer exist.

Therefore, another group of authors proposes to create an *ad hoc* system to protect climate migrants. Biermann and Boas, for example, call for a specific regime for climate refugees, being convinced that the current system under the UNHCR leadership would not be appropriate to include climate induced migrations. The protection of climate refugees must be seen as a global problem and responsibility: rich developed nations have the largest part of responsibility for climate change, and this means that they should contribute the most in financing and facilitating the resettlement of those migrants[49]. Nonetheless, there are several difficulties arising when thinking of a new treaty.

Jane McAdam presents three main reasons why an international treaty would probably not be the best solution. First of all, these proposals seem not to consider the empirical data foreseeing that the majority of displacements will be internal ones. Therefore, she argues, efforts risk being concentrated on the ideation of a non-optimal response, to the detriment of valid alternatives[50]. Second, as already mentioned, climate change is hardly ever the single cause of displacement, as it rather acts exacerbating already existing vulnerabilities. If this is so, from a policy perspective, it would be really difficult to differentiate between people moving because of climate change, and people moving because of "traditional" economic or social reasons. Moreover, it has been claimed that the decision of granting protection to the former category and not to the latter is completely arbitrary[51]. The third argument is the most pragmatic one: states do not show the political will to engage in the negotiation of a new international instrument aiming at protecting a new category of displaced people[52]. And even in the optimistic case of an agreement in this sense, its implementation would not be easily reached[53]. Both McAdam and Piguet agree that focusing the attention on a new international treaty, which is clearly a very ambitious goal, "can ironically encourage *inaction* on climate change"[54].

[49] BIERMANN F., BOAS I., *op.cit.*, p. 6
[50] MCADAM, J., (a) "Swimming Against the Tide: Why a Climate Change Displacements Treaty is Not the Answer", *International Journal of Refugee Law*, Vol. 0, n° 0, 2011, p.7
[51] *Ibid.*, p.13
[52] *Ibid.*, p. 15
[53] *Ibid.*, p. 16
[54] *Ibid.*, p. 5

Nonetheless, the impossibility to agree on a new treaty does not imply that alternative solutions cannot be found: on the contrary, it is possible to try to apply already existing mechanisms to the new issue, as those in the fields of "development strategy, humanitarian affairs, post-disaster interventions, or immigration and admission policies"[55]. This would allow action even in the case of a lack of consensus on the desirability of new standards or new mechanisms[56].

This brief literature review highlights the fact that researches in the field of climate change and displacement have usually focused either on the causal relation between the two elements or on the creation of new legal mechanisms to cope with it[57]. Thus we can argue, together with Nina Hall, that a gap exists in the literature, regarding both "the politics of the link between climate change and migration" and "how existing institutions are responding to this issue-linkage"[58]. It is from the acknowledgement of the lack of a political and normative framework to deal with this issue that our work starts. In fact, it aims at exploring why the international community has not already bridged this gap and how this problem could be effectively managed.

1.2 Theoretical Framework

1.2.1 The notion of global governance

As already stated in the introduction, this work tries to answer to the following research question: why has the existing system of global governance been unable, until now, to fill the normative vacuum in which climate-related migrations are taking and are going to take place? For sake of clarity, we will now try to specify what we exactly mean. For global governance, we will refer to the definition provided by the Commission on Global Governance in 1995:

> *"Governance is the sum of many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which*

[55] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p. 22
[56] *Ibidem*
[57] HALL N., "Moving Beyond its Mandate ? UNHCR and Climate Change Displacement", *Journal of International Organization Studies*, 2013, p. 91
[58] *Ibidem*

conflicting or diverse interests may be accommodated and co-operative action taken."[59]

Vasilache underlines the intrinsic link between the notion of governance and the one of government, understood as executive power, referring also to the views and definitions of other authors, like Peters and Rosenau. Interestingly, Peters considers governance as "the contemporary way of governing under conditions of globalization and actor plurality"[60]. Vasilache also identifies four characteristics of governance: first, it includes the policy, polity and political level; second it combines and takes into account all the state powers and, third, every actor type; fourth it is mainly focused on the performance and dynamics side of politics[61]. Therefore, even if at the global level the decision-making process is more difficult to account for than at the national one, governance exists. "It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest"[62].

Further, Held describes global governance as a "multi-layered, multidimensional and multi-actor system"[63]. It is multi-layered because the management of several global issues may involve the cooperation between sub-national, national and international agencies. It can be considered multidimensional as different political patterns originate from the different configuration of agencies in different sectors. Moreover, it involves more and more actors, not only intergovernmental ones, but also transnational representatives of the civil society or private-public actors. However, this pluralistic vision does not consider that every state and every interest has the same influence over the definition of agendas and programmes. Finally, global governance takes place within an increasing multitude of differing networks.[64]

When we talk about bridging the normative gap concerning climate-related migrations, we refer to a comprehensive response on the part of the system of

[59] THE COMMISSION ON GLOBAL GOVERNANCE, *Our Global Neighbourhood*, Oxford: Oxford University Press, 1995, p. 4
[60] Vasilache A., "The Rise of Executive Sovereignty in the Era of Globalization" *in* Telò M., *State, Globalization and Multilateralism: The Challenges of Institutionalizing Regionalism,* Springer, 2012, p. 148
[61] *Ibid.,* p. 150
[62] THE COMMISSION ON GLOBAL GOVERNANCE, *op.cit.,* p. 4
[63] HELD, David, *Cosmopolitanism. Ideals and Realities,* Cambridge, Polity Press, 2010, p.31
[64] *Ibid.,* pp. 31-32

global governance, meaning any kind of agreement that could in some way regulate this phenomenon. This would preferentially be binding, like the Non-Proliferation Treaty or the Convention relating to the Status of Refugees, but even a non-binding system, like the Guiding Principles on Internal Displacement, could constitute a starting point for the protection of migrants and the management of movements.

In order to answer to our research question, we will make reference to and use of two main theories: the one of gridlock of Hale, Held and Young for the governance part, and the one developed by Robert McLeman for the migration issue.

1.2.2 The theory of gridlock

Hale et al. start from the acknowledgment of the dramatic increase of international cooperation after the Second World War. Strongly willing to avoid the scourge of another world-wide conflict, and conscious of the shortcomings of the League of Nations, states put all their efforts in the creation of the United Nations, designed as a balance between the ideals of the League and the needs of realpolitik. The authors, in spite of the frequent critiques to the UN system, highlight its importance for the post-1945 order and the consequent geopolitical stability: a number of proxy wars notwithstanding, the decades following the 1950s have been marked by unprecedented peace. Even though it cannot be considered the only cause for this situation, the UN, together with other institutions and alliances, as the NATO and the European Community, has been a crucial element in guaranteeing international security[65]. However, this was not the only aim: economic governance on a global scale was a central element of the post war order, leading to the creation of the Bretton Woods system based on the International Monetary Fund and the World Bank as well as on the General Agreement on Tariffs and Trade[66], which was incorporated in the World Trade Organization in 1995. The economic data vary from country to country, but a general trend of economic growth can be recognized for several states, at least until the recent financial crisis.

In the meantime, the world has seen the birth of an increasing number of international organizations as well as of alternative forms of governance, like

[65] HALE T., HELD D., YOUNG K., (b) "Gridlock: from Self-reinforcing Interdependence to Second-order Cooperation Problems", *Global Policy*, 2013, vol. 4, n° 3, p. 224
[66] *Ibid., p. 225*

"networks of ostensibly 'domestic' government officials, public-private partnerships and purely private forms of governance"[67].

The point raised by the authors is that a self-reinforcing dynamic was generated in this way, with growing interdependence becoming more and more institutionalized and calling for new interdependence. In fact, post war institutions established favourable conditions for new and increased forms of interdependence, which on their turn created the demand for more institutionalization[68]. This process is represented in Figure 1.

At this stage of the mechanism, interdependence has grown to a point that it hampers the ability to cooperate at the global level. The fact that the successes of the multilateral order born after the WWII, namely political and economic evolutions, are now among the elements bringing the system to a gridlock leads the authors to consider them as second-order cooperation problems. The unprecedented level of interconnectedness to which we assist today requires a parallel growth of institutionalized multilateral cooperation, which is lacking or insufficient in several domains. This gridlock appears as a common feature of all issue areas of global governance: "cooperation seems to be increasingly difficult and deficient at precisely the time when it is needed most"[69].

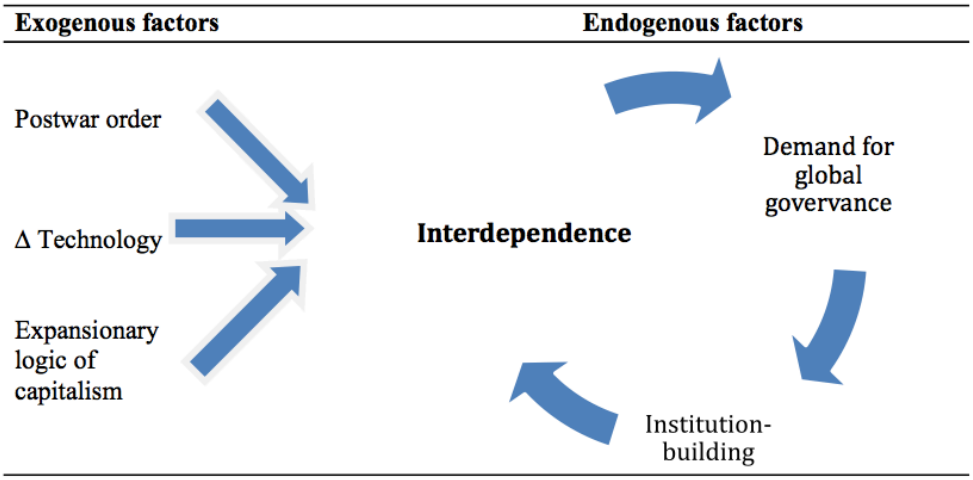

Figure 1. The process of self-reinforcing interdependence [70]

[67] *Ibidem*
[68] *Ibidem*
[69] *Ibid.*, p. 226
[70] *Ibidem*

The authors identify four different pathways to gridlock, or four reasons for this phenomenon, namely "multi-polarity, institutional inertia, harder problems and institutional fragmentation"[71] and for each of these four, they determine specific causal mechanisms. The first pathway is growing multi-polarity. This refers to the trend of progressive inclusion of more and more countries in international decision-making processes, due to decolonization, self-determination movements and the fall of the Soviet Union. The UN General Assembly members, who were only 51 in 1946, nowadays reached the number of 193.[72] Evidently, this is generally a positive development, as it granted increased living standards in most of them; nonetheless, it led to specific problems in international negotiations, as cooperation becomes more difficult when the actors are more numerous. The specific mechanisms identified are, therefore: the increased transaction costs of negotiations in a multipolar context; the delegation to and centralization of power into institutions, deriving from these costs and questioning the legitimacy and fairness of the process; the increasing divergence of countries' interests.[73]

Secondly, institutional inertia refers to a tendency to *immobilisme* on the part of institutions in terms of distribution of power among countries, as the post-war system incentivized the participation of most powerful states by granting them more privileges. This structure has remained mostly unchanged, as it is the case for the UN Security Council, even though today a wider participation would be needed. The mechanisms highlighted here are the "formal, treaty-based nature" of several institutions, making them resistant to change, and the fact that "they serve as focal points for actors' expectations, beliefs, and practices"[74], which can congeal and create informal norms and beliefs creating path dependency.

The third pathway to gridlock is the acknowledgment of the changed nature of international problems, which have become more and more difficult to manage. Therefore, problems are "harder" both in terms of extensity, as they implicate interdependence between countries and individuals, and intensity, due to their deeper penetration into societies[75].

Finally, institutional fragmentation highlights the proliferation of international institutions. While this, if well managed, can have positive effects, the problems to

[71] HALE, Thomas, HELD, David, YOUNG, Kevin, *op.cit.*, p. 34
[72] *Ibid.*, p. 36
[73] *Ibid.*, p. 37
[74] *Ibid.*, pp. 44-45
[75] *Ibid.*, pp. 46-47

cooperation arise because of uncoordinated mandates, inefficient division of labour and forum shopping on the part of states because of excessive flexibility[76].

Therefore, we will use the theory of gridlock as a framework for our analysis of the global governance of the issue of climate change related migrations. In particular, in order to demonstrate that on this phenomenon too the governance is gridlocked, we will use the four pathways as independent variables. We will develop this point in the next chapter, while the next section will be devoted to the analysis of migration movements offered by Robert McLeman in his book "Climate and Human Migration. Past Experiences, Future Challenges", which will be our reference point for migratory behaviours.

1.2.3 Migration theory

As anticipated, in this section we will refer mainly to McLeman's book "Climate and Human Migration. Past Experiences, Future Challenges"[77], whose second chapter is dedicated to the analysis of the drivers and causes of migration. While recognizing that a comprehensive theory on migration behaviours does not exist, McLeman builds a unifying discourse based on the complementarity among existing theories.

First of all, he actualizes "The Laws of Migration" formulated by Ravenstein in 1885 and 1889, which are the first necessary step for each study on migration, and he keeps them as his basis. The result of the analysis is that a huge number of Ravenstein's laws are still valid and applicable today. The laws have been summarised as follows:

1. *Migrants move mainly over short distances; those going longer distances head for the great centres of industry and commerce.*
2. *Most migration is from agricultural to industrial areas.*
3. *Large towns grow more by migration than by natural increase.*
4. *Migration increases along with the development of industry, commerce and transport.*
5. *Each migration stream produces a counter stream.*

[76] *Ibid.*, pp. 47-48-49
[77] MCLEMAN, Robert A., *Climate and Human Migration. Past Experiences, Future Challenges*, Cambridge, Cambridge University Press, 2014

6. *Females are more migratory than males, at least over shorter distances; males are a majority in international migration.*

7. *The major causes of migration are economic.*[78]

Ravenstein's laws differed in some point from the first to the second version, and an element on which McLeman is more cautious is the idea that migrants are usually individual adults: he argues that the role of households and networks should not be disregarded, and what can be drawn by data is that young adults are the most likely to migrate. A very modern finding was the role of gender in migration, as migratory behaviours can be quite different between men and women. Nonetheless, recent studies show that today several women migrate over long-distances too[79]. Finally, Ravenstein rightly recognized that a number of factors at the original and arrival place influences migration decisions, as we will precise later on in this section.

Starting from these points, McLeman reviews the contributions of several scholars in order to categorize migration and complement Ravenstein's laws. Hence, he states that migrants can be categorized on the basis of the duration of migration, its distance and the degree of agency of the migrant. First of all, the recognition of the temporal dimension of migration is crucial and on this basis it can be defined as seasonal, temporary non seasonal, recurrent, continuous and indefinite[80]. It was Everett Lee who introduced the element of time in migration, defining it as "a permanent or semi-permanent change of residence"[81]. As far as the spatial component is concerned, displacement can be viewed as:

- Intra-urban migration, when it remains within an urban centre;

- Internal migration, when it is circumscribed within the boundaries of a state, and can be further categorized as rural-to-rural, rural-to-urban or urban-to-rural;

[78] KING R., "Theories and Typologies of Migration: An Overview and A Primer", Willy Brandt Series of Working Papers in International Migration and Ethnic Relations, *Malmö Institute for Studies on Migration, Diversity and Welfare,* 2012, p. 12
[79] MCLEMAN, Robert, *op.cit.*, p.19
[80] *Ibid.*, p. 21
[81] LEE E.S., "A Theory of Migration", *Demography*, vol. 3, n°1, 1966, p. 49

- International migration, when it involves the crossing of a political border. In this case the typologies are intraregional, interregional and intercontinental.[82]

The third parameter on which to categorize migration is the degree of agency of the migrant in his/her decision to migrate. Categories can be placed over a continuum from the highest agency, corresponding to amenity seeking or lifestyle migration, to the lowest one, namely forced migration. Among this last one, we can distinguish between those who have no degree of agency, as slaves, victims of trafficking and prisoners, and refugees or displaced people. In the middle of the continuum are economic migrants, which can move because of income diversification or risk reduction, in the context of a household strategy, or seeking opportunities, usually as an individual looking for employment. The category nearest to lifestyle migration is the one of family migration, which usually involves a high degree of agency[83]. Obviously, within each of these categories themselves the degree of agency involved varies on the basis of several factors.

McLeman identifies also some common concepts in migration theory, transversal to almost every explanation of the phenomenon. The first is the concept of path dependency, according to which migration is more likely to occur between two places when a migratory movement has already been established between them. Another and associated notion is the one of cumulative causation: even when the conditions and causes that originally gave birth to a migration movement disappear, new forces will intervene to revitalize or maintain it. This concept is crucial as it focuses more on the perpetuation of migration rather than on its birth, as the causes in the two stages can be different. For this reason, it has been widely used by network theories, focusing on the relevance of migration networks as forms of social capital for migrants[84]. The human life course is the third crucial element to be considered, as some age categories are usually more prone to migration than others, because its social and economical advantages and disadvantages change during the life span of an individual. Finally, important concepts are also those of agency and structure and their relationship. Agency refers to the degree of freedom and choice of an individual in pursuing his or her actions, while structure indicates the societal norms and institutions that constrain

[82] MCLEMAN, Robert, *op.cit.*, p. 22
[83] *Ibid.*, pp. 28-29-30
[84] MASSEY D.S, ARANGO J., HUGO G., KOUAOUCI A., PELLEGRINO A., TAYLOR J.E., "Theories of International Migration: A Review and Appraisal", *Population and Development Review*, vol. 19, n°3, 1993, p. 448

them. Although migration theories have traditionally focused on either one or the other element, recent studies are trying to combine the macro- and meso-structural influence with individual decisions.[85]

In this last respect, a useful reference is made to the Foresight project, which identifies cultural, economic, political, social and environmental factors as the five broad and intertwining drivers of migration, operating at the micro, meso and macro levels[86]. "In each case, it is the existence of spatial and temporal variability in one or more of these five dimensions that creates the conditions (or 'drivers') for migration, allowing that these might interact or overlap in different ways in different places"[87]. This is in some way similar to a combination of "push" and "pull" factors, which is a traditional representation of the causes of migration. This concept was already implicitly present in Ravenstein's work, and refers to the combined effects of the situation in the home country and the attractiveness of potential destinations in the decision to migrate. Lee's version of the push-pull model was widened by a set of intervening obstacles to be overcome and by personal factors[88]. While this is a useful notion, it is a simplification of a more intricate phenomenon[89], and for this reason the view of the Foresight project enables the recognition of more complex forces and influences at stake. An important point highlighted by the project is that the existence of the five drivers does not mean that migration will necessarily take place, as this decision is subject to a wide range of "intervening or institutional factors"[90].

In order to combine these findings on migration with researches on human vulnerability and adaptation to environmental or climatic events, in his third chapter McLeman develops a function of vulnerability, with the aim of analysing climate-related migrations within a general conceptual framework.

Traditionally, climate change researchers have considered vulnerability as a function of "E = exposure to conditions or events that may lead to loss or harm; S = the inherent sensitivity of a given system, population, or place to the particular events or conditions to which it is exposed; A = the capacity of said system,

[85] MCLEMAN, Robert, *op.cit.*, pp. 26-27-28
[86] FORESIGHT, *op.cit.*, p. 44
[87] *Ibid.*, p. 33
[88] KING R., *op.cit.*, 2012, p. 13
[89] MCLEMAN, Robert, *op.cit.*, p. 20
[90] FORESIGHT, *op.cit.*, p. 33

population or place to adapt to the given exposure"[91]. Therefore, the function looks like this:

$V = f(E, S, A)$

Therefore, migration is not only, as often considered, the result of exposure of a territory to environmental disasters, as the capacity of the population to adapt to them is crucial in shaping its response to the event. Nonetheless, migration can in many cases become itself a strategy of adaptation, as fleeing can reduce the potential of loss or harm. However, it is not usually the first adaptive response to adverse climatic conditions, because migration involves difficulties and costs[92]. In order to capture this relationship, McLeman advances the vulnerability function to represent migration as a function "of the nature of the event, the characteristics of the population exposed to that event, and its capacity to adapt in ways other than migration"[93]:

$M = f(E, S, (A\text{-}M))$

where "M = migration in the context of vulnerability" and "E = exposure to a climatic stimulus; S = sensitivity of the population to that stimulus; A-M = adaptation options other than migration"[94].

By itself, the function cannot capture the complexity of migratory phenomena. For this reason, McLeman combines it with the influence on populations of cultural, economic, political, demographic and environmental forces operating at the macro and meso levels. Very important is the reference to networks of migration, which constitute a form of social capitals for migrants and whose role should not be overlooked, as they provide information and assistance both during the trip and at the arrival. The influence of macroeconomic factors is also crucial, and they have long been considered the main cause of migration. Political elements enter the picture in the form of policies or laws regulating migration and questions of citizenship, which have an obvious influence on movements of people. Culture and education have an influence on the whole path of migration, and cultural differences in particular play an important role at the stage of settlement in a new country or city. Environment too can impact human life, both in positive and negative ways, and migration can be linked to slow-onset events as to sudden

[91] MCLEMAN, Robert, *op.cit.*, p. 57
[92] *Ibid.*, p. 63
[93] *Ibid.*, p. 67
[94] *Ibidem*

disasters, taking all the possible forms. Finally, McLeman considers demographic elements as an outcome of the other factors and not as a driver themselves.[95]

In a system not subject to perturbations, decisions are taken mostly at the household level, but they have implications for the whole population as migrants take with them their human, social and economic capital. Moreover, the population of origin can be subject to in-migration too, so its characteristics would be continuously changing[96].

At this point of the analysis the author introduces in the scheme the effects of a climatic event or changing climatic conditions and the influence of capital. Responses will be first searched for at the macro level: if adaptation fails or is insufficient here, the meso or, in case of its failure, the micro levels would be involved. The last element to be considered and introduced is the reason why people migrate and, in order to do this, McLeman refers to social theories referring to the concept of capital[97]. Without them, the analysis would be a simple description of climate-migration interactions. Therefore, both economic and social capitals are crucial in the study of the phenomenon. The first one can be a factor stimulating migration or reducing the capacity of affected populations, as well as a way of adapting to climate change. Social capital, on the other hand, "which refers to elements of social networks that may be of economic benefit"[98], plays a role in facilitating or perpetuating migration. In explaining migration behaviours, scholars often consider also other forms of capital, as human, cultural, natural or religious capital. Hence, the resulting scheme is the one in figure 2, where dashed lines contouring boxes and arrows indicate the uncertainty of the action.

McLeman's findings on migratory movements will be our reference point for this work. In our opinion, his analysis presents a number of advantages. First of all, he takes into the picture all the levels, the macro, meso and micro ones, and he recognizes the role of each one in contributing to the decision to (not) migrate. Moreover, he does not consider migration simply as a mechanical result of a number of determining elements, but takes into account a number of influences that can have an impact on the final decision. Social, macroeconomic, cultural, political, demographic and environmental factors are all studied and included. The explicit incorporation of the environmental element in his model, considering

[95] *Ibid.*, pp. 34-45
[96] *Ibid.*, p. 68
[97] *Ibid.*, pp. 72-73
[98] *Ibid.*, p. 74

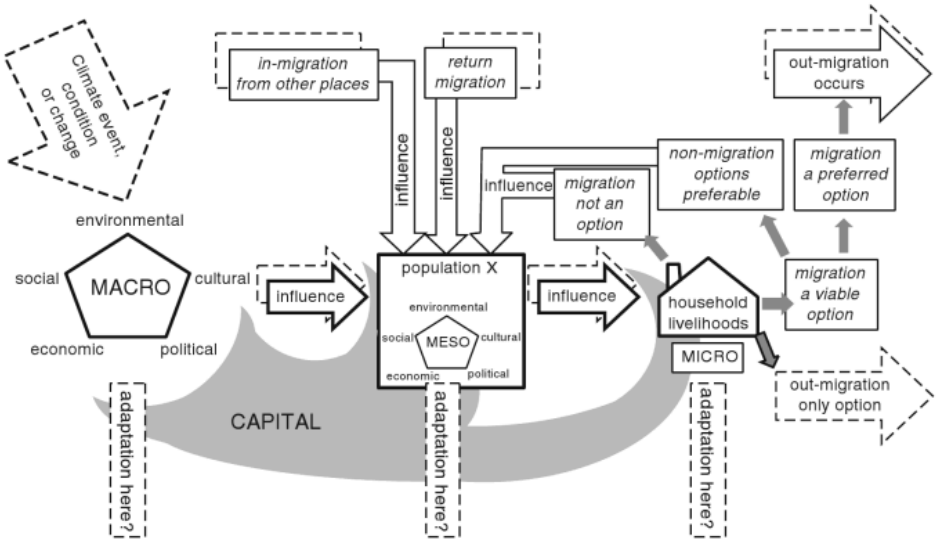

Figure 2. General representation of an adaptive system[99]

the impact of a climatic change or event, is particularly useful for our work. Finally, a crucial element of his analysis is that he recognizes that non-migration too can be an option. Shifting the focus on the general adaptive system rather than on migration decision-making, he is able to provide a more complete picture of this complex and dynamic phenomenon.

In the next chapter, we will develop our analysis, operationalizing our application of the theory of gridlock to the phenomenon of climate-related migration.

[99] *Ibid.*, p. 73

2. Cooperation on Climate-Related Migrations and its Problems

This second chapter will consist of two main parts. The first one will deal with the issue of cooperation on the theme of climate – related migrations. For this reason, initiatives at the international, regional and national level will be looked at and analysed. In the second section, on the other hand, we will proceed with the operationalization of our hypothesis.

2.1 Cooperation on Climate – Related Migrations

In the majority of transnational policy fields and issues, states have by now agreed on a common framework of cooperation, usually under the umbrella of the United Nations. This is not true in the case of migration governance[1]. This is not to say that global migration governance does not exist at all, but rather that it has not a comprehensive and coherent shape, as it appears managed by a fragmented system of multi-level institutions. An international migration regime is not in place, and states maintain a significant degree of autonomy in dealing with the issue of migrations, without an international regulation of their responses[2].

The same can be said for the narrower category of climate change-related migrations. Indeed, policy makers have been slow in developing a system of governance, meaning a system of "national, regional or international laws, policies or organizational responsibilities (…) to manage environmental induced migration"[3]. Nonetheless, some form of cooperation has been attained and some actions have been taken, and they will be reviewed in what follows. Together with Jane McAdam, herself citing Koko Warner, we underline the importance of governance, as the regulation of an issue determines and shapes its practical evolution. In our case, the way in which states and institutions will define the governance framework of climate-related migrations will determine the role of migration itself as a form of positive adaptation or as a failure to adapt[4].

[1] Betts A., "Introduction: Global Migration Governance", *in* BETTS A., *Global Migration Governance*, Oxford, Oxford University Press, 2011, p.2
[2] *Ibidem*
[3] MARTIN S., "Climate Change, Migration, and Governance", *Global Governance*, n° 16, 2010, p. 398
[4] MCADAM, Jane, *op. cit.*, p. 214

A crucial distinction to be made is the one between internal and international displacements. Concerning the former, a relevant international framework, even though non-binding, already exists: this is provided by the Guiding Principles on Internal Displacement, which were adopted in 1998 by the United Nations. Even if they do not explicitly refer to environmental displacements, it is often claimed that climate-change and environmental migrants remaining within the borders of their state may be protected under this framework[5]. Also some "regional instruments, such as the 2006 Protocol on the Protection and Assistance to Internally Displaced Persons and the 2009 African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa" [6] may have the same role. They all share the same definition of "internally displaced persons", referring to:

> *persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of (...) natural or human- made disasters, and who have not crossed an internationally recognized State border.*[7]

The advantage of such instruments is their broad definition, which can easily include also people displaced for environmental reasons, but which at the same time does not imply the need to demonstrate the causal link between the two events[8].

As far as international displacements are concerned, the protection framework is more blurred and complex. McAdam identifies five traditional "spheres of governance" within which the issue of climate-related displacement has usually been dealt with: 1) migration/asylum (UNHCR, IOM); 2) the environment (UNFCCC, UNEP, IPCC); 3) development (UNDP, ILO); 4) disaster response and disaster management (UNEP, UNDP, WFP, FAO); 5) human rights/humanitarian aid agencies (OHCHR, OCHA, UNFPA)[9].

[5] Kälin W., "Conceptualising Climate-Induced Displacement", *in* McAdam J., *Climate Change and Displacement. Multidisciplinary Perspectives*, Oxford and Portland, Hart Publishing, 2010, p.86
[6] *Ibid.*, p.87
[7] *Ibidem*
[8] *Ibidem*
[9] McAdam J., "Environmental Migration", *in* Betts A., *Global Migration Governance*, Oxford, Oxford University Press, 2011, p.169

2.1.1 The role of the UNHCR

Even though the United Nations High Commissioner for Refugees (UNHCR) is often considered as the most likely organization to take care of climate change displaced people, it has for a long time contested the notion of environmental refugee. It argues that people displaced for environmental events do not meet the requirements of the 1951 Geneva Convention relating to the Status of Refugees, according to which refugees are those people persecuted for reasons of "race, religion, nationality, membership of a particular social group or political opinion"[10]. Its involvement began only at the end of the 2000s.

The turning point came in 2007, when the High Commissioner António Guterres, during the annual meeting of the executive committee, first acknowledged that the drivers of migration were changing and that there was a linkage between climate change and displacement[11]. During the following years, the UNHCR itself increased its involvement with climate change, by, for instance, establishing a task force on climate change in 2008 in order to articulate a consistent position of the institution on the issue. However, the general position of the UNHCR remained the critique of the term refugee, even though the task force had the mandate to cooperate with the sub group on climate change of the Inter-Agency Standing Committee (IASC)[12]. At the end of that same year, the agency published its first report on the issue, "Climate Change, Natural Disasters and Human Displacement: A UNHCR Perspective", where it restated that the issue fell outside its protection mandate, but still highlighted the necessity to enhance international dialogue and cooperation on it[13]. Nonetheless, the High Commissioner continued to call attention on the issue. This was particularly the case in 2011, at the UNHCR's ministerial meeting, during which he emphasized the nature of climate change as accelerator of other drivers of migration[14].

The UNHCR played a catalytic role in the organization of the Nansen Conference on Climate Change and Displacement, hosted by Norway in 2011. The conference was spurred by the Closed Expert Meeting on Climate Change and Displacement organized by the UNHCR in Bellagio in February 2011. The expert group highlighted the insufficiency of the actual legal and policy framework, and called

[10] UNITED NATIONS GENERAL ASSEMBLY, *Convention Relating to the Status of Refugees*, Geneva, 28 July 1951, p.14
[11] HALL N., *op. cit.*, pp. 97-98
[12] *Ibid.*, p. 99
[13] MCADAM, Jane, *op.cit*, p. 228
[14] MCADAM J., (b), *op.cit.*, p. 17

for further development[15]. In this respect the Nansen conference adopted a set of broad principles, the Nansen Principles, which called on states to work with the UNHCR and "other relevant stakeholders" in order to define a guiding framework or instrument to manage externally-displaced people "owing to sudden-onset disasters"[16]. As a state-led initiative, the conference could include all the relevant international organization and contribute to revive cooperation on the issue of climate change and migrations. Nevertheless, McAdam argues that the exact meaning of "disaster" remains to be clarified, and that several displacements could be caused also by slow-onset events[17], not covered by the principles.

In 2013, UNHCR launched, together with other international agencies, an Advisory Group on Climate Change and Human Mobility, in order to prepare for UNFCCC COP19 in Warsaw in 2013. The Advisory Group aimed at collecting evidence and widening the knowledge about human mobility linked to climate change, putting forward official submission to the UNFCCC Secretariat[18].

The following year, the UNHCR organized in Sanremo, Italy, a consultation on "Planned relocation, disasters and climate change: Consolidating good practices and preparing for the future". The initiative was supported by funds of the European Union, Norway and Switzerland and its outcome consisted on a number of recommendations on planned relocation. Unfortunately, it did not produce a guide for states to manage this practice. On this issue, UNHCR expressed its view of planned relocation as an adaptation strategy to Climate Change and the need for its inclusion in National Adaptation Plans (NAPs) in a joint publication on NAPs produced for the UNFCCC session held in June 2014[19].

In sum, UNHCR never gained a formal mandate for the protection of climate change-induced migrants, but it tried to change its rhetoric, policy and structure in order to increase awareness on and respond to this phenomenon[20].

2.1.2 IOM and UNFCCC

The International Organization for Migration (IOM) has been among the first actors to be active on the question of environmental migration, with its

[15] *Ibid.*, p. 14
[16] NORWEGIAN REFUGEE COUNCIL, *The Nansen Conference. Climate Change and Displacement in the 21st Century*, 2011, p.5
[17] MCADAM, Jane, (b), *op. cit.*, p. 19
[18] UNHCR, *UNHCR, The Environment and Climate Change. An Overview*, 2014, p. 18
[19] *Ibidem*
[20] HALL N., *op. cit.*, p. 102

commitment starting in the 1990s. It produced a number of studies and researches and it proposed action and governance paths to be taken on the issue. It also managed numerous programs of relocation or temporary migration of workers coming from populations hit by environmental changes. With its involvement, IOM contributed to the inclusion of the problem within the agenda of international migrations, and it stressed the role of displacement as an adaptation, rather than as a failure[21]. However, IOM is not part of the UN system, and it is structurally different from the UNHCR. Unlike the latter, IOM neither have the mandate to supervise over the application of an international treaty, nor it has legitimacy on a regime of international law. In spite of its competences on the management of migration, because of these limits it is often claimed that IOM is not the most suitable institution to deal with climate-related displacements[22].

In chronological terms, the first institution to engage on the issue has been the UN Development Program (UNDP), which in 1985 published the report written by El-Hinnawi, introducing the issue of environmental refugee[23] for the first time in a UN official document. Today, the UNDP is mostly absent from environmental migrations debates, leaving space to the UN Framework Convention on Climate Change (UNFCCC). The main objective of the Convention is the stabilisation of Green House Gases emissions within a non-dangerous limit[24]. Therefore, its commitment and action have initially been focused on the reduction of emissions, limiting the impact of industrialized countries on the global climate. More recently, a complementary approach has emerged: the focus on the adaptation of human societies to climate change. It is in this framework that the UNFCCC has established its Bali Action plan, during the Thirteenth Conference of the Parties (COP13) in Bali in 2007, which identified two priorities: prevention and adaptation. The plan also introduced the concept of common but differentiated responsibilities, recognizing the importance of developed countries' support to the states most affected by climate change effects[25].

After this, migration began to appear in some negotiating texts or drafts working papers of the UNFCCC. The following paragraph was later included in the outcome document of COP15 in Copenhagen:

[21] COURNIL, Christel, MAYER, Benoît, *Les migrations environnementales*, Paris, Presses de Sciences Po, 2014, p. 89
[22] MCADAM, Jane, *op.cit,* p. 230
[23] EL-HINNAWI, Essam, *op. cit.,* p. 4
[24] COURNIL, Christel, MAYER, Benoît, *op.cit.,* p. 90
[25] *Ibid.,* p. 91

4. Invites all Parties to enhance adaptation action under the Copenhagen Adaptation Framework [for Implementation] taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, [and whereby developing country Parties shall be supported by developed country Parties and in accordance with paragraph 6 below], to undertake, inter alia:

…

(f) Measures to enhance understanding, coordination and cooperation related to national, regional and international climate change induced displacement, migration and planned relocation, where appropriate;[26]

However, the real turning point came with the COP16 in Cancun in 2010. The ultra cited paragraph 14(f) of the Cancun Adaptation Framework "*invites* all Parties" to:

enhance action on adaptation under the Cancun Adaptation Framework, taking into account their common but differentiated responsibilities and respective capabilities, and specific national and regional development priorities, objectives and circumstances, by undertaking, inter alia, the following:

…

(f) Measures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels;[27]

Although the framing of the article is not binding for state parties, it is nonetheless an important recognition of the impacts of climate change on human displacements, as well as of migration as a possible adaptation strategy. In general, the UNFCCC framework is relevant for its high profile level, and because it offers a voice to each and every state, regardless of its size[28]. On the other hand,

[26] UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, *Work undertaken by the Conference of the Parties at its fifteenth session on the basis of the report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, 11 February 2010, FCCC/CP/2010/2, p. 13

[27] UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, *Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010*, 15 March 2011, FCCC/CP/2010/7/Add.1, pp. 4-5

[28] WARNER K., (b) "Climate Change Induced Displacement: Adaptation Policy in the Context of the UNFCCC Climate Negotiations", *UNHCR Division of International Protection*, May 2011, PPLA/2011/02, p. 13

McAdam highlights how it is not the most adapt forum to discuss such a complex issue in a comprehensive way, and it has not the necessary expertise or operational capacity to address the issue of migration[29].

2.1.3 Other institutions and agencies

A part from the UNHCR, IOM and UNFCCC, several other actors have been involved in the cooperation on climate-related migrations. A number of agencies within the UN system have a mandate including responsibilities on migration. Among them we recall the International Labour Organization (ILO), which has a specialized office, the International Migration Program; the UN Population Division in the Department of Economic and Social Affairs (DESA); the UN Office for Drugs and Crimes (UNODC). Nevertheless, none of them has shown commitment on the question of climate change-induced migrations, neither on the relationship between climate change and the fields under their responsibility[30].

To remain within the UN system, the UN Commission on Human Rights (UNCHR) recognized the importance of the issue in 2004, when it called upon the Sub-Commission on the Promotion and Protection of Human Rights to prepare a report "on the legal implications of the disappearance of states for environmental reasons"[31], but unfortunately it was not continued by the Human Rights Council (UNHRC) that replaced it in 2006. This one adopted a resolution on "Human Rights and Climate Change" in 2008, recognizing the threats posed to people and communities and their rights. It also commissioned a study to the Officer for the High Commissioner for Human Rights (OHCHR), which presented its report the following year, calling for long-term political solutions to the issue. The Human Rights Council later recognized a clear relationship between climate change and the violation of some human rights.[32]

The UN General Assembly adopted a resolution in 2009 on "Climate Change and Its Possible Security Implications", but the reference to possible human displacements remained in the draft text and was not included in the final version of the document. Nonetheless, it called on a report from the Security Council on the impacts of climate change on security issues, which shortly considered also human displacement and migration. However, the analysis is weak and the causal

[29] MCADAM, Jane, *op.cit.*, p. 231
[30] MARTIN S., *op.cit.*, p. 408
[31] MCADAM, Jane, *op.cit.*, p. 221
[32] *Ibid.*, p. 223

relationship between climate change-related migration and conflict is criticized by many parties. The Council returned on the issue in 2011, but could not agree even on a non-binding document, and therefore decided to leave the management of this question to the lower levels of the UN[33].

An important sign was the adoption, in 2007, of the Male Declaration on the Human Dimension of Global Climate Change by Small Island Developing States. This was "the first international agreement to state expressly that 'climate change has clear and immediate implications for the full enjoyment of human rights'"[34], and it called for a debate within the UNHRC and a study by the OHCHR, as well as negotiations within the UNFCCC[35].

Furthermore, at the interstate level, an important initiative has to be referred to. Recognizing a lack of political will on the part of the states for a widening of UNHCR's competences in order to include environmental migrants under its protection, the Swiss and Norwegian governments decided to rely on an intergovernmental mechanism. Therefore in 2012, a year after the Nansen conference, they gave birth to the Nansen Initiative, with the aim of agreeing on a set of principles and mechanisms to manage the question of the protection of international migrants displaced in the context of disasters and climate change. Active from 2013 to 2015, the initiative was built to favour a bottom-up approach: the first phase would be made of a series of sub-regional consultations, in order to gather information and focus on the steps of displacement; the second one would consist of a global dialogue to develop a non-binding Protection Agenda.[36] The Global Consultation is going to take place in October 2015 in Geneva, and it is going to consolidate and discuss the results of the regional consultations.

2.1.4 Regional and national initiatives

For sake of completeness, we will now mention some of the national and regional protection initiatives (usually temporary protection mechanisms) that are more relevant for climate-change induced people, even though these do not figure in the category of "international cooperation" on the issue. Far from being an exhaustive analysis, this paragraph will help to complete the general framework of actions in the field.

[33] *Ibidem*
[34] *Ibid.*, p. 222
[35] *Ibidem*
[36] *Ibid.*, p.18

At the national level, some states have introduced specific mechanisms to protect environmental migrants. For instance, since 1990 in the United States it is possible to grant temporary protected status (TPS) to persons "in the United States who are temporarily unable to safely return to their home country because of on-going armed conflict, an environmental disaster, or other extraordinary and temporary conditions"[37]. Nevertheless, this legal mechanism has some limits: first of all, the granted protection can only be temporary; second, it can be applied to people who are already in the United States at the moment when the disaster happens; finally, the application of protection is discretionary, decided case by case. For all these reasons, it doesn't seem the suitable instrument to address environmentally induced migration[38].

In Europe, Swedish and Finnish immigration laws provide for protection for people who cannot return to their states of origin because of an environmental disaster[39]. Moreover, many countries have special ad hoc mechanisms for some particular states, on the basis of which they can decide not to return nationals of an endangered state, for environmental and socio-economic causes included, as it is the case of Denmark. Or they can choose particular protection mechanisms for some specific groups, like Belgium, Germany and Switzerland do[40]. Several member states also provide humanitarian schemes permitting the stay in the country to non-citizens on humanitarian grounds, and this could be relevant for environmentally displaced people: among them we recall Austria, Belgium, Denmark, Germany and Switzerland[41].

New Zealand too, through its Immigration Act, allows people to remain on its territory on the basis of exceptional humanitarian circumstances, if this is not contrary to the public interest[42]. Furthermore, in 2002 New Zealand also put in place the Pacific Access Category (PAC) visa scheme, which provides for specific quotas of citizens from Tuvalu, Kiribati and Tonga. It has often been referred to as a protection programme, given the particularly vulnerable situation of these Pacific Small Island States to sea-level rise, but it remains a traditional migration scheme. In fact, selection (by ballot) is restricted to individuals between 18 and 45

[37] MARTIN S., *op.cit.*, p. 405
[38] *Ibid.*, p. 406
[39] MCADAM, Jane, *op.cit*., p. 114
[40] *Ibid.*, p. 111
[41] *Ibid.*, pp. 112-113
[42] *Ibid.*, p. 114

years old, with a job offer in New Zealand, a minimum level of income and of English[43].

As Warner points out, national responses can be useful to respond to sudden-onset accidents like environmental disasters, but slow-onset events and long term displacement would need more stable assistance[44].

As far as the regional dimension is concerned, the European Union adopted in 2001 the "Temporary Protection Directive", "on minimum standards for giving temporary protection in the event of a mass influx of displaced persons"[45]. Even though no explicit reference is made to environmentally displaced people, the minimum standards established in the directive could be applied to them. However, Member States have not been able to cooperate on the second part of the provision, which is the promotion of "a balance of effort between Member States in receiving and bearing the consequences of receiving such persons"[46]. In 2007, the European Commission issued a Green Paper on "Adapting to Climate Change in Europe – Options for EU Action", in which it related climate change to consequent conflicts and displacements. Two years later, its White Paper on "Adapting to Climate Change: towards a European Framework for Action", the European Commission called for the management of climate change consequences, including migratory ones, from several policy perspectives[47].

More specifically on this issue, in 2008 the Council of the European Union issued a report on "Climate Change and International Security", including a section on environmental migration and recognizing the different social, political and economic consequences for several regions of the world and the European Union itself[48]. In 2008 the European Commission also co-sponsored the Environmental Change and Forced Scenarios (EACH-FOR) project, with the aim of analysing and investigating a number of possible environment-migration connections and case studies[49].

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[43] *Ibid.*, pp. 116
[44] WARNER K., (a) "Global Environmental Change and Migration : Governance Challenges", *Global Environmental Change*, n°20, 2010, p. 411
[45] THE COUNCIL OF THE EUROPEAN UNION, *Directive on minimum standards for giving temporary protection in the event of a mass influx of displaced persons and on measures promoting a balance of efforts between Member States in receiving such persons and bearing the consequences thereof,* 20 July 2001, 2011/55/EC, p. 12
[46] *Ibid.*, p. 14
[47] Popp K., "Regional Policy Perspectives", *in* Piguet E., Laczko F., *People on the Move in a Changing Climate. The Regional Impact of Environmental Change on Migration,* Dordrecht, Springer, 2014, p. 241
[48] MCADAM, Jane, *op.cit.*, p. 225
[49] WARNER K., (a) *op.cit.*, p. 404

In the same year, the issue was framed in security terms by the so-called Solana Report, i.e. a report on "Climate Change and International Security" submitted to the European Council by the then High Representative Javier Solana and the European Commission, describing environmental migration as a possible security threat. The same perspective was later echoed in the Joint Reflection Paper by the EEAS and the EC in 2011[50].

In 2009, the European Council implemented the Stockholm Program, which invited the European Commission to conduct a study of the impacts of climate change on international migration, including toward the European Union. The EC answered a year later with the Action Plan Implementing the Stockholm Program, with which it committed to the emission of a communication on the issue by 2011. The Communication on Migration came in May 2011, but it mentioned migration and climate change only once, and left the topic to a Staff Working Paper that was released, postponed, in 2013. The Commission Staff Working Document on "Climate Change, Environmental Degradation and Migration" widely relied on the 2011 Foresight Project and called for comprehensiveness and coherence between environmentally induced migration and other branches of the Commission's work, yet not specifying the means to reach it[51].

To remain in Europe, even though outside the EU framework, in 2009 the Committee on Migration, Refugees and Population of the Council of Europe Parliamentary Assembly produced a report suggesting the addition of a protocol to the European Convention on Human Rights, in order to recognize the right to a healthy environment, but this was not implemented[52]. That same assembly passed also resolution 1655, recognizing that natural and environmental disasters and degradation will have important impacts on human mobility and on its security dimension. It also called for subsidiary protection through national legislation[53].

In general, the EU has almost exclusively considered environmental migration as a phenomenon external to the European region, but we will see in the next chapter that this is not always the case[54].

In the Pacific region, in 2008 state leaders agreed on the adoption of the Niue Declaration on Climate Change during the Pacific Island Forum. The declaration

[50] Popp K., *op.cit.*, p. 246
[51] *Ibid.*, p. 236
[52] MCADAM, Jane, *op.cit.*, p. 234
[53] Popp K., *op.cit.*, p. 234
[54] *Ibid.*, p. 235

recognized the desire of Pacific people to live in their own countries as long as this will be possible, and it committed members to promote in all international fora the recognition of climate-change threats and sea level rise impacts on their territories[55]. The following year the Climate Vulnerable Forum adopted, during its first meeting, the Male Declaration, calling on the UNFCCC's member states to consider the consequences of climate change in terms of human displacements and relocation[56]. In 2010, during another meeting held in Tuvalu, twelve states adopted the Ambo Declaration, a non-binding instrument acknowledging the threats of climate change consequences to the most vulnerable states and expressing interest in the development of instruments for the protection of individuals displaced within or across borders because of climate change effects[57].

The Anchorage Declaration was approved in Alaska in 2009, during the Indigenous Peoples' Global Summit on Climate Change. This non-binding document urged states to recognize the rights of indigenous peoples, among which the right not to be forcefully relocated away from their original territories. Concerning climate change migrants, it remarked the need for appropriate mechanisms to answer to their rights and vulnerabilities[58].

Moving to Africa, it is worth noting that already in 2006 the African Union included environmental considerations in its Migration Policy Framework for Africa, which recognized, among the drivers of migratory movements, environmental degradation and disasters[59].

Further, it is often claimed that already existing regional systems could provide the basis for the protection and assistance of climate change displaced people, in particular agreements on the free movement of capital, goods and people. The Economic Community of west African States (ECOWAS), the Economic Union of the Organisation of Eastern Caribbean States and the Caribbean Single Market and Economy and are often referred to[60].

To sum up, several normative and policy gaps still appear in the management of environmental and climate change-related displacements, in particular at the

[55] MCADAM, Jane, *op.cit*., p. 225
[56] Popp K., *op.cit.,* p. 243
[57] MCADAM, Jane, *op.cit*., p. 225
[58] *Ibidem*
[59] Popp K., *op.cit.,* p. 233
[60] MCADAM, Jane, *op.cit*., p. 235

international level. In the next section, we will try to analyse the reason of this lack of international cooperation.

2.2 The Global Governance Gridlock

In this section, we are going to demonstrate that the general inaction of the international community on the regulation of the issue of climate-related migrations can be explained through four independent variables. These are the four pathways to gridlock identified by Hale, Held and Young (Figure 3[61]): 1) growing multi-polarity; 2) institutional inertia; 3) harder problems; 4) institutional fragmentation. Our demonstration will be based on the research form that we have reported in the Annexes. It is based, as explained in the introduction, on the application of our four independent variables, and the related mechanisms that Hale et al. identify, to the relevant international actors involved in the issue of climate-related migration that we have identified in the previous section.

2.2.1 UNFCCC: growing multi-polarity and fragmentation

Our first independent variable, as it appears in the table, is growing multi-polarity. With this term Hale et al. refer to the increase in the number of states after the Second World War. This brings as a consequence the related growth in

Figure 3 Pathways to gridlock and their mechanisms

Pathway	Mechanism
Growing multipolarity	1. Increased transaction costs 2. Exacerbated legitimacy dilemma 3. Divergence of interests
Institutional inertia	1. Formal lock-in of decision-making authority 2. Entrenchment of cognitive and organizational focal points
Harder problems	1. Extensity: scope of problems has increased 2. Intensity: problems penetrate more deeply into societies
Fragmentation	1. Increased transaction costs 2. Inefficient division of labor, redundancy 3. Excessive flexibility

[61] HALE T., HELD D., YOUNG K., *op.cit.*, p. 227

the number of states whose cooperation is necessary to address adequately a multitude of global problems. Multi-polarity means that the transaction costs of negotiations increase, as well as the divergence of interests between all the actors. Moreover, due to these cooperation problems, states often tend to delegate decisions to supranational authorities, in this way rising questions of legitimacy[62].

The mechanisms of growing multi-polarity were frequently identified in the negotiations of the UNFCCC. The same can be said for those of institutional fragmentation. This refers to the effects of the increase in transnational and multilateral organizations, which has led to the creation of a complex multi-actor and multilevel system of global governance, as well as of 'regime complexes' resulting from the overlapping of international organizations in almost every issue area. While fragmentation could have the positive effect of an efficient division of labour, this rarely happens due to the absence of authoritative centralization[63].

Our analysis is organized on the basis of the gridlocks identified for each institution. In the case of the UNFCCC we will progress in chronological order, from the Thirteenth Conference of the Parties held in Bali in December 2007. We have chosen COP13 as our starting point because it brought the adaptation issue within climate negotiations, and established the Bali Action Plan, which stated the adaptation measures necessary for a climate agreement. More specifically, it has been the first time that the UNFCCC has made reference to climate-induced displacements. In fact, paragraph 112 refers for the first time to consequences of climate change as possible drivers of conflicts. "Environmentally displaced persons as a result of climate change, desertification and deforestation"[64] would compete for water, food and energy, in this way spurring new local and regional conflicts. However, the article refers to an estimate of up to 50 million displaced people by 2010: clearly, this prediction was not verified, and it can be claimed that this mistake contributed to the de-legitimation of studies linking migration to climate change. Nevertheless, the article marks a new interest of the UNFCCC in a topic that it had never dealt with before.

Negotiations in Bali were slowed down by divergence of interests among the parties. This was particularly visible in relation to some issues, as long-term

[62] *Ibidem*
[63] *Ibid.*, p. 228
[64] UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, *Report of the Conference of the Parties on its thirteenth session, held in Bali from 3 to 15 December 2007. Part One: Proceedings,* 14 March 2008, FCCC/CP/2007/6, p. 22

cooperative action: the text on mitigation by developed and developing countries was so contentious that it was adopted only at the last moment[65]. With such debated negotiations on the most urgent need of mitigation actions, it was natural that the issue of climate-related migrations was left aside. However, Bali did not know only the problems linked to the increased number of parties: also the growing dimension and complexity of the climate regime caused difficulties, which can be linked to its fragmentation. In fact, the delegates had to find a balance between the sessions of the UNFCCC COP, of the Kyoto Protocol COP/MOP, of the subsidiary bodies, of the Ad Hoc Working Group and informal meetings, as well as the several negotiating issues[66].

The outcome document of the following COP14 in Poznan does not mention in any terms migratory movements or displacements linked to climate impacts. It just calls for continued access to the Global Environment Facility resources for least developed countries (LDCs), and in particular African and small island states[67]. In Poznan too, the shortcomings of divergent interests were visible, as countries considered a number of issues related to the adverse impacts of climate change and related response measures, but they could not reach an agreement on the further actions to implement[68].

COP15, held in Copenhagen in December 2009, signed a return to the issue of human displacements in the context of climate change with paragraph 4(f), to which we have already referred in section 2.1.2. This progress notwithstanding, COP15 was characterised by harsh and divisive negotiations and diverging interests of the parties, and several problems are identifiable. An example of increased transaction costs, resulting in a slowing down of discussions, was the suspension of negotiations by the African Group and LDCs, supported by the G77

[65] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary Of The Thirteenth Conference Of Parties To The UN Framework Convention On Climate Change And Third Meeting Of Parties To The Kyoto Protocol: 3-15 December 2007", *Earth Negotiations Bulletin*, 18 December 2007, Vol. 12, No. 354, p. 15

[66] *Ibid.*, p. 18

[67] UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, *Report of the Conference of the Parties on its fourteenth session, held in Poznan from 1 to 12 December 2008. Addendum. Part Two: Action taken by the Conference of the Parties at its fourteenth session*, 18 March 2009, FCCC/CP/2008/7/Add.1, p. 6

[68] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary Of The Fourteenth Conference of Parties to The UN Framework Convention on Climate Change and Fourth Meeting of Parties to the Kyoto Protocol: 3-15 December 2007", *Earth Negotiations Bulletin*, 15 December 2008, Vol. 12, No. 395, p. 5

and China, as a form of protest against informal negotiations[69]. This was indeed an issue during the conference, as the Danish presidency proposed two texts that had been discussed only informally, causing the anger of many parties, especially developing countries, who questioned the legitimacy and transparency of such a proposal[70].

Because of the difficulties encountered in Copenhagen, parties meeting in Cancun the following year were focused on finding compromises and balanced solutions, which can be considered a transaction cost originating from the high number of negotiating parties and their diverging interests. "For a successful outcome, 'balance' was the magic word"[71]. Crucial for climate-related displacement is the already cited paragraph 14(f) (see section 2.1.2).

In the following Conference of the Parties, the issue of climate-related migrations was raised only by the Gambian Minister of Forestry and the Environment, who recalled its urgency, but it does not appear in the outcome document[72]. Instead, wide reference is made to the concept of loss and damage, which was taken up again during the COP18 in Doha. However, conflicting interests between developed and developing countries emerged on this issue, as the latter proposed an institutional mechanism to regulate it, but it was rejected by developed nations. Therefore, Doha's outcome document called on COP19 to develop institutional arrangements in order to deal with the losses and damages in countries most vulnerable to climate change[73].

However, loss and damage proved to be a difficult question also in Warsaw, which hosted COP19 in 2013. Loss and damage refers to the impacts of slow or sudden onset weather events that cannot be prevented by mitigation actions. Therefore, the main conflict between developed and developing countries was that the former considered loss and damage as part of mitigation and adaptation strategies, while the latter aimed at distinguishing them and providing them with

[69] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Copenhagen Climate Change Conference: 7-19 December 2009", *Earth Negotiations Bulletin*, 22 December 2009, Vol. 12, No. 459, p. 28
[70] *Ibidem*
[71] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Cancun Climate Change Conference: 29 November-11 December 2010", *Earth Negotiations Bulletin*, 13 December 2010, Vol. 12, No. 498, p. 29
[72] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Durban Climate Change Conference : 28 November-11 December 2011", *Earth Negotiations Bulletin*, 13 December 2011, Vol. 12, No. 534, p. 25
[73] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Doha Climate Change Conference : 26 November-8 December 2012", *Earth Negotiations Bulletin*, 11 December 2012, Vol. 12, No. 567, p. 20

different sources of financing. Agreement was reached only during the closing plenary, with the G-77 and China proposing amendments in order to differentiate between the two, at least in the Preamble[74]. Difficult negotiations led to long-lasting sessions, until late night, which represented an increased transaction cost, threatening efficiency as well as transparency and inclusiveness. The issue of transparency was particularly questioned in Warsaw, casting a shadow over the legitimacy of the entire process[75]. Another problem that emerged during COP19 was the one of fragmentation, generated by the lack of major progress of the UNFCCC. As a result, several subnational and non-state actors turned to initiatives, programmes and policies addressing climate change outside the UNFCCC umbrella[76].

COP20 in Lima presented some problems similar to the one showed in Warsaw the year before. Divergences between developed and developing countries on loss and damage continued, with Small Island Developing States calling for its consideration as a separate element in a new agreement, against US opposition[77]. Lima too was characterised by long and difficult negotiations, with the final document concluded only several hours after the scheduled end of the conference[78].

Overstretched negotiations can also be found in Geneva, where the most recent conference was held in February 2015, in preparation for COP21 in Paris at the end of this year. As the first reading was ready already few days after the start of the conference, the Co-Chairs called on efforts to solve bracketed text and eliminate redundancies. However, only minor technical corrections were generated[79]. Furthermore, the resulting document reflects "sharper differences in parties' positions than the Lima text"[80]. An example of this was the proposition by the LDCs to establish "a climate change displacement coordination facility"[81], in order to address the issue of planned relocation of populations hit by climate change.

[74] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Warsaw Climate Change Conference : 11-23 November 2013", *Earth Negotiations Bulletin*, 26 November 2013, Vol. 12, No. 594, p. 28
[75] *Ibid.*, p. 29
[76] *Ibid.*, p. 30
[77] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Lima Climate Change Conference : 1-14 December 2014", *Earth Negotiations Bulletin*, 16 December 2014, Vol. 12, No. 619, p. 33
[78] *Ibid.*, p. 43
[79] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, "Summary of the Geneva Climate Change Conference : 8-13 February 2015", *Earth Negotiations Bulletin*, 16 February 2015, Vol. 12, No. 626, p. 13
[80] *Ibidem*
[81] *Ibid.*, p. 14

This proposal was rejected because numerous countries have long refused, as we have seen, to address the issue under the framework of the UNFCCC.

2.2.2 UNHCR and IOM: institutional inertia and fragmentation

When looking at the UNHCR's and IOM's action in the field of climate-related migrations, the main gridlock that emerges is the one of institutional inertia. According to Hale at al., this inertia results from the institutional building of the post WWII period, when the need for a centralized system of governance led to a trade-off between legitimacy and stability. This means that most powerful states were incentivized to participate in the post-war governance building, and in part to pay for its costs, by the granting of some privileges. A clear example of this is the structure of the UN Security Council. While this system worked very well at the beginning, now it would need to be changed and to become more inclusive. However, the institutional building makes this very difficult[82].

Although we do not find this same mechanism in the UNHCR and IOM in terms of distribution of power among countries, institutional inertia characterizes these two agencies in terms of mandate and scope of action. As far as the UNHCR is concerned, as we have already seen, its definition of "refugee" is very precise and limited, and it doesn't allow for the inclusion of a new category of displaced people. The refugee categorization by the UNHCR is central to its mandate and identity[83]. While the discussed category of climate or environmental refugees could not be foreseen at the time of the Geneva Convention, it is claimed by many parties that it would be necessary to change it in order to include them and fill the normative vacuum[84]. However, there has not been consensus among member states on the expansion of the Convention and related UNHCR activities[85].

On the contrary, IOM is not part of the UN system, therefore it has not a specific mandate and normative authority, but it functions mainly as a service provider for states[86]. Further, it has neither a treaty to oversee nor its own normative vision[87]. IOM did commit to the issue of climate-related displacements, as we have shown in 2.1.2, but because of the exposed reasons it lacks a comprehensive and coherent

[82] HALE T., HELD D., YOUNG K., *op.cit.*, p. 227
[83] HALL N., *op.cit.*, p. 96
[84] BELL D. R., *op.cit.*, p. 138
[85] HALL N., *op.cit.*, p. 102
[86] MCADAM, Jane, *op.cit.*, p. 230
[87] Betts A., *op.cit.*, p. 8

mandate for action and it is often claimed that it is not the most appropriate institution to take care of climate-related migrants.

Hence, as it emerges from this analysis, the inertia of existing institutions is linked to a major problem of the governance of climate-related migrations, which is its fragmentation. Beyond the fragmentation that can be perceived within the UNFCCC or other institutions, the most severe one is the one damaging the general system. As McAdam states:

> *The governance of climate-change related movements (like global migration governance more broadly) suffers from significant fragmentation, both vertically - with actors at the international, regional and local levels - and horizontally - with the phenomenon addressed in part or, more rarely, as a whole under the auspices of a range of other 'policy categories' and associated institutions*[88].

The existence of a plurality of governance mechanisms and institutions causes a lack of a coherent multilateral governance framework, as none of these organizations can grant it. Moreover, their mandates often overlap or conflict with each other or are too limited to properly address the issue[89].

2.2.3 Harder problems

Talking about "harder problems", Hale et al. refer to the changed nature of problems on which states have to cooperate. Both the extensity and the intensity of problems have increased, and more and more issues are now global, affecting a growing number of countries and individuals within them, and deeper, penetrating within national politics and societies[90]. Combining with the increased number of relevant countries and their divergent interests, this problem makes the governance of some global phenomena particularly complicated.

This is the case of climate-related displacements. Starting with its extensity, we can state, together with McAdam, that this is a multi-causal phenomenon, meaning that, as we have already seen, climate change does affect migration but it is not its only driver. Rather, it combines with other stressors and often amplifies or accelerates their effect[91]. Moreover, climate-related migrations will assume

[88] MCADAM, Jane, *op.cit.*, p. 213
[89] *Ibid.*, p. 214
[90] HALE T., HELD D., YOUNG K., *op.cit.*, p. 227
[91] MCADAM, Jane, *op.cit.*, p. 264

several different forms, and for this reason they would need a multi-level response, which includes the local, national, regional and international levels[92].

Its extensity brings with it a deep intensity, too. As the drivers of migration are multiple and interconnected, they associate with one another and reinforce each other. For instance, environmental change can cause food and health problems which in turn can push for migration. Moreover, the effects of climate change are often more severe in context already characterised by a high degree of vulnerability, and they can have a multiplier effect. Further, climate change often combines with non-environmental elements highlighting a path dependency of migratory movements: where people have already moved for non-environmental causes, they will be more prone to leave for environmental stressors.[93] All this shows, together with the complexity of the phenomenon, its implications for and diffusion into societies, calling for a complex management of the issue.

Therefore, we argue that the causes of the lack of a response to the normative gap in which climate-related migrations will take place cannot be identified only in the structure of the global governance system but also – and above all – in the unprecedented complexity of the issue at stake. Thus, among our independent variables, "harder problems" is the weightiest one. This is consistent with the theory of governance gridlock, as Hale et al. state that in some issues some of the pathways may be more important than others[94].

Significantly, it is possible to define the phenomenon of climate-related displacement as a wicked problem. While the concept has been subject to re-elaborations after its first appearance in the 1970s, Termeer et al. list four main characteristics of wicked problems, which can be identified in climate-related migrations too. First, wicked problems are difficult to understand because "the formulation of the problem is the problem" and "there is no consensus on how to frame the problem or the solution"[95]. This is clearly the case of climate-related migrations. Warner affirms that the difficulties in defining the phenomenon are not only due to "the challenge of isolating environmental factors from other migration drivers", but also to "the institutional and governance implication of

[92] MCADAM, Jane, *op.cit.*, p. 236
[93] PIGUET E., PECOUD A., DE GUCHTENEIRE P., *op.cit.*, p.13
[94] HALE, Thomas, HELD, David, YOUNG, Kevin, *op.cit.*, p. 34
[95] Termeer C., Dewulf A., Breeman G., "Governance of Wicked Climate Adaptations Problems" *in* Knieling J., Filho W. L., Climate Change Governance, Berlin, Heidelberg, Springer, 2013, p. 28

doing so": defining a concept involves responsibilities assignments for action[96]. Second, it is possible to consider a wicked problem as a symptom of another problem: given their multi-dimensional and interconnected nature, they develop at multiple temporal and spatial levels[97]. The same can be said for climate-related migrations, which are the consequence of the impacts of climate change combining with other drivers of migration and involving several different dimensions. Third, they are very difficult to solve and new problems can sometimes be the consequence of past solutions[98]. In considering migration as an adaptation to climate change, this third element is verified. Fourth, "wicked problems can result in wicked experiences amongst ambitious governance actors that aim at influencing societal problems"[99], in the sense that their management can result particularly stressful and actors often do not know if their action is decisive or not. In this case, they can turn to defensive strategies that can result counter-productive. This is the case of the governance of climate-related migrations, where states have most often looked at their national interest, as it often happens with migration, while cooperation is needed more than ever about this question.

Finally, a crucial element needs not to be underestimated: climate-related migration brings together two of the most debated issues of our times, namely migrations and climate-change. While the first one is often perceived as a threat to national security and sovereignty, the mitigation of the second one is felt as an attack to development and economic growth, and both these fields are particularly sensitive for national governments. Therefore, if cooperation is already hard on migration and climate change when treated separately, this can only worsen if they are brought together.

The intricacy of the phenomenon and the need for a multi-level governance response will be further scrutinized in the next chapter, through the exposition of three climate-related migrations scenario: New York, the Netherlands and Morocco.

[96] WARNER K., (a) *op.cit.,* p. 403
[97] Termeer C., Dewulf A., Breeman G., *op.cit.,* p.28
[98] *Ibid.,* p. 29
[99] *Ibidem*

3. Three Future Climate-Related Scenarios

This chapter will review three possible scenarios of climate change-related migrations: New York and New Jersey; the Netherlands; Morocco and North Africa. For each of them, we will ask what is the role of the international community in the case of population displacements, and which is the role of the lower level of governance (national or regional). They have been chosen because all three will suffer, in different ways and in different measures, from the impact of climate change. In particular, the Foresight project identifies sea-level rise and the change in tropical storms and cyclone intensity as the two main environmental changes that will impact on the drivers of migration[1], and they characterize our cases.

The first case analyses the impact of Hurricane Sandy on the states of New York and New Jersey in 2012 in order to imagine what would happen if similar storms would increase in frequency and strength, which would be possible as a result of climate change and sea level rise. Data will be deployed to show that this kind of event would likely force the New Yorkers, or part of them, to leave their city. Then we will ask what would be the role of the international community in response to these natural catastrophes. The United States would likely recur to internal relocation, but whether the global arena has some duties of assistance will be analysed too. The second scenario focuses on the regional level, and for this reason the Netherlands has been chosen for its characteristics. We will question who would have to answer in the case of sea level rise forcing the Dutch population, or part of it, to leave. It is arguable that the EU would intervene in order to decide a relocation of these people in communitarian logic. The role of the international community will be assessed too. The last hypothesis considers emigration from Morocco to European shores, both of Moroccan and Sub-Saharan citizens, to be caused at least in part by climate or environmental changes, which sometimes is already the case. Inter-regional mechanisms would be activated, but the international community too would have a role.

3.1 New York, New Jersey and the Impact of Hurricanes

When we hear debates about climate change and the possibility of migration resulting from its impacts, we usually consider these hypotheses as distant and

[1] FORESIGHT, *op.cit.*, p. 51

alien from us, regarding mainly – if not only – developing countries. Hurricane Katrina in 2005 but even more Hurricane Sandy in 2012 showed that this is not the case: "developed and relatively wealthy metropolises like New York City are at risk, and (…) environmental displacement is a concern for all countries, no matter their level of development"[2].

Indeed, extreme weather events are likely to cause loss, harm and even displacement in both poor and wealthy countries alike. Nonetheless, the most disadvantaged social categories, like the poor or the marginalized, are also the most vulnerable ones in these cases. This is consistent with McLeman's MESA function presented in the previous chapter, according to which the possibility of experiencing migration increases with the intensity of the event and the sensitivity of the population, but it is reduced by the adaptive capacity of the population[3].

3.1.1 Data

The coast running from Virginia to New Jersey is particularly subject to major storms passing from south to north, both hurricanes and more frequent North-East cyclonic storms, which often cause consistent land retreat[4]. Furthermore, over the course of the last century sea level has been rising of 3mm per year along the southern coast of the New York – New England region, and of about 2mm along the northern one[5]. Therefore, this area is particularly subject to sudden environmental events and to sea level rise (SLR).

Hurricane Sandy hit New York City and New Jersey in October 2012. Its impact was particularly catastrophic because of several reasons. First of all, it reached the lowest central pressure level (940 millibars) ever registered for an Atlantic hurricane. Second, it was the widest registered in the Atlantic, as the winds spread over a diameter of 400 hundred kilometres around its eye. Finally, it caused an unprecedented rise of water in New York City, as in some places it reached 4.2 meters.[6]

[2] Delavelle F., "Hurricane Sandy in New York and New Jersey : Evacuation, Displacement and Adaptation", *in* Gemenne F., Brücker P., Ionesco D., The *State of Environmental Migration 2013. A review of 2012*, Paris, Studies IDDRI – OIM, 2013, p. 15
[3] MCLEMAN, Robert, *op.cit.*, p. 77
[4] Kraft J.C., "Atlantic Coast Central (USA) (Virginia, Maryland, Delaware and New Jersey)" *in* Bird E.C.F, *Encyclopedia of the World's Coastal Landforms*, Switzerland, Springer, 2010, p. 107
[5] Bokuniewicz H., "New York and New England)" *in* Bird E.C.F, *Encyclopedia of the World's Coastal Landforms*, Switzerland, Springer, 2010, p. 113
[6] Delavelle F., *op.cit.*, p.16

Due to their intensity, their spatial scale and their capacity of destroying buildings, tropical cyclones, or hurricanes as they are called in the Atlantic and Caribbean areas, are among the extreme weather events most likely to cause huge human displacements[7]. They form when 1) the temperature of sea surface exceeds twenty-seven degree Celsius and 2) where low-pressure air covers the sea surface and is relatively still and moist. Parcels of this air can rise and stimulate the condensation of moisture, which creates "a convective cell of circulating air". At this point, pressure draws air toward the centre of the cell, and faster winds are produced. Through the rotation of the Earth, air too begins rotating around the newly formed eye of the storm[8].

Interestingly, Delavelle shows how the impact of Hurricane Sandy was amplified by two main phenomena. The first one is the fact that it hit the coast during full moon, therefore when the tide was at its highest level (about 30cm over the usual level). But the second factor was the long-term element of sea-level rise[9]. This is particularly important for our analysis, as sea level rise is one of the consequences of climate change, and it is an evident phenomenon in New York and New Jersey, which are particularly vulnerable to it and where, "as a consequence of the ocean's thermal expansion and of the melting of ice caps in the Arctic, the sea level (…) has risen of about 30 cm-twice as fast as water levels of coastal regions in other states"[10]. Therefore, as the climate impacts expert Cynthia Rosenzweig highlights, even though it is not possible to categorize the hurricane itself as a product of climate change, the flooding damages are strictly linked to it. In fact, the storm was surely made worse by climate change, and in the future the losses of similar events would be even more serious, as sea level will continue to rise[11]. In this sense, this case is comprised in the general framework of climate change as an accelerator of existing vulnerabilities that we have already exposed in this work.

To be complete, we have to mention the fact that the strength of the storm was amplified also by the geographical vulnerability of the region, as its wind hit the so-called "New York Bight", that is the almost right angle formed by the meeting of the shorelines of New Jersey and Long Island. This creates a sort of tunnel that

[7] MCLEMAN, Robert, *op.cit.*, p. 78
[8] *Ibid.*, p. 81
[9] Delavelle F., *op.cit.*, p.16
[10] *Ibidem*
[11] KAHN B., "Superstorm Sandy and Sea Level Rise", *National Oceanic and Atmospheric Administration*, November 15th, 2012

caused an accumulation of ocean water and rain in the New York harbour[12]. Further, the general conformation of the area, very low on sea level, makes it particularly prone to these kinds of events. It is not a case that in the 17th century the original Dutch settlement that later became New York City was called "New Amsterdam". However, geographical vulnerability was accompanied by the demographic and infrastructural ones. In fact, the 930 kilometres of coastland of New York are densely populated, with the result that, according to the New York City Office of Emergency Management, around 2.3 million people would be highly at risk under a Category 3 hurricane[13]. In New Jersey too the coastal area and the islands are widely occupied by urban and suburban buildings. There, because of poor planning and building methods, a lot has been built on the dunes and the backshore, with the result that northeast storms and hurricanes have always caused severe damages. The nature of the coast, SLR and storms risks notwithstanding, building in this coastal zone is progressing[14]. Moreover, concerning infrastructural vulnerability, New York City is characterised by numerous suspension bridges, which had to be closed during the storm for security reason, but in this way reducing evacuation ways. Furthermore, the subway system is particularly subject to flooding[15].

As far as evacuations are concerned, these did not take place all at the same time. In fact, a first wave of displaced people was constituted by those who followed the order of the Mayor Bloomberg for the residents in the "Zone A", one of the lowest and most vulnerable to storms, to evacuate. For several reasons, not all the residents left immediately. Firstly, the administration had a two-fold response, in the first place declaring that evacuation would not be necessary, and then ordering the Zone A to evacuate only the day before the storm hit. Second, the public was influenced by what had been considered an overreaction in the case of Hurricane Irene the previous year, when 370,000 people were evacuated, subways, airports and buses closed down for a measured rainfall of 30 cm (while in the case of Sandy floods were meters-high). Furthermore, the majority of the inhabitants of New York lack a response culture, as they are not used to hurricanes and

[12] MURPHY J., "Why NYC Is So Vulnerable to Hurricanes", *CityLimits*, New York, November 1st , 2012, http://citylimits.org/2012/11/01/why-nyc-is-so-vulnerable-to-hurricanes/
[13] Delavelle F., *op.cit.*, p.17
[14] Kraft J.C., *op. cit.*, pp. 110-111
[15] Delavelle F., *op.cit.*, p.17

evacuations. Therefore, several New Yorkers did not follow the order to evacuate.[16]

This picture is coherent with McLeman's vision, according to which people's exposure to extreme weather events and the resulting harm depend on the geographical characteristics of the area where they live as well as the cultural, social, human, economic and political processes influencing their lives. The effective occurrence of human displacements depends on the combination of the adaptive capacity of institutional actors and the level of economic, social, and cultural capital of households after the event[17].

The situation started to change on Monday, October 29th, when Sandy effectively hit New York City. In the following days, the remaining inhabitants of Zone A as well as of many other areas left in precaution or were forced to leave by the impact of the storm and resulting power shortages. A week after the Hurricane hit, 10,000 displaced people had registered in public shelters, but other thousands were probably displaced elsewhere. In the meantime, several areas of the city were still without electricity, and the situation was worsened by the impact of the winter storm Athena from November 7th to 10th, which caused additional evacuations[18].

Evacuations can be distinguished in terms of their length in time. While some people were able to return home in a short time, others were still displaced several months later. The term displaced here is not used as a synonym of evacuees, as those people were unable to return home and became displaced persons. To have an idea of the magnitude of the phenomenon, estimates talk about around 40,000 people who became homeless after the storm[19].

Public shelters provided for by officials were usually organized in public schools, but were often insufficient and filled over their capacity. For this reason, the Federal Emergency Management Agency organized the relocation of thousands of households in hotel rooms[20]. While this strategy had the advantage not to remove people from their habitual residence area, and it was thought of as a transitional solution, it had several shortcomings in the long term. First of all, it became a quasi-permanent situation: in January 2013, about 3,500 households were still living in hotel rooms. This became a quite stressful status, as they had to change

[16] *Ibid.*, pp. 17-20
[17] MCLEMAN, Robert, *op.cit.*, p. 80
[18] Delavelle F., *op.cit.*, p. 18-19
[19] *Ibid.*, p. 20
[20] *Ibidem*

rooms several times and because the permission to stay had two weeks duration and had to be reconfirmed each time on an individual basis. Moreover, it was costly both for FEMA, which spent tens of millions of dollars, and for households, who had to pay for their meals everyday. FEMA also granted household assistance to those who were removed from hotels, but often in the case of low- and middle- income households this money could not be used to repair their house or find a new one, as they had several other expenditures to afford. The total of displaced people registered by FEMA was of 250,000 households, for USD 370 million assistance costs. Nonetheless, the majority of evacuees and displaced was probably constituted by those who did not register and organized with relatives, rented a house or remained homeless[21].

A further element that Hurricane Sandy, like Hurricane Katrina before it, showed was the social disparity of the impacts of the storm. It emerges, as anticipated, how poverty and social marginalization are often linked to the worse physical damages and even loss of shelter. In fact, poor people usually live in damaged or unsound buildings, have limited access to transportation and communication systems and cannot rely on resources to rebuild after the disaster[22]. In the case of Hurricane Sandy, several people decided not to evacuate because they lacked the necessary means, as many among them did not possess a car, and the closing up of the public transports the day of the storm cut off this possibility too. Moreover, evacuation meant losing working days, and some could not afford it. 120,000 people made applications for first-time unemployment insurance benefits after the disaster, highlighting the impact on the poorest ones, who were almost half of those who had access to FEMA aids. Among them, many were renters lacking a proper insurance on their goods and depending on the owner for reparations[23].

Of the thousands of people who left their homes because of super storm Sandy, 14,000, mainly in New Jersey, are still displaced and waiting for a long-term solution, and they often belong to the poorest and most marginalized members of the community. However, numbers are not precise, because of the lack of a federal, state or local agency monitoring displacements following a disaster[24].

[21] *Ibid.,* p. 21
[22] MCLEMAN, Robert, *op.cit.,* p. 92
[23] Delavelle F., *op.cit.,* p. 22
[24] INTERNAL DISPLACEMENT MONITORING CENTRE, *op.cit.,* p. 70

3.1.2 Possible future scenario and policy implications

We have seen the tremendous impacts of hurricane Sandy on New York and New Jersey, and the related difficulties and the costs to cope with them. As sea level rise continues, the impact of similar storms will be more and more dangerous and disruptive. In particular, estimates foresee an increase of tropical cyclones' intensity, while there is more uncertainty regarding their frequency[25]. But les us assume that not only their intensity, but also their frequency will rise: this would likely mean frequent evacuations of a huge amount of people. Indeed, we have seen that in the case of Hurricane Sandy the answer of the authorities has been to evacuate endangered areas. The decision to evacuate after an environmental event strikes the system is subject to elements at the macro level, as national policies, like the one to favour spontaneous migration; at the meso-level, as the city authorities measures during the storm, like the order to evacuate; their decision to close the public transportation system; their organization of public shelters; the economic resources available to manage them. Micro-level variables enters the picture too, and indeed there were differences between households according to their level of economic and social capital, which influenced their decision to evacuate and their following adaptive capacity.

But then, if the frequency and power of these events increase, we can argue that it would be necessary to act in a long-term logic. Thus, it would probably be better and less costly to relocate some people permanently and not only to improve engineering in order to reduce the impact of the storms. In this respect, several projects of sea walls and other barriers have often be considered to be applicable to New York, and they are already present in the great majority of New Jersey's territory. However, Delavelle outlines two main shortcomings: first of all, they will represent a considerable cost; second, they reflect a short-term approach to the problem, as they would solve the issue only for a time span of 50-100 years, given that sea level continues to rise. Moreover, they consider projections on future SLR and storms to be accurate, and this may not always be the case[26].

Planning relocation strategies and policies in advance would make the process smoother. Nonetheless, planned relocation involves some logistical problems, like the considerable financial costs of relocating even a small part of the population

[25] MCLEMAN, Robert, *op.cit.*, p. 80
[26] Delavelle F., *op.cit.*, p. 25

and the physical availability of a territory in which displaced people could settle down[27].

At the international level, the Guiding Principles on Internal Displacement could be applied in the case of sudden onset disasters. The principles, as their website reads, "are based upon international humanitarian and human rights law and analogous refugee law. They are intended to serve as an international standard to guide governments, international organizations and all other relevant actors in providing assistance and protection to IDPs"[28](i.e. Internally Displaced Persons). In Section 2 of the Introduction, internally displaced persons are defined as:

> *Persons or groups of persons who have been forced or obliged to flee their homes or habitual places of residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border*[29].

Given that our future scenario considers natural disasters as hurricanes worsened by sea level rise, a consequence of human-induced climate change, displaced people in this case would be covered by the Guiding Principles. Among them, two are of particular interest for our analysis: Principle 3 states that the primary duty and responsibility to assist and protect falls on the national authorities; Principle 15 specifies the right of displaced people to seek safety in another part of their country, to leave it and ask for asylum in another and not to be forcibly returned or resettled in risky territories. Principle 25 also recognizes the right of "international humanitarian organizations and other appropriate actors" to intervene to provide assistance to IDPs[30].

However, the Guiding Principles do not form a binding document and therefore they do not impose any obligation on any state. Hence, it is very likely that in a similar case it would be the nation state the only actor to intervene, in terms of population management. Potential interventions from the international

[27] MCLEMAN, Robert, *op.cit.,* p. 189
[28] "The Guiding Principles. Introduction to the Guiding Principles", Global Database. Guiding Principles on Internal Displacement, http://www.idpguidingprinciples.org, page consulted on 19 July 2015
[29] UNITED NATIONS COMMISSION ON HUMAN RIGHTS, *Guiding Principles on Internal Displacement*, New York, 1998, E/CN.4/1998/53/Add.2, p. 1
[30] *Ibid.*, pp. 2, 8, 13

community would be constituted by financial aid or logistical help, together with humanitarian organizations. Furthermore, it is important to remember that in the particular case of the US, which is a federal state, even long distance movements from one American state to another will be considered as internal migrations, as they will not involve the crossing of an international border.

Moreover, we recall that, as showed in section 2.1.4, the United States have considered the issue of climate-related displacements only in terms of immigrants entering the US: it is to foreigners that the temporary protected status is addressed. Therefore, the US lacks a comprehensive normative or policy framework under which dealing with IDPs for environmental and climate-related causes. It is this gap that needs to be filled, in order to be prepared when similar events will take place in the future.

Long-term adaptive strategies would need to include relocation from low-lying areas to higher and less populated ones, as regions in Queens and Staten Island[31]. Preventive relocation could not be forced, but rather it would be better to create incentives: Delavelle suggests economic incentives, like higher taxes on businesses and houses in areas at risk, and incentives for those who leave them. Insurances too could be employed, rising their costs in low-lying areas: before Sandy, coastal areas were characterised by low insurance costs, but increasing them could increase the risk perception of homeowners and also favour spontaneous relocation. Moreover, in order to avoid the inadequate and insufficient organization that followed Sandy, measures for evacuation and responses to all phases could be implemented[32].

In conclusion, we argue that in this case, if adaptation and mitigation measures will be taken at the state and federal level, there would be no need for policies or agreements at the international one. This is especially likely to be the case for the United States of America, with their consistent level of economic and technical development. We do not mean to generalize these statements to developing countries, for which ad hoc scenarios and hypotheses need to be developed.

Next section will look at the case of the Netherlands, a country which similarly suffers from Sea Level Rise but which is inscribed in a different regional framework.

[31] Delavelle F., *op.cit.*, p. 26
[32] *Ibid.*, p. 26-27

3.2 The Netherlands and Sea Level Rise

Among the impacts of climate change, sea level rise will affect millions of people. In 1990, at least 200 million people were estimated to live in coastal zones, and this number is probably going to increase in the future because of the expansion of coastal cities and the rate of demographic growth, which is double than the global one for coastal populations[33].

According to the 2007 IPCC report, the sea level grew faster, about 3.1 mm per year, in the decade from 1993 to 2003 than the average growth of 1.8 mm per year in the period from 1961 to 2003[34]. Three factors are considered primary causes of SLR: 1) the thermal expansion of the ocean; 2) Greenland and Antarctica glacial melt; 3) terrestrial storage change. Among them, ice melting is likely to be the main driving factor of SLR in the future[35]. While three millimetres per year does not sound like a dramatic increase, this change represents a significant threat for inhabitants of low-lying territories around the world. The main consequences of SLR are usually considered to be five: 1) increased rates of flooding and inundations; 2) wetlands loss or change; 3) erosion; 4) saltwater intrusion inland, into surface or ground water; 5) coastal soils decreased drainage and salinization[36].

In Europe too coastal areas are home of important centres, both in terms of population and of economic production. Among them, some are already under the level of the sea, as it is the case for much of the Netherlands, the Italian Po River plain and the Eastern England fens[37]. Europe's vulnerability to SLR is not as high as in developing countries, due to its wealth, its past investments in flood protection and in coastal management[38]. However, the phenomenon should not be overlooked. In what follows, we will analyse the case of the Netherlands.

3.2.1 Data

We have chosen to investigate the Dutch case, among other European countries or areas, because the entire country is at risk of suffering from sea-level rise impact,

[33] NICHOLLS R.J., MIMURA N., "Regional issues raised by sea-level rise and their policy implications", *Climate Research,* Vol. 11, December 17th, 1998, p. 5
[34] IPCC, *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assess- ment Report of the Intergovernmental Panel on Climate Change*, Geneva, 2007, p. 2
[35] DASGUPTA S., LAPLANTE B., MEISNER C., WHEELER D., YAN J., "The impact of sea level rise on developing countries : a comparative analysis", *Climatic Change,* Vol. 93, p. 380
[36] MCLEMAN, Robert, *op.cit.,* p. 183
[37] NICHOLLS R.J., MIMURA N., *op.cit.,* p.10
[38] *Ibid.,* p.12

due to its geographical position and conformation. Nonetheless, the Dutch coast is protected against the sea by dykes and dunes[39].

The major hazard to which the country is subject is the one of flooding. According to Roggema's estimates, SLR is particularly dangerous for the Netherlands because it will increase the destructive impacts of flooding[40]. Moreover, the majority of the population lives along the 400 kilometres of coastline and often below the level of the sea. Therefore, the highest risks of flooding concern the most densely populated area, increasing the disruptive potential of a disaster[41]. Storms are also already frequently hitting the Dutch coastline, and they mainly originate from the southwest, west and northwest, with the latter ones as the most dangerous because of resulting high tides[42].

It is crucial to highlight that the current shape of the country is substantially man-made: it results from centuries of water and floods management practices. Without them, the Netherlands would now look completely different, given its low-lying areas[43]. Through the centuries, people have built sea dykes to protect against the sea, and have later enlarged them forming an artificial coastline[44]. Hence, in the most economically productive and densely populated areas, systems of defence against floods have reached the highest standards in the world[45]. While until the second half of the 20th century policies were focused on the preservation of territorial integrity and, if possible, also on the acquisition of new land from water, this has recently changed. Modern techniques of flood safety can even bring to loss of land. The focus is now on the containment of water, rather than on the building of higher and higher dikes[46].

3.2.2 Possible future scenario and policy implications

As anticipated, the IPCC AR4 report estimated an increase of sea level between 0,18 and 0,59 mm per year over the next 100 years, depending on different

[39] Jelgersma S., "The Netherlands", *in* Bird E.C.F, *Encyclopedia of the World's Coastal Landforms*, Switzerland, Springer, 2010, p. 665
[40] Roggema R., "Climate Change Around the World : Australia, the Netherlands, and India", *in* Sundaresan J., Santosh K.M., Déri A., Roggema R., Singh R., *Geospatial Technologies and Climate Change*, Switzerland, Springer International Publishing, 2014, p. 4
[41] *Ibid.*, p. 8
[42] Jelgersma S., *op.cit.*, p. 665
[43] OLSTHOORN X., VAN DER WERFF P., BOUWER L.M., HUITEMA D., "Neo-Atlantis: The Netherlands under a 5-m sea level rise", Climatic Change, Vol. 91, 2008, p. 105
[44] Jelgersma S., *op.cit.*, p. 667
[45] KABAT P., VAN VIERSSEN W., VERAART J., VELLINGA P., AERTS J., "Climate Proofing the Netherlands", *Nature*, Vol. 438, 17 November 2005, p. 283
[46] OLSTHOORN X., VAN DER WERFF P., BOUWER L.M., HUITEMA D., *op.cit.*, p. 105

scenarios[47]. However, these estimates are often considered too conservative. According to data of the 1990s, in a scenario of a SLR of 1 meter, 10 million people would be affected, that is the 67% of the Netherlands population, the highest share in Europe. The total of land loss would reach 2165 km^2, corresponding to 6,7% of the total[48].

The ATLANTIS project team has ideated a scenario considering a SLR of 5 meters beginning in 2030 and reaching its peak in a 100 years time span. The authors themselves recognize that this is very likely to represent a worst-case scenario, but they believe it can spur new debates and policies[49]. The results of the study are particularly interesting for our work, and are reported in what follows.

First of all, SLR would entail economic consequences. The project calculated the economic assessment of the application of current Dutch coping strategies to a 5 metres SLR scenario. This was obtained through a proportion between the present costs (600 million Euros) of coping with foreseen SLR and the data of their scenario. The calculated outcome is that protection against a 5 metres rise of sea level would be 30 times the current one and it would represent 2% or 3% of the national GDP. Therefore, the costs would be higher than the benefits[50]. Another economic impact would be felt by the areas affected, which would become less attractive for both investments and living. Companies could decide to relocate elsewhere, with important losses for the country or parts of it. A losing sector would surely be agriculture, while the coastal engineering one would largely benefit from the situation[51].

The authors report that the Netherlands could be divided, in economic and political terms, in three parts. The first area would be the north and west territories, which are the lowest lying ones, and which are neither densely populated nor highly productive. According to the study, harsh debates would be engendered on the convenience of extra floods barriers, as in this case the costs would greatly exceed the benefits. Thus, it continues, it is likely that their inhabitants would be forced to migrate. The second part of the country would consist of the "economic core area" in the west, corresponding mainly to Amsterdam, The Hague and Rotterdam. Here almost 80% of the national

[47] IPCC, *op.cit.*, p. 8
[48] NICHOLLS, R.J., MIMURA N., *op.cit.*, p.11
[49] OLSTHOORN X., VAN DER WERFF P., BOUWER L.M., HUITEMA D., *op.cit.*, p. 104
[50] *Ibid.*, p. 108
[51] *Ibid.*, p. 117

resources and a consistent percentage of Dutch citizens are located [52]. Finally, the third zone would cover the eastern and southern areas, which are wealthier than the low-lying ones and will also be less subject to SLR damages. For these reasons, it is likely that they would neither be prone to share the costs with the rest of the country, nor to receive displaced people, in this way giving birth to a political problem[53].

As far as solutions are concerned, the project refers to a previous study, conducted on a scenario of 5 metres rise over 200 years. In this case, three possible answers were identified: 1) the construction of a new dike around the entire Netherlands, but this was considered extreme and too costly; 2) the strengthening of existing flood-defence structures; 3) the permanent evacuation of the South-Western and Northern parts of the country, while focusing efforts on the protection of the economic core area[54]. Something similar to this third solution is suggested also by McLeman as a general strategy to cope with SLR over a large portion of territory and a long time span. In this case, in fact, new engineered infrastructure may become too costly to be put in place, and "planned or managed retreat from the most exposed areas" could constitute "the next least disruptive response"[55].

In this context, the authors consider migration to become a relatively natural strategy for people living in the affected areas, who could move to the most secure ones. Foreigners living in the Netherlands could come back to their country of origin, and retired people could move to southern Europe. Nonetheless, migration would not be that simple. The authors themselves recognize that if disaster would suddenly hit huge amounts of people, displacement could also turn in the establishment of refugee camps, complicated by the eventual impossibility to come back[56].

Even restating that a 5 metres sea level rise scenario can be considered too extreme and unlikely, it is crucial to ask the question of what the policy answers would be in a similar, or even more conservative, scenario.

Let us consider, for the interest of our work, a possible outcome in which at least part of the Dutch population would be forced to permanently leave its place of residence, and be displaced elsewhere. The primary duty of assistance would fall

[52] *Ibid.*, p. 115
[53] *Ibid.*, p. 116
[54] *Ibidem*
[55] MCLEMAN, *op.cit.*, pp. 188-189
[56] OLSTHOORN X., VAN DER WERFF P., BOUWER L.M., HUITEMA D., *op.cit.*, p. 117

on the nation state itself, and therefore on national policies implemented by the government. The difference here would be caused by the responsiveness of the authorities: the result would be totally different whether a plan for evacuation would be disposed for in advance, before the eventual occurrence of a disaster, or whether it would be ideated and put in place during an emergency situation. Planning would clearly help facilitating relocation. Nevertheless, as already stated in the previous section, planned relocation entails some logistical problems. The first one will be constituted by the considerable financial costs of relocating even a small part of the population. The second is the physical availability of a territory toward which displacement could proceed[57]. If we consider that the less densely populated area of the Netherlands is also the one more likely to suffer from the damages of sea level rise, and that therefore efforts would probably be focused on the securitization of the central and more economically productive zone, displacement would meet several challenges.

As far as the international community is concerned, a valid question regards its duties towards displaced people. In the case of internal displacement, as already considered in the case of New York, people migrating or resettled because of SLR would be covered by the Guiding Principles on Internal Displacement. However, we recall that the Principles are not binding, and they do not impose any duty of assistance on the international community nor on any state.

In-between the national and the international levels, it is worth considering the regional one. In fact, unlike the previous scenario about New York, the Netherlands is a country part of a peculiar regional organization, the European Union. For this reason, if the threat of SLR hampered the country, it is very likely that the Union would intervene in some way. For instance, it could provide for some funds for the implementation of adaptation measures, also in consideration of Dutch contribution to the Union budget[58]. A part from financial assistance, in the case of population displacements the issue would be different.

To begin with, it is worth noting that, as exposed in section 2.1.4, the European Union has begun to consider the issue of climate-related migrations, but all the resulting documents consider migration in the Union coming from the outside. Therefore, there is not any kind of normative or policy framework that could be

[57] MCLEMAN, *op.cit.*, p. 189
[58] OLSTHOORN X., VAN DER WERFF P., BOUWER L.M., HUITEMA D., *op.cit.*, p. 116

specifically applied to our scenario. This is very important, because it will impact on the Union's response to a similar event.

Hence, it is sensible to imagine that in the case of migratory movements, spontaneous or planned, within the Netherlands itself, the European Union would intervene only in terms of financial and logistical assistance and support. In the absence of a previously agreed framework, in front of a disaster there would not be time to discuss on policies or legislative acts to regulate the matter. Therefore, only the most urgent need for assistance would be met.

The picture is likely to be different in case of movements from the Netherlands to other European member states. Given the freedom of movement of people established by the Schengen agreement, Dutch citizens would have the full right to move to other countries in the Schengen area. The Union could not hinder this choice, especially because, for several among them, life in their country would be dangerous and life-threatening. Moreover, even though not binding, the Guiding Principles on Internal Displacement apply also to the regional level. Nevertheless, in case of a mass movement of people, the problems would come from its unprecedented dimension, that would make it necessary to regulate and coordinate these displacements.

Further, if we had to apply McLeman's adaptive system scheme to this second scenario, the picture would be different from the previous one: the macro level would be constituted by policies and actions at the European level, rather than the national one, which would become the meso-level. The micro-one would remain the level of households. Here again, the model is consistent with our scenario, as all the three levels influence the migration decision and the adaptive capacity of individuals and families.

To conclude, it appears from our analysis that a major problem will be constituted by the absence of a European policy or normative framework when floods will make part of the Netherlands uninhabitable. Responses and actions would be taken without proper guidelines or a comprehensive strategy. Thus, even though the probability related to these events is not high, especially in the short term, we consider it necessary for the European Union to begin including the issue of climate-induced displacements within the area of the Union in its debates. We need to understand that the impacts of climate change, even in terms of migration, will not affect only distant and poor countries, but EU member states as well.

Given the hazards and damages related to a similar crisis circumstance, it is better to consider this risk and act to prevent it and deal with its effects. This will hopefully spur the ideation of a framework for action that will result crucial in the future management of those movements.

In the next section, we will move to the area of North Africa to consider the case of Morocco.

3.3 Morocco: Droughts and Sea Level Rise

The third case we have chosen to analyse is the one of Morocco. Belonging to the region of North Africa, or "Maghreb" in Arabic, at a distance of few kilometres from Spain, this is one of the countries often looked at by Europe as a possible origin of immigrants. Its nature of transit state, i.e. a state crossed by migrants heading over a further destination (usually Europe) makes it interesting also for debates over climate-induced migrations, as many of them often depict Sub-Sahara inhabitants leaving those areas for the northern shores of the Mediterranean. In what follows, we will show that in reality the picture is more blurred.

3.3.1 Data: migration and climate change

White recognizes Morocco as a transit state, that is a state that is not the final destination of migrants, but which is crossed in order to reach this latter[59]. Transit states are not passive territories: on the contrary they do play an active and crucial role in encouraging or discouraging out migration. They are characterized by five attributes: 1) they border, or are at a reasonable distance from, advanced and industrialized countries; 2) they are themselves emigration countries; 3) they host foreigners in transit towards other states, who often stay and work there due to the difficulty to reach final destination countries; 4) they carry out their own immigration controls, often in collaboration with industrialized countries; 5) they are often ready to participate in border controls, as a way to increase their negotiating powers and sovereignty claims[60].

[59] WHITE, Gregory, *op.cit.*, p. 95
[60] *Ibid.*, pp. 96-97

The first characteristic is particularly interesting in the case of Morocco. In fact, it is not only situated on the Southern shore of the Mediterranean, like all the other North African countries: its territory also surrounds the two autonomous Spanish cities of Ceuta and Melilla. There, Morocco and the European Union are separated only by border fences.

Morocco has been an emigration country for the most part of its recent history, with emigration flows directed primarily towards Western Europe[61]. During the interwar years, Moroccans emigrated to Europe in the context of French colonial strategies, and they also fought side by side with the allied powers during WWII. After the war, the explosive development of the "*trente glorieuses*" continued to attract labour from Morocco. Yet, migration reached a significant level only after Algerian independence, also because during the 1950s there were Italy and Spain providing for Europe's labour shortages. During the 1960s, Morocco signed several bilateral guest workers programs with the major European countries, and those programs evolved in more stable and permanent migration[62].

While at the beginning migration was mainly illegal and male, in the last decades many Moroccans have been legally naturalized in European countries and female and family reunification migration became more frequent[63]. Data of the European Commission show that in Spain, both in terms of residence permits and foreign resident population, the first nationality is the Moroccan one[64]. Nonetheless, illegal migration has been rising. Moroccan emigrants are mainly unskilled, but it is estimated that in 2000 about 20% of tertiary-educated people were living abroad[65].

In terms of push and pull factors, the elements of the dynamic are clearly identifiable: the evolution of European labour markets increases the need for the flexible wages structure offered by immigrant workers. Furthermore, emigration has been encouraged by the Moroccan state too, as a way of reducing ethnic tensions and employment pressures. It also permits securing foreign exchange through remittances and developing social capital[66].

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[61] Wodon Q., Burger N., Grant A., Joseph G., Liverani A., Tkacheva O., "Climate Change, Extreme Weather Events, and Migration : Review of the Literature for Five Arab Countries", *In* Piguet E., Laczko F., *People on the Move in a Changing Climate. The Regional Impact of Environmental Change on Migration*, Dordrecht, Springer, 2014, p. 120
[62] WHITE, Gregory, *op.cit.*, p. 99
[63] *Ibid.*, p. 100
[64] EUROPEAN COMMISSION, *Country Factsheet: Spain 2013. European Migration Network*, http://goo.gl/4JqZPz, consulted on 3 July 2015
[65] Wodon Q., Burger N., Grant A., Joseph G., Liverani A., Tkacheva O., *op.cit.*, p.120
[66] WHITE, Gregory, *op.cit.*, p. 102-103

Moroccan immigration history began more recently, in the late 1980s. The causes of this phenomenon are to be found in several factors. First of all, the relative expansion of Moroccan economy due to the neoliberal economic reforms linked to the structural funds of the World Bank and the International Monetary Fund. Secondly, the integration of Spain and Portugal in the EEC brought its boundaries closer to Morocco, and this coincided with a tightening of immigration controls in Europe. Finally, in the 1970s and 1980s sub-Saharan African countries experienced political instability and poor economic performances. All this pushed migration flows towards Morocco, as a way to reach European shores, which offered better lifestyles, jobs and consequent remittances[67]. In several cases, migrants also remain in Morocco instead of continuing toward the North, and they usually settle down in big cities[68].

For the interest of our analysis, it is now necessary to investigate the impacts of climate change in Morocco. This country is already characterized by deteriorating environmental conditions, which are likely to worsen due to climate change. Among the expected impacts, we can list a lower level of precipitations, a higher risk of droughts, the increase of dry areas in the North, and decreasing ground water[69]. Water shortages, which are already experienced by Morocco, can be linked to climate-related causes in the South and to demographic pressure in the North. Even though more than 80% of water is employed in agricultural activities, only 13% of cultivated land is irrigated. According to different climate scenarios, the country's agriculture would not suffer from decreased rainfall and water shortages until 2025 or 2030. Later on, however, agricultural output may drastically fall, especially – but not only - in those regions (northern and centre-west areas) where it depends primarily on rainwater[70].

Those changes are likely to have impacts on migration flows. In fact, 40% of Moroccan population works in the agricultural sector and nearly 70% of the poor are settled in rural areas. Thus, environmental and climatic shocks causing declines in agricultural output will have negative impacts on the livelihoods of thousands of people[71]. Nonetheless, it is worth recalling that the poorest ones are often unable to migrate, due to the high costs of this practice. As climate change

[67] *Ibid.,* p. 105
[68] *Ibid.,* p. 107
[69] Wodon Q., Burger N., Grant A., Joseph G., Liverani A., Tkacheva O., *op.cit.,* p. 121
[70] *Ibidem*
[71] *Ibidem*

impacts reduce their incomes and affect their livelihoods, the poorest people migrate locally or remain trapped[72].

Another impact of climate change to which Morocco is and will be subject is the increase in floods and the rise of the sea level. This is going to have severe consequences on the country, which has 3,500 km of coastline, and it is going to impact on migration movements too. Wodon et al. report the results of the EACH FOR project, which found that after a severe drought in Morocco in 2007, among the arrested illegal immigrants in Spain, two thirds came from Khouribga, a Moroccan farming and mining region. Hence it is already possible to identify a link between environmental degradation and migration, even at the international level[73]. Nevertheless, household interviews conducted by Wodon et al. show how socio-economic factors still play a greater role in migration decisions[74].

Though it is crucial to recall that migration flows are more frequently internal than international, and that environmental or climatic factors are rarely the primary reason at the basis of migration decisions, it is important to highlight the existence of these drivers. Furthermore, this picture is completely coherent with the view of climate change as an accelerator of already existing trends.

3.2.2 Possible future scenario and policy implications

In debates about climate-related migration Morocco is sometimes depicted as a country of origin or of transit for hundreds of thousands of migrants heading toward Europe. Nevertheless, catastrophic predictions have to be avoided as mainly inaccurate. In fact, evidence shows that, as far as Sub-Sahara is concerned, people tend not to move too far away, but rather toward major urban centres or coastal cities of the south[75]. White reports what has been defined by de Haas as the "myth of the invasion", which does not reflect actual data about these movements. For instance, de Haas estimates that around 120,000 people migrate each year to the entire Maghreb. This is surely a significant number, but it is far from the catastrophic predictions of some security studies[76].

However, to ignore those movements would be equally wrong, also because those numbers are likely to grow in the next decades. For instance, among the seven

[72] WHITE, Gregory, *op.cit.*, p. 48
[73] Wodon Q., Burger N., Grant A., Joseph G., Liverani A., Tkacheva O., *op.cit.*, p. 122
[74] *Ibid.*, p. 127
[75] WHITE, Gregory, *op.cit.*, p. 53
[76] *Ibid.*, p. 105

main migratory routes identified by Frontex as being used by migrants to irregularly cross European borders, the Western Mediterranean one goes from Morocco and Algeria to Spain[77]. Therefore, in this perspective, interregional agreements between the European Union and Morocco, possibly together with other Maghreb countries, could be a viable solution to regulate the issue of climate-related migrations.

This strategy could probably be inscribed in the recent history of Moroccan cooperation with the European Union. Since the 1990s, the state has been developing a sort of double-track strategy, on one side offering support to Moroccan emigrants in Europe, who became more and more long-term migrants, while on the other hand increasing controls for transit migration[78]. Moroccan efforts began in 1991, with a bilateral agreement with Spain, after decades of tensions between the two countries. While "The Treaty of Friendship, Good-Neighbourliness and Cooperation" did not mention irregular migration from Morocco to Spain, it did mark a rapprochement between the two. In the following years, Morocco signed other bilateral agreements with Spain and a number of multilateral conventions, for instance in the framework of the UN or ILO. In 1996, it signed an Association Agreement with the European Union, in the context of the Barcelona Process. The agreement covered several issues, from trade to financial and technical assistance, to cultural exchange. Nevertheless, negotiations were complicated by a number of difficult issues as surveillance against dissidents or drug interdiction. Moroccans lamented that the final agreement associated immigration to organized crime, terrorism and drugs[79].

With the new king Mohammed, Morocco knew important political openings, while 9/11 brought a securitization of relations with the North Atlantic allies. In this framework, Morocco became a non-NATO ally in 2004. Efforts to control immigration flows continued both in the form of joint actions with Spain as well as through Moroccan national law, above all the so-called Law 02-03, which mirrors Western immigration laws. However, this law links immigration with terrorism and criminality, focusing more on sanctions than on migrants' rights[80].

[77] MOREHOUSE C., BLOMFIELD M., *Irregular Migration in Europe*, Washington DC, Migration Policy Institute, p. 9
[78] WHITE, Gregory, *op.cit.*, p. 111-112
[79] *Ibid.*, p. 112-113
[80] *Ibid.*, pp. 114-115

Cooperation between Morocco and Spain accelerated in 2005, with several signs of rapprochement. In 2006 for instance, the outcome document of the Euro-African Ministerial conference on Migration Development held in Morocco and supported by French and Spanish ministers, the Rabat declaration, signalled international cooperation on illegal migration, even though not mentioning climate induced migration directly[81]. The environment and climate began to appear and to be considered as factors driving migration from the Sahel and sub-Saharan Africa only few years later. Of crucial relevance is the EU-Morocco Summit hosted by Spain in 2010, whose joint statement underlines the strategic Moroccan position in relation to both Africa and Europe, and the role it played in the "Africa-EU common strategy", among others in particular in the fields of climate change, peace and security. The document also underlines the need for regional cooperation in order to face the challenges associated with the Sahel region and for the strengthening of cooperation in order to combat illegal immigration[82].

To be clear, the major concern for Morocco in terms of emigration towards Europe is not the transitory one. But as Europe requests it to slow down the emigration of Moroccan citizens themselves, the state moves the discussion to the issue of migrants seeking their way to Europe through Morocco, an arena it can more easily control[83].

Sadly well-known examples of this were the episodes of September 2005, when hundreds of Sub-Saharan migrants tried to climb the border fences between Morocco and Ceuta. While more than 500 people succeeded, five died, shot by the Moroccan police, and almost 30 remained injured[84]. According to Doctors Without Borders, 6300 migrants (1400 according to official estimates) had died in the decade between 1995 and 2005 in the area of Ceuta and Melilla[85].

As it emerges from this analysis, future migration from North Africa to Europe is very likely to increase, and a progressively huge amount of migration decisions would be linked to environmental and climate conditions. In this respect, an interregional cooperation between the European Union and North Africa would probably be a necessary instrument to better manage these movements, in the interest and advantage of both origin and receiving countries and migrants

[81] *Ibid.*, p. 117
[82] *Ibid.*, p. 120
[83] *Ibid.*, p. 116
[84] LE MONDE, "L'assaut d'immigrants sur l'enclave espagnole de Ceuta a fait cinq morts", 29 September 2005
[85] LE MONDE, "À Ceuta ou Melilla, immigrer ou mourir", 6 October 2005

themselves. Given that a sort of cooperation already exists between the EU and Morocco, further developments in this sense would be very likely. Here again, as in the two previous scenarios, it would be crucial to build up a normative or policy framework before consistent displacements will begin to take place.

Once again, the subject of the role of the international community has to be questioned. We argue that the need for an international regulatory framework will depend on whether inter-regional cooperation would be successful or not. In the case of a well-planned and functioning strategy of prevention and adaptation between the two regions, or between the European Union and some single country, the issue would probably be enough regulated. In this perspective, even though an international agreement – binding or non binding – on the phenomenon of climate-related migrations will not be reached in the short or medium run, the issue could be managed through regional or inter-regional agreements. The crucial role of regions in global governance has often been emphasized. In fact, their wideness allows transnational coordination on a number of issues; they include states and societies with similar culture and history; they can play a strong and effective role on the international arena; and they are the framework where the advantages of cooperation and the disadvantages of its scarcity are more evident[86].

In this third scenario too, our analysis is consistent with the adaptive system built by McLeman (1.2.2). In this case, our macro-level is represented by the inter-regional policies and agreements on migration; the meso-level by the national ones; and the micro-level by households' conditions. They all play a crucial role in the final decision to migrate or not.

It is worth noting that, among the three scenarios considered, the one in which a minimum action already exists is the last one, in which migration would run from the developing to the developed world. This highlights a lack of awareness in the Western and developed world about the risks of climate change impacts on population movements within and across the developed world itself.

[86] Meyer T., "Globalization, Regionalization and Stateness", *in* Telò M., *State, Globalization and Multilateralism: The Challenges of Institutionalizing Regionalism*, Springer, 2012, p. 129

Conclusion

In what follows, we will recall the main points of our work, which has tried to answer to the question of why the international community has been until now unable to bridge the normative gap concerning the issue of climate-related displacements. Our hypothesis was that this is due to three characteristics of the global governance system, namely growing multi-polarity, institutional inertia and institutional fragmentation, and one attribute of the problem, its unprecedented complexity. We have "borrowed" the four independent variables from the theory about the gridlock of global governance designed by Hale, Held and Young, which has constituted our theoretical framework. We have combined with it the model of an adaptive system presented by McLeman. This has been a valid reference point in the second part of our research, where we have scrutinized the complexity of climate-related displacements through three hypothetical scenarios.

We have built three hypothetical scenarios – New York and New Jersey, the Netherlands and Morocco – in order to further develop the point of the problem's complexity, our fourth and maybe most interesting independent variable. They have been chosen because of their vulnerability and exposure to climate hazards and because they allowed concentrating the analysis on three different levels: the national, regional and inter-regional ones.

On the other hand, in order to demonstrate our hypothesis we have employed content analysis of documents, selecting the outcome reports of the UNFCCC Conference of the Parties (COP) from 2007, the year of the thirteenth COP in Bali, when climate-related migrations were for the first time included in UNFCCC negotiations. The most recent text included is the outcome document of the Geneva Climate Change Conference of February 2015. Moreover, we decided to comprise in our study also the summaries of the different Conferences of the Parties, which show the negotiations dynamics. The deductive analysis was based on four grids, one for each independent variable, in which the indicators were constituted by the mechanisms identified by Hale et al. for each pathway to gridlock. Further, we included in the picture also the UNHCR and IOM.

The results of our research have confirmed our hypothesis: all the four independent variables were found to have contributed to the immobility of the

international system. In particular, as far as the UNFCCC is concerned, the prevailing elements identified are growing multi-polarity and fragmentation. For the first one, several examples of divergent interests between developed and developing countries were identified. For instance, in Bali the text on mitigation was adopted only at the last moment[1]. In Doha, developing countries proposed an institutional mechanism to regulate loss and damage, but this was rejected by developed nations[2]. Also increased transaction costs resulting from an increased number of countries were frequently recognized: discussions were slowed down in Copenhagen because the African Group and the LDCs, with the support of the G77-China, suspended the negotiations as a form of protest against informal negotiations that were taking place. These latter too can be considered as a consequence of increased multi-polarity, as countries find incentives in building agreements outside formal talks[3]. In Bali, fragmentation was recognized in the fact that the delegates had to find a balance between the sessions of the UNFCCC COP, of the Kyoto Protocol COP/MOP, of the subsidiary bodies, of the Ad Hoc Working Group and informal meetings, as well as among the several negotiating issues[4]. Fragmentation was identified in Copenhagen too, generated by the lack of major progress of the UNFCCC which incentivized several subnational and non-state actors to turn to initiative, programmes and policies addressing climate change outside the UNFCCC umbrella[5].

IOM and UNHCR, on the other hand, are mostly characterized by institutional inertia. However, this is different from the one identified by Hale et al., who define it in terms of crystallized distribution of power among countries. Here, we found institutional inertia in the mandate and scope of action of the two institutions. As far as the UNHCR is concerned, the lack of consensus among parties on the widening of the definition of "refugee" makes it impossible for this institution to protect climate-related migrants[6]. IOM, on its part, does not belong to the UN system, and it lacks a specific mandate, normative authority[7] and a treaty to oversee[8]. Even though it committed to the issue of climate-related migrations, it cannot count on a comprehensive and coherent mandate of action. Therefore, we can inscribe the lack of an international agreement on the theme of

[1] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, (a) *op.cit.*, p. 15
[2] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, (f) *op.cit.*, p. 20
[3] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, (c) *op.cit.*, p. 28
[4] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, (a) *op.cit.*, p. 18
[5] INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, (c) *op.cit.*, p. 30
[6] HALL N., *op.cit.*, p. 102
[7] MCADAM, Jane, *op.cit.*, p. 230
[8] Betts A., *op.cit.*, p. 8

climate-related migration to the general gridlock characterizing current global governance.

However, two elements resulted more crucial than the others. The first one is the institutional fragmentation of the system of global governance on this phenomenon. The absence of an international institution in charge of the management of the issue leads to, as McAdam states, both vertical fragmentation, with actors operating at different levels, and horizontal fragmentation, so that the phenomenon is addressed as part of other policy categories[9].

The second element, as anticipated, is constituted by the characteristics of the problem, which make it of such a complexity that cooperation results hampered. In fact, climate change is hardly ever the only factor determining the decision to migrate, but one among many others. Thus, climate change should rather be considered as an accelerator of already existing dynamics, or as a threat multiplier. Furthermore, very often these movements remain within the boundaries of the country of origin, with people falling in the category of internally displaced persons (IDPs). Moreover, it is often argued that migration constitutes only one of the possible adaptive responses to climate change, as there are other strategies that population can put in place. In any case, migration is not always a failure to adapt, but it can be acknowledged as an adaptive mechanism[10]. The complexity of this phenomenon, as we have already argued, derives also from its combining of two major global problems of our times, namely migration and climate change. Cooperation is difficult on the two issues when discussed separately, and it can only be made even more difficult by their coming together.

We have decided not to concentrate this work on the causal relationship between climate change and migration. Rather, we preferred to shift our focus on the governance of climate-related migrations, acknowledging the existence of a normative and political gap and scrutinizing why it has not been bridged yet. Therefore, this made it possible to focus on the problems of cooperation and identifying the causes, or at least a part of causes, at the basis of the lack of it. In our view, this is an important contribution of our research. In fact, this allows moving on to the most urgent need regarding climate-related displacements, which is the creation of a new or reformed framework to address them. It is not

[9] MCADAM, Jane, *op.cit.*, p. 213
[10] MCADAM J., (d) "Creating New Norms on Climate Change, Natural Disasters and Displacement: International Developments 2010–2013", *Refuge*, vol. 29, n°2, 2014, p. 11

possible, we believe, to solve a problem without knowing its underlying origins, and this is valid also for international cooperation.

Hence, future paths of research following our work could be focused either on the deeper analysis of the causes of the lack of cooperation or, perhaps more interestingly, on possible solutions to this *impasse*. We briefly suggested in chapter 3 that the management of this phenomenon at the regional or inter-regional level could have several advantages, among which a better knowledge of local situations and a higher national propensity to cooperate with neighbouring countries. Moreover, countries in a same region often share similar problems related to both climate change and migration. A further possibility could be the building of a multi-level system of governance, combining in a comprehensive way the local, regional and international level, as suggested by McAdam. For lack of space, we could not examine in depth these possibilities, but we believe they constitute interesting starting points for future research.

Lack of space and time brought with them other limitations. A major one was considering only people moving in case of natural disasters or weather events. As it is often the case, our analysis concentrated on those who are able to leave. However, frequently the most vulnerable and most poor do not even owe the necessary means to migrate, which constitutes a rather costly solution, sometimes because they have lost them as a result of the natural disaster that hit them. Thus, they remain stuck and subject to threats and hazards. A gap in the governance system exists for them too[11], but we could not address it here. Yet, this constitutes another spark for future analysis.

[11] WARNER K., (a) *op.cit.,* p. 410

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Annexes

Table 1 Growing multi-polarity

Conferences/ Mechanisms	Increased transaction costs	Exacerbated Legitimacy Dilemma	Divergence of interests
COP 13 Bali			"During the negotiations, several issues proved difficult to resolve, especially during the talks on long-term cooperative action under the Convention. Text on mitigation by developed and developing countries was particularly contentious, with ministers and other senior officials continuing to meet well beyond the scheduled close of the meeting at 6:00 pm on Friday, 14 December. After meeting in a small-group setting until shortly after 2:00 am on Saturday morning and reaching a tentative agreement, the plenary reconvened at 8:30 am. However, some parties were still unable to agree on text on developing countries' mitigation actions, and it appeared that discussions were on the verge of a breakdown. At 10:30 am, UN Secretary- General Ban Ki-moon and Indonesian President Susilo Bambang Yudhoyono returned to the conference, urging delegates to reach a compromise. Agreement remained elusive until Saturday afternoon, when parties finally agreed to a proposal by India and other developing countries to text referring to nationally appropriate mitigation actions by developing country parties in the context of sustainable development, supported by technology and enabled by finance and capacity building in a measurable, reportable and verifiable manner. After the EU and all other parties had accepted this language, the US agreed to join the consensus, and the decision on long-term action under the Convention was adopted." (International Institute For Sustainable Development, 2007: 15)
COP 14 Poznan			"Parties were unable to agree on the further actions to be carried out, and were also unable to agree on text on the status of the implementation of decision 1/CP.10 (Buenos Aires programme of work on adaptation and response measures), due mainly to disagreement over the treatment of the impact of response measures. No outcome was reached and the COP took note of this during its closing plenary on 12 December." (Summary, p. 5) "he success on the Adaptation Fund was tempered by the inability to secure additional resources for the Fund due to lack of agreement on extending the share of proceeds (or "adaptation levy") to Joint Implementation and emissions trading under the second review of the Protocol under Article 9." (International Institute For Sustainable Development, 2008: 18)

COP 15 Copenhagen	"There were also other time-consuming procedural hurdles. On Monday, 14 December, the African Group and LDCs, supported by the rest of the G-77/China, called for suspending negotiations under the AWG-LCA and on all other issues under the AWG- KP apart from Annex I parties' further emission reductions beyond 2012. The move was intended as a protest against only AWG-LCA issues being taken up during informal ministerial discussions." (International Institute For Sustainable Development, 2009: 28)	"During the opening of the high-level segment on 16 December, the Danish COP Presidency officially announced its intention to table two texts "based substantially on the two texts forwarded by the AWGs." The proposal angered many delegates, especially developing countries, who argued that the proposal undermines their "transparent and democratic" efforts throughout the year to develop negotiating texts under the AWG-LCA and AWG-KP. (...) Informal consultations ensued, taking up an entire day of negotiating time on Wednesday during the second week, at what many saw as a "critical point" in the Conference. As a result, parties agreed that only texts developed by the AWG-KP and AWG-LCA would be used as a basis for further discussion. While many blamed the Danish COP Presidency for the time wasted, some others voiced concerns over the rejection of the Presidency's proposal. (...) Many delegates first learned about the Copenhagen Accord on the internet and draft versions of the text were also leaked through the media long before the official UNFCCC document was produced. Most media reports alluded to a deal crafted by a small number of countries. Many close to the process despaired, arguing that announcing an agreement reached by a small group of countries was not democratic or diplomatic." (International Institute For Sustainable Development, 2009: 28)	"There seems to be no question that the deep divisions and ill will that characterized the negotiations and the resulting Copenhagen Accord were disappointing to many negotiators and observers alike." (International Institute For Sustainable Development, 2009: 29)
COP 16 Cancun	"For a successful substantive outcome, "balance" was the magic word. Coming to Cancun, most parties specified that balance was required between the two negotiating tracks under the Protocol and the Convention, and between the key elements of the Bali Action Plan. UNFCCC Executive Secretary Figueres offered the following recipe: "Everyone must be equally happy and equally unhappy with the outcome." " (International Institute For Sustainable Development, 2010: 29)		
COP 17 Durban			

COP 18 Doha			Loss and damage: "The issue proved controversial and was forwarded for ministerial consultations by Edna Molewe (South Africa) on 5 December. She reported that the main political issue concerned the potential establishment of an institutional arrangement, such as a mechanism. An institutional mechanism was proposed by developing countries, while developed countries were reluctant to accept this." (International Institute For Sustainable Development, 2012: 20)
COP 19 Warsaw	"Late nights, too, continued to compromise transparency, efficiency and inclusiveness" (International Institute For Sustainable Development, 2013: 30)	"Since Copenhagen, concerns over transparency and process have cast a shadow over the UNFCCC. The need to rebuild both trust among parties and legitimacy of the process is dire. To some extent, more transparent and inclusive talks in Cancun and the Durban "indabas" did manage to restore a certain degree of confidence. Yet, acrimonious discussions returned again in Warsaw as the fragile feeling of trust dissipated. Developing countries complained of "broken promises" and made desperate calls for implementing agreed commitments on finance, while mutual accusations of backtracking were thrown around. Some controversial statements made during a press conference sparked a finger-pointing session between the Like-Minded Developing Countries (LMDCs) and the EU, which some even described as "negotiating through the media." With trust issues like these, the road to Paris is likely to be a bumpy one.(...) Anxieties surrounding transparency and inclusiveness versus efficiency and effectiveness (...) have been haunting the UNFCCC process for years. And although COP President Marcin Korolec was hailed for conducting the process in a transparent and party- driven manner, many developing countries' delegations were spread too thinly to be able to effectively follow the packed agenda" (International Institute For Sustainable Development, 2013: 29)	"Several developed countries stated that loss and damage is part of the mitigation and adaptation continuum, whereas developing countries identified loss and damage as a separate issue, distinct from adaptation." (Summary, p. 18) "For developing countries, particularly members of AOSIS and the African Group, it was therefore crucial that the mechanism's specific functions and modalities include provision of support and that funding for actions on loss and damage come from a dedicated source separate from adaptation finance. Conversely, developed countries repeatedly emphasized that, as part of the Cancun Adaptation Framework, arrangements on loss and damage should not duplicate or add layers to the existing institutional framework. In the end, agreement was only reached during the closing plenary, with the G-77/China squeezing in last-minute amendments in a final attempt to distinguish loss and damage from adaptation, even if only in the preamble." (International Institute For Sustainable Development, 2013: 28)

COP 20 Lima	"Noting parties' inability to move beyond "some bracketed preambular paragraphs" over a three-hour contact group session, ADP Co-Chair Kumarsingh emphasized that the remaining three days of negotiations "are counting down." " (Summary, p. 29) After the Presidency's consultations with negotiating groups that continued late into Saturday night— many hours after the Conference was supposed to conclude at 6:00 pm on Friday, the 'Lima Call for Climate Action' was concluded." (International Institute For Sustainable Development, 2014: 43)		"On the operative paragraphs, on a paragraph on the scope of the 2015 agreement, Nauru, for AOSIS, supported by Mexico, Bangladesh and the Dominican Republic, emphasized loss and damage as a separate element of the new agreement. The US and Canada opposed this, with the US saying they were prepared to accept the rest of the paragraph in light of assurances sought by a number of countries." (International Institute For Sustainable Development, 2014: 33)
Geneva	"Given that the first reading of the text was completed early in the week, the Co-Chairs, with the support of many parties, made several attempts to start streamlining the text by removing duplications and redundancies. However, some negotiating groups were not ready to proceed to this stage. As a result, apart from technical corrections, the negotiating text remained the same on Friday as it was on Tuesday evening." (International Institute For Sustainable Development, 2015: 13)		"Reading through the Geneva text, some veterans commented that it "almost inevitably" reflects sharper differences in parties' positions than the Lima text." (International Institute For Sustainable Development, 2015: 13)

Table 2 Institutional Inertia

Institution/ Mechanism	Formal lock-in of decision making authority	Entrenchment of cognitive and organizational focal points
UNHCR	"Refugees were defined narrowly in the convention, reflecting the post-war context. (…) Refugee status is a specific, legal category of persons (…). The convention's categorization of refugees is at the heart of UNHCR's mandate and identity". (Hall, 2013: 95-96)	"IOM does not have a protection mandate. It does not oversee a treaty regime and has little normative vision of its own" (McAdam, 2012: 230). "It exists (...) primarily as a service provider to individual states that pay for its services. The IOM has not clear mandate provided by the international community, in the way that most UN agencies have a statute that provides them with normative authority." (Betts, 2011: 8)
IOM	"UNHCR is a normative IGO. It has responsibility for supervising two international conventions: the refugee and stateless conventions. (…) In short, UNHCR was established with an exclusive mandate to supervise the Refugee Convention." (Hall, p.95) "There was no consensus support from member states to develop such a protection framework for climate change displacement. In sum, UNHCR has not gained a mandate to expand its activities into protection for those displaced across international borders by climate change sudden or slow onset events." (Hall, 2013: 102)	

Table 3 Institutional fragmentation

Mechanisms/ actors	Increased transaction costs	Inefficient division of labour	Excessive flexibility
COP13 Bali	"Delegates in Bali had to balance meetings of the UNFCCC COP and the Kyoto Protocol COP/MOP, along with the subsidiary bodies, the Ad Hoc Working Group, dozens of contact groups and informal consultations on issues ranging from budgets to national reporting to reducing emissions from deforestation in developing countries, not to mention side events held by governments, international organizations, business and industry, and environmental NGOs. Balancing the large number of participants, issues and negotiating venues requires stamina, time management and a lot of creativity. With the launch of new negotiations on a long-term agreement, which, by definition must be more ambitious than anything that has gone before, yet another piece has been added to the ever-growing complex puzzle that makes up the climate regime." (International Institute For Sustainable Development, 2007: 18)		
COP19 Warsaw			"What is increasingly gaining relevance are the growing number of initiatives, policies and programmes outside the UNFCCC actively addressing climate change. Often, these are borne out of the frustration of subnational jurisdictions and non-state actors with the lack of progress in the UNFCCC. In some cases, governments eager for progress have turned to other international institutions, such as the Montreal Protocol, or taking unilateral measures. Several hundred civil society representatives, even those usually engaged constructively in the negotiations, walked out of COP 19, demonstrating their deep reservations—also felt by others—on the ability of the UNFCCC to deliver." (International Institute For Sustainable Development, 2013: 30)

Geneva			"Several parties, however, have long resisted addressing this issue" (i.e. the organized migration and planned relocation of populations that will be forced to move as a result of climate change) "under the UNFCCC, and negotiations on loss and damage are likely to be complex" (International Institute For Sustainable Development, 2015: 14)
IOM		"Although there is an International Migration Organization (IOM), it remains outside of the UN framework and has no explicitly normative mandate other than as a service provider to states." (Betts, 2011: 3) "The governance of climate - change related movement (like global migration governance more broadly) suffers from significant fragmentation, both vertically - with actors at the international, regional and local levels - and horizontally - with the phenomenon addressed in part or, more rarely, as a whole under the auspices of a range of other 'policy categories' and associated institutions. (...) Yet despite (or because of) the plethora of existing, as well as potential, governance mechanisms, processes, and institutions, no coherent multilateral governance framework exists for this purpose. (...) None of these organizations provides a comprehensive and coherent multilateral framework regulating State responses to such movements. Moreover, institutions in the various policy fields may have overlapping or conflicting mandates, or alternatively such a limited/partial perspective that the phenomenon as a whole remains beyond their scope." (McAdam 2012: 213-214) "There is no formal or coherent multilateral institutional framework regulating states' responses to international migration. There is no UN Migration Organization and no international migration regime, and sovereign states retain a significant degree of autonomy in determining their migration policies. (...) Although there is an International Migration Organization (IOM), it remains outside of the UN framework and has no explicitly normative mandate other than as a service provider to states. The degree of institutionalized cooperation that exists in relation to migration is therefore relatively limited in comparison to many other trans-boundary issue-areas. Yet this is not to say that there is no global migration governance. Despite the absence of a 'top-down' multilateral framework, there is a rapidly emerging 'bottom-up' global migration governance framework. In the absence of coherent multilateral institutions, states are creating ad hoc forms of multi-level migration governance. An increasingly complex array of bilateral, regional and inter-regional institutions is emerging." (Betts, 2011: 3)	

Table 4 Harder problems

Extensity: scope of problems has increased	Intensity: problems penetrate more deeply into society
"Climate change - related migration is a multi-causal phenomenon; climate - related displacement is likely to have different forms, and will require a variety of responses at the local, national, regional, and international levels" (McAdam, 2011: 236) "Climate change affects migration but cannot be isolated as the sole cause of movement. Rather, it interacts with and overlays other economic, social, and political drivers (or stressors) that themselves affect migration. It is a multi-causal phenomenon. Second, and closely linked to the previous point, climate change–related movement migration is a part of global migration dynamics generally, rather than a discrete, independent category, and it needs to be understood within a wider development context, not just a humanitarian one." (McAdam, 2014: 1)	
	"Factors fostering mobility are not only numerous, but also inter- twined. For example, environmental change can generate health problems or food insecurity, which may in turn foster migration. In such cases, identifying the 'primary' cause of migration is probably impossible, as all causes may mutually reinforce each other. Environmental factors may also play a greater role if they emerge in a context already characterised by political, demographic, economic, or social tensions; climate change would thus be an additional burden, which can have a multiplier effect. (...) Environmental and non-environmental factors can also interact in a step-by-step manner: if people have already moved for predominantly economic reasons, they could be more likely to move again because of climate change." (Piguet et al., 2011: 13)