



**Climate-induced migration in Western Sub-Saharan Africa : Improving the policymaking of the European Union. The case study of Senegal and Nigeria.**



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# **Introduction**

This dissertation engages with the topic of climate change and migration, and more precisely on the nexus of the two in regards of the immigration from Senegal and Nigeria to Europe, from a political perspective.

## **1.1. Historical perspective**

Human populations have always moved with the seasons, natural disasters or territorial conquests. In the past, catastrophic events such as the earthquake recounted by Voltaire in his *Poem on the Lisbon Disaster* have displaced large numbers of people. However, since the industrial revolution and the release of astronomical amounts of greenhouse gases have led to considerable environmental degradation and a new global era that scientists call the "Anthropocene" (Milán-Garcia and al., 2021). There is now a consensus and recognition that our lifestyles and production patterns are harmful to the planet. The "climate crisis is the greatest threat" that humanity will have to face in the upcoming decades (Roth and Henrich Böll Foundation, 2020). The consequences of this environmental degradation manifest themselves in various ways, such as through the displacement of millions of people across the globe.

The link between migration and climate change has only recently been made. Migration became a new topic of study in the 1990s, at the same time as the first Intergovernmental Panel on Climate Change (IPCC) reports were released. Since the migration waves of 2011 and 2015, migration and its implications for society have become a new object of study that catalyzes political interests. Indeed, the waves of migration that occurred in these two years have revived interest in transboundary issues (Panebianco, 2022). In parallel, the IPCC has predicted an acceleration and worsening of droughts, storms and hurricanes, which has a direct impact on the living conditions of affected populations (IPCC, 2007; McAdam, 2011). Yet, comically, the link between the two has long been non-existent, if not completely ignored. It was first mentioned in 1985 in one of the United Nations Environment Programme's reports entitled *Environmental Refugees*. It was not until major events such as Hurricane Katrina, which displaced nearly 60,000 people, that the link was made (Gemenne and Cavicchioli, 2010).

Since then, many research programmes have been conducted. The EACH-FOR programme, for example, was one of the first to compare environmental degradation in almost 23 countries and to highlight the link with migration. This study not only demonstrated the link between environmental modification due to changing climatic conditions and the desire to immigrate, but also highlighted the fact that all populations react differently to this issue (Gemenne, Cavicchioli, 2010). It is therefore now a real subject of study that is attracting the attention of more and more researchers. But what does "environmental migration" mean? What terminology should be used? Furthermore, which line of study should be adopted to analyze this phenomenon from a new angle?

## 1.2. Definition

Debates about migration are often constrained by poorly defined and misused terminology (Cournil & Mayer, 2014:21). There are already words that could be applied to this kind of situation, but the different terms, whether 'migrant', 'refugee', 'emigrant' or 'asylum seeker', all connote very specific legal or social situations. Indeed, the status of 'refugee' refers directly to the Geneva Convention of 28 July 1951, which precisely defines the criteria according to which a person can be recognized as persecuted (Cournil & Mayer, 2014:22). It states very clearly and exclusively that a refugee is an individual:

« owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it. »  
(UNHCR, 1951)

The term 'climate refugee' or 'environmental refugee' therefore responds more to a desire to challenge and alarm the political class to place this issue at the top of the agenda (Vigil, 2016) than to a real legal status

The most common used definition for environmental migration is the one proposed by the OIM. Environmental migrants are “persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad” (IOM,

2007:33). Another definition is given by Wilkinson in the case of 'climate-induced migration', a similar terminology but more precise. He defines them as 'movement of people driven by sudden or progressive changes in the weather or climate [...] temporary and permanent, seasonal and singular, as well as voluntary and forced movement' (Wilkinson et al, 2016:2; Söderberg Olofsson, 2021:3).

The choice of terms for this topic is far from politically neutral, as each term has a different understanding and definition. Thus, for the purposes of this assignment, the two definitions that will be used will be those cited above, and any other terminology should be avoided.

### 1.3. Problem foundation

#### 1.3.1. Recognition of environmental migration as a matter of environmental justice

If this question deserves a dedicated dissertation, it is because it deals with key societal issues. Climate change is no longer a vague concept used to frighten corporations, but a reality that we are all already facing. Dealing with the issue of climate migration is like dealing with issues of social justice (Latour, 2010). European countries have a responsibility towards the countries of the South most affected by climate change, as they are the primary instigators (Latour, 2010.).

Inequalities in resilience to climate change will increase and lead to what has been described as a real 'climate apartheid' (Alston in Cournil, 2022). In that sense, there is a form of 'climate justice' at play in the understanding of climate migration. Climate justice is, according to Nobil Ahmad and Maas-Albert, indicative 'of an ethical commitment to life, livelihoods and struggles against inequalities' (Ali et al, 2020:10). It is then neither a 'luxurious extravagance' nor a simple 'question of morality' (Ali and al., 2020:10) but the need for a coherent and comprehensive policy response to the challenges of climate change to ensure the well-being and dignity of nations, borders and all members of humanity (Ali and al, 2020:10). It is therefore a form of shared responsibility towards society to take charge of issue and adapt our behavior accordingly. Especially since the Covid-19 crisis has shown that policies can adapt quickly to an emergency, provided the policymakers have the mind to do so (Nobil Ahmad et al, 2020:9).

### 1.3.2. Environmental migration a political object in the European perspective

The choice of a European perspective is partly due to the place of Europe in public policy and the ambiguous relationship that Europe has with the migration history. Migration is one of the “most dynamic areas of EU policy-making” of the past two decades (Schmidthäussler, Niemann, 2014:1). In not even 20 years, it has become one the most “fully communautarized” sector in the EU policy area (Schmidthäussler, Niemann, 2014:1.). This can be explained through a variety of phenomenon. Indeed, this question lies at the heart of the community, as it affects the group identity. Identity 'for oneself' (Fray and Picouveau, 2010) is always defined in opposition to an identity defined by others (Goffman, 1975; Baudry and Juchs, 2007). In this sense, it is also possible to speak of the identity of a social group. The feeling of belonging to a group leads to what are called 'identity strategies' (Baudry and Juchs, 2007). The group gives itself an identity, which is not naturally given, but which is defined according to habits to distinguish itself and exist as such. In the West, the phenomenon of migration has led to a fear of the dispersion of culture and identity (Fargues, 2001). The issue of identity has become increasingly prominent in policy discourses in recent years. Indeed, globalization 'bridges gap in cultural differences through migration and reshapes cultural norms and values' (Ezemenaka, 2019:75). It is precisely this phenomenon that creates rejection among some Europeans, who see migration as a threat to their identity and therefore refuse to allow migrants to be integrated into European society (Ezemenaka, 2019). If it is not the majority who think this way, the rise of far-right parties such as Alternative for Germany (AFD) are a more or less direct consequence (Euronews, 2018 in Ezemenaka, 2019). There is therefore a real duality operating within Europe, with on the one hand the desire to define itself as a host country and on the other the difficulty of reconciling foreignness with European society.

This topic also offers an interesting reflection in terms of governance. Indeed, Europe is often criticized for its disparate governance and lack of coherence in the policy making process. Suffering generally from vertical and horizontal 'fragmentation', whether in terms of a lack of coordination between different actors or at the level of policy categories and institutions (McAdam, 2011), this is even more striking in the case of environmental migration. There is a real 'agenda denial' (Cobb & Ross, 1997; Vlassopoulou, 2008) regarding the management of migration and environmental issues. There is a notable and undeniable gap in the legal and the institutional framework (Panebianco, 2021), even though migration is increasingly prominent in political discourse. It is interesting to note that there is a real 'climatization of global politics'

(Panebianco, 2022) but that it is not always translated into reality. The linkage between migration and climate change can be made either in scientific terms or as a political claim (Panebianco, 2022), and therefore the disconnection between political discourse and the reality of facts and/or actions is a particularly visible in this case.

Since 2010s, the term “adaptation” is widely used in policy documents (Nobil Ahmad and al, 2020:11). It refers directly to the need for Member States and policy makers to implement concrete actions to limit the consequences of global warming. This is reflected in the EU Strategy on Adaptation to Climate Change, which aims to move from "planning to implementation" (IISD, 2021) and which recognizes the importance of also participating in the adaptation of partner countries and countries outside the EU, whose situation can directly affect the EU "through cascading and spillover effects on trade or migration" (IISD, 2021). There is a need to reflect on the action that the European Union should or can take with the countries from which most of the migratory flows originate. In other words, the EU's external policy tools need to be rethought to ensure that environmental migration is managed effectively and, especially that the main populations concerned do not suffer from inappropriate discourse or actions.

### 1.3.3. Lack of data and empirical analysis

The difficulty with this topic is that the correlation between migration and climate change is not direct. We must leave aside the deterministic tendency according to which the slightest disturbance would lead to migratory flows but, instead, recognize that environmental change can be a push factor determining or aggravating other factors degrading living conditions (Latour, 2010), which in turn lead to the desire to emigrate to more clement lands. Despite the numerous scientific pieces written on the subject, there is very little empirical analysis that has been produced on the issue. Researchers face numerous difficulties, from the difficulty of predicting which population will be affected, what the mechanism of adaptation will be, to what the 'precise causal link between the effects of climate change and its impacts on human settlements' is (Gemenne and Cavicchioli, 2010:84). Therefore, there is little work devoted to estimating the number of climate migrants, as it is complicated to isolate the environmental factor from other factors (Diallo and Renou, 2015).



The reference works on this subject are (Diallo and Renou, 2015) those of the UNEP in 1898 under the direction of El Hinnawi, the Jacobson report published in 1998 under the direction of the World Watch Institute and the Myers report published in 1993. The latter report predicted that the number of migrants could be between 150 and 212 million by 2050. However, this issue has been “ignored or narrowly framed in the past” (Ali and al., 2020:9), which makes it a subject that is still under construction, requiring further analysis of this phenomenon.

#### 1.4. Case study

The case studies illustrating concretely the above-mentioned issues will deal with the West African zone and more particularly Senegal and Nigeria. It is a region that can be considered as « hotspot of current and future climate impacts” (Rigaud et al., 2021b:12; Muller et al. 2014; Niang et al., 2014). There is a high confidence that the warming already observed in the region will continue (Knutti and Sedlacek, 2013 in Rigaud et al., 2021b) and even increased drastically. It has been calculated that the temperature has already increased by an average of about 1.5-2°C compared to the temperatures that were recorded in 1950 (Bendandi, 2019). Moreover, according to the IPCC, climate variability and the changes in the surrounding environment will result 'to aggravate poverty, food insecurity, inequalities, violence and conflicts' (Bendandi, 2019:320). In his conceptual model, Abel et al. has designed a framework that shows how climate change can create instability in several directions. Climate effects such as drought, difficulties in agricultural production yields can lead to three types of migration, namely internally displaced persons, asylum seekers/refugees or economic migrants, whose displacement can in turn result in demographic pressures and conflicts over resources. Similarly, the effects of climate change may lead to conflicts over resource scarcity, which in turn may lead to migration (Abel et al., 2019 in Bendandi, 2019). It is therefore an interesting area to study because in the context of this region, and more specifically in the two countries chosen, climate change can be both a causal and an aggravating factor of migration. It is in this context that the European Union has an opportunity and must use the tools at its disposal and better migration governance to ensure not only better adaptation on the ground, but also better reception of the populations that reach its soil, while avoiding repeating the previous mistakes or adopting a paternalistic stance.

### 1.5. Research questions and purpose of the research

#### **Research questions.**

Therefore, in view of the multitude of elements established above, several questions arise regarding the treatment of environmental migration. What is the reality of migration flows from West Africa to Europe? To what extent is climate change a determinant of these migrations? How is this question perceived by political actors and policymakers ? How does the repoliticization of this issue on the agenda, depending on how it is interpreted, affect the treatment of the migration issue?

#### **Hypothesis.**

Several hypotheses will be refuted or confirmed in this research. The first is that there would be a gradually exponential increase in flows to Europe, due to the exacerbated vulnerability of populations to climate change. The second is that the response of policymakers in the European Union is totally inadequate to this situation, hurting the populations concerned.

#### **Purpose of the research.**

The aim of this research is to understand how climate migration originating from vulnerable countries is dealt with at an institutional level by the European Union and more precisely how this pressuring and urgent issue is approached by policymakers. A second aspect is to see how to overcome the possible policy gap by analyzing the concrete actions that should and will have to be taken in a close future.

#### **Research frame.**

To answer this question, the research will be divided into three chapters. The first aims to provide a theoretical framework for environmental migration based on the scientific, sociological and political discourses surrounding the issue. The second deals more specifically with the existing policy gap around climate-induced migration and the tools that could be put in place to fill it. The third chapter is a case study on environmental migration to the EU in Senegal and Niger and aims to compare the reality of these situations with the theoretical discourses mentioned above and to identify what role the EU can play to improve their management.

# Methodology

## Qualitative analysis.

This dissertation will follow the grounded theory method developed by McNabb in his book on *Research Methods for Political Science* (2015) based on Glaser and Strauss' model. This paper will also mainly be based on a qualitative approach, which means that the research process and the conclusion will be based on “nonstatistical inquiry techniques and processes used to gather data about social phenomena” (McNabb, 2015).

## *Time zone.*

For the sake of clarity, this research will briefly review the history of the study of environmental migration but will focus on the change in perception of this subject from the late 1990s to the present day. The most important studies on the subject were published in the 2000s and they continue to be updated every year. The time scale of analysis will also briefly extend to the years 2030-2050 to evoke expert analyses on the evolution of migration flows and their reception by the political sphere. It was not realistically possible and of the upmost interest to go back over the full history of environmental migration theorizing, nor to make a very detailed analysis of future expectations in terms of meteorological evolution. For this reason, it was chosen to restrict the analysis to these well-defined time periods.

## *Structure.*

In the first part, the aim of this research is to understand how climate migration is dealt with at an institutional level by the European Union, based on the analysis of the various reports instituted by policymakers. The idea is mainly to demonstrate how migration has become an object of policymaking. The data collected to participate in this analysis will be mainly a collection of "grey literature", i.e., a collection of reports from public institutions such as the European Parliament, the Commission or the World Bank, which will be compared with the work of academics on the same subject. The main actors at the core of the analysis will therefore be the networks of experts who deal with the issue, the policymakers and the way in which public action has taken up the issue of migration,

The second part will consist of a qualitative multi-case study approach (McNabb, 2015:236) through the examples of Senegal and Nigeria, in relation to Europe. These two case studies fall into the category of collective case studies, in that their analysis allows for the study

of a particular phenomenon (McNabb, 2015:237). Indeed, these case studies allow for a better understanding of the 'interaction of personal behavior and collective institutions' in the case of environmental migration, but especially 'the interplay of agency and structure' (McNabb, 2015:238). To analyze these different case studies, the data collection followed the following process. The research in this dissertation is based primarily on readings of published literature on the subject. Three main media were identified: institutional and parliamentary reports, scientific journals and finally anthropological/sociological articles about migration and environmental migration. These media offer a wide range of information and analysis on the subject, and above all allow for a comparison between the conclusions drawn by policymakers and those of scientists, who are faced with different realities.

### **Quantitative part.**

Even if this takes up only a negligible part of the assignment, the quantitative data should be mentioned as a supplement. The data quoted will be used for the understanding of migration flows develop and how they are interpreted in the political sphere. Thus, the quantitative analysis will be based on the Shared Socioeconomic Pathway, and the Representative Concentration Pathway models used to quantify the vulnerability and exposure of populations. These data primarily present probability scenarios for the future based on estimated correlations between several elements. They are used to predict and anticipate future behavior 'based on observed changes in existing conditions' and thus 'provide a greater understanding of phenomena' (McNabb, 2015:12; Shaughnessy and Zechmesiter, 1994), but should be considered with much caution.

### **Weaknesses of the methodology.**

The time and geographical constraints as well as the means allocated to this research did not allow for sufficient empirical analysis, thus echoing the study weaknesses already highlighted on this issue.

Empirical data on migration are highly contested, due to the difficulty of qualifying them quantitatively and qualitatively (Baillat, Tarore Chazalnoël, 2022:91). Quantifying their extent is particularly complex. The results of the studies cited should therefore be interpreted with caution. There is also much controversy between the different schools of thought on what criteria should be considered when qualifying environmental migration, what elements should be considered as determinants and how to manage the governance of migration.

To complement this academic work, interviews were planned to be conducted to gather the views and opinions of experts from different contexts on the issue. In view of the time restrictions imposed by the writing of this master's thesis, the number of these interviews was insufficient to claim a completely exhaustive result and did not allow to gather enough evidence for the clarification on specific issues.

The study presented cannot be totally exhaustive insofar as it was necessary to make a choice as to the concepts to be studied and the criteria to be retained to study environmental migration. Thus, the desire to focus on the study of vulnerability, adaptation strategies and governance at the European level are choices that have been made, but which limit the scope of the analysis.

# **Chapter 1. Theoretical framework : the nexus climate change and migration**

How were the first links made between the climate change and migration? What are the different schools of thought on the subject? How has the political and institutional discourse evolved on the subject? This will be explored in the next section, which will first look at the link between climate change and migration, before looking at the concept of vulnerability to climate change. It will then look briefly at the predictions of migrations flows, before comparing them with the official discourse on migration in Europe.

## **1.1. Climate change and migration**

As explained in the introduction above, migration is not a new phenomenon and has been part of the humankind since forever. Human beings were part of nature, adapting to the environment around them and evolving with it. However, environmental factors have always been largely absent from the analysis around displacement. Piguet explains this phenomenon by four different reasons, as follows. One line of argument was that technology would reduce the influence of nature on humans and that they would no longer be dependent on hazards (Piguet et al., 2011:88). The second argument in favor of a disconnection between environment and migration is that it was mainly a deterministic approach, which was rejected in the 1990s. The third reason is that economic factors have been given a prominent place in migration studies, and this has thus taken precedence over the rest (Ibid.). The Marxist influence thus led to the economic factor, but also and above all the political factor, being considered as one of the reasons for the displacement of populations (Ibid.).

It was not until the 1990s and the IPCC report on climate change that interest in the link between climate change and migration moved up the political agenda (Piguet and al., 2011:87). The succession of COPs as well as the arrival of dedicated experts on the issue within UNHCR and IOM (Cournil, 2022) also contributed to the realization that climate change is no longer simply a natural phenomenon as it had been before, but an anthropogenic consequence of the highly polluting activities of the last two centuries. However, the compartmentalization of disciplines was still very present at that time. Thus, environmental specialists predicted an alarming evolution and made a direct link between the two without taking into account the

analyses of migration specialists, who were more reserved about a possible correlation between (Piguet et al., 2011:89). Today, both sides agree that it is very difficult to agree on the role of environmental change in migration, due to the lack of empirical data (Piguet et al., 2011:89). The study of environmental migration thus highlights a paradigm shift in scientific research, since it involves recognizing the intersectionality of fields and agreeing on the fact that migration can be interpreted in different ways, whether it is analyzed through the prism of science, in economic terms or in political terms (Piguet et al, 2011:89). Nowadays, the linkage between climate change and migration has “entered the IO’s research agenda (...) paying specific attention to sub-Saharan Africa” (Panebianco, 2022).

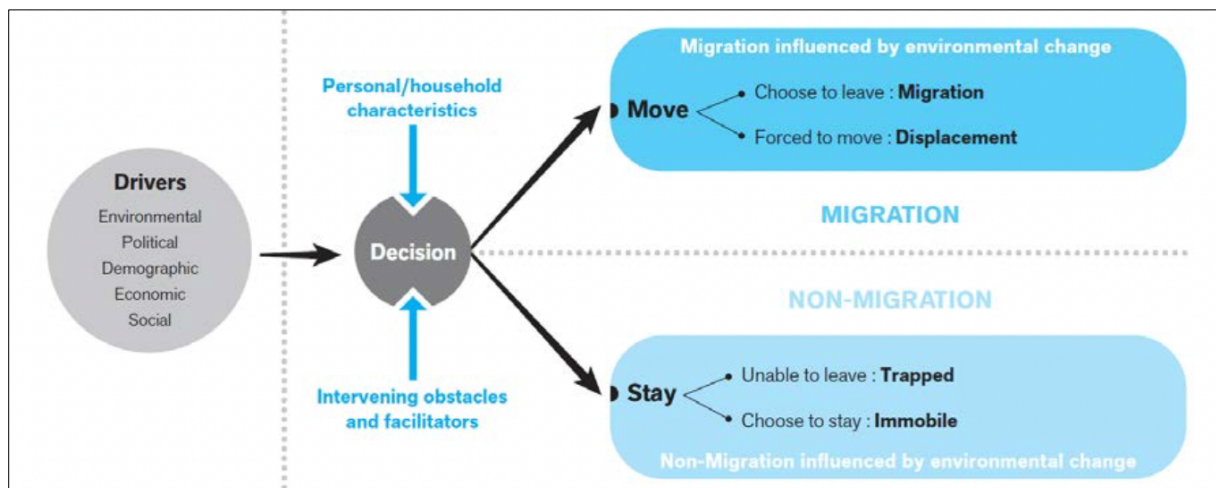
There are still two competing views of the problem: those who see migration movements as 'adaptation processes' and those who see migrants as 'victims' of climate change and therefore deserving of special refugee status (Gemenne, 2018:84). Depending on how migration is perceived, the policy response will be very different. The debate on climate change and its implications is so politicized that any statement about environmental migration cannot be dissociated from political discourse (Piguet et al, 2011:89). It is even more so since the link between migration and security has continued to be highlighted as a threat to peace and security (Baillat, Traore Chazalnoël, 2022:91).

The question that arises is mainly how climate change can influence international migration paths. In that case too, there are two schools of thought. Naudé's 2008 study of nearly forty-five countries showed that climate change has an indirect effect on environmental migration insofar as it exacerbates the three main causes of migration, namely the scarcity of water and arable land, conflicts and natural disasters. The interaction between environment and living conditions remains complex to grasp and it is difficult to say which of the economy, conflict or environmental conditions is more decisive for the departure decision (Brüning and Piguet, 2018). The second school argues that unfavorable weather conditions will dampen migration. Indeed, although it may seem counter-intuitive, migration due to a change in the primary environment usually generates a decrease in migration (Brüning and Piguet, 2018). Some studies show that international migration may increase when weather conditions are perceived as more favorable (Brüning and Piguet, 2018) but decrease when they are not as there may be a trapping effect, i.e., people do not have the capital to leave in case of environmental stress. Academically speaking, trapped populations are defined as those "who do not migrate, yet are situated in areas under threat, [...]having to stay behind, where they will be more vulnerable to

environmental shocks and impoverishment. The notion of trapped populations applies to poorer households who may not have the resources to move and whose livelihoods are affected" (IOM, 2019). In that sense, it must be borne in mind that environmental change “may also cause significant levels of immobility” (Kraler and al., 2020:30). The decision to stay can be forced due to a lack of assets but can also be an individual choice because opportunities can arise out of situations of environmental change for some people (Kraler and al, 2020:31; Hendow et al., 2018:29), if they find new ways to adapt to these conditions. Indeed, it must be remembered that the decision to migrate is first and foremost a personal decision, and that beyond the external elements that may favor this decision, personal elements and the agency of individuals must be considered (Panebianco, 2022). Migrations aspirations have been well analyzed in the past decades by academics as a new form of coping mechanism (Migali and Natale, 2021:71). While asking populations which conditions would trigger them to move, the most common answers were : “finding work”, “economic hardship” and “poverty” (Migali, Natale, 2022:76). Migration can be seen as a coping strategy to overcome the difficulties encountered in the original country or in the original area. It is aiming at finding better living conditions and reducing the negative consequences of the immediate environment. To understand the migratory patterns, it is therefore also necessary to take into account the issue of the perception of climate change by the populations. People are more aware of changes in their immediate environment when weather conditions affect the 'livelihood activities, such as agriculture, water availability or vegetation changes' (Van Praag, Lietaer & Michellier, 2022). The understanding of these events depends on general factors such as the emphasis on climate change in general policy discourses (Marin & Berkes, 2013 in Van Praag, Lietaer & Michellier, 2022) or the culture of regional migration based on cultural and religious factors, which in turn determine the culture of risk and vulnerability shared by local communities (Vedwan, 2006 and Jenkins et al, 2018 in Van Praag, Lietaer & Michellier, 2022). Hence the importance of also considering an anthropological and societal perspective in understanding migration phenomena and flows, rather than relying primarily on scientific models.

To summarize, there are four different types of human mobility while considering the linkage between climate change and migration, depending on the living conditions and the individual perception : migration, displacement, trapped populations and immobility.





Source : Ionesco, 2016 ; Kramer et al., 2021:32

In this study, we focus on the first two cases, i.e., the case where people have no choice but to migrate because disasters are already present, and the case where disasters are a certainty and therefore a decisive factor in the decision to move.

As can be seen, the scope for studying the link between migration and climate change is very broad. The above are theoretical contextual elements that were necessary to understand the framework of the topic.

## 1.2. Climate-induced migration, vulnerability and population exposure

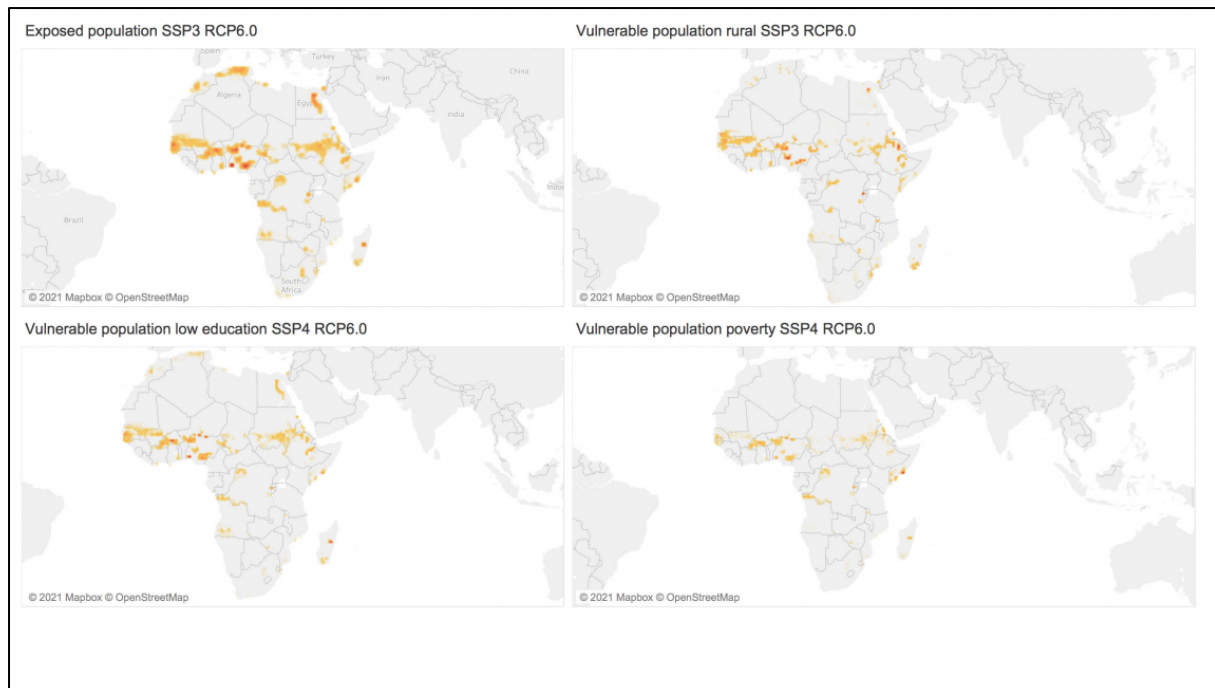
The question of why people move is central to the study of migration. The concepts that are important to consider are multiple. However, in the context of our study, the ones that stand out most are those of vulnerability and exposure. It is relatively complex to determine which part of the population will be most affected by climate change. The concept of exposure and vulnerability were defined by the IPCC to assess “the impact of climate change on environmental and human systems” (Migali and Natale, 2021:13). The last report on this topic was published last year, in 2021, by the EU Scheine Hub of the European Commission. In this report, the severity of climate change impacts is defined by the “interaction between extreme weather events and climate hazards” in relation with “the exposure and the vulnerability of environmental and population system” (Migali and Natale, 2021:13). In that context, exposure is defined by “the spatial overlaying of the presence of population and the local manifestation of impacts from climate change”, while vulnerability is understood as “ the population’s

capacity to cope with the adverse consequences of climate change” (Migali and Natale, 2021:13). To determine these two indicators, two sets of scenarios are to be considered, among others, which are the Shared Socioeconomic Pathways (SSPs) and the Representative Concentration Pathways (RCPs). The SSP represents the plausible future changes at a global level in ‘demographics, human development, economy and lifestyle, policies and institutions, technology, and environment and natural resources’ (O’Neill et al., 2017). It is a set of 5 different scenarios that are used for adaptation planning purposes because they describe the trends that could arise, depending on the chosen path. It is representative of the socio-economic challenges faced by society while trying to adapt to climate change by choosing a mitigation strategy (Migali and Natale, 2021:14). In the modelling used for climate migration by the Groundswell program, it is generally the SSP2 and SSP4 scenarios that are considered, which correspond respectively to a « middle of the road » pathway and an unequal development scenario. In the first case, it means that there would be a “moderate population growth urbanization, income growth and education; and have moderate challenge to adaptation” (Rigaud et al., 2021b:79). The second sample of scenarios is given by the Representative Concentration Pathway (RCP). It represents the change in the energy balance of the earth system. The RCP scenarios represent the different possible trends of CO<sub>2</sub> scenarios (Rigaud et al., 2021b:80). In the lower one, or the so called RCP2.6, the temperatures peak are kept in between 0.25 to 1.5°C, aligning with the targets of the Paris Agreement. In the higher emission scenario, the RCP8.5, the temperatures will “rise by 0.5 to 2° by 2050 and by 3°C to 5.5°C” (Rigaud et al., 2021b:80). To achieve the scenario of RCP2.6, new technologies and strong environmental policies are needed. The RCP8.5 scenario would become true if the GHG emissions keep increasing and fossil fuels are still the most-used resource.

SSP and RCP were modeled independently from each other. However, this independence between the two sets is exactly what allows the intersection between them and allows to link climate mitigation to adaptation challenges. By crossing the SSP and the RCP, it is possible to have different scenarios of the conditions under which the vulnerability of the populations could be aggravated or reduced. The Groundswell methodology, developed by the World Bank, selected 4 likely scenarios in its model: a more inclusive development (RCP8.5/SSP2), a pessimistic reference (RCP8.5/SSP4), an optimistic one (RCP2.6/SSP2) and a more climate friendly (RCP2.6/SSP4). This model considers the effects that water availability has had in the past, as well as the results of crop productivity or net primary productivity (NPP). Another study led by Silvia Migali and Fabrizio Natale also uses these parameters by linking

population exposure to the reduction in agricultural productivity due to climate change and gives similar results while considering the SSP1 to SSP5 scenarios. They are also considering the possibility of the RPC6.0 scenario, i.e., where efforts to try to mitigate the consequences of climate change are relatively average.

According to these results, Western Africa will encounter increasing temperatures and changing rainfall patterns. The production of maize, millet and sorghum are expected to fall, and the global yield loss lies could reach -11% over the century (Migali et Natale, 2021). When considering SSP1, 212 million people would be exposed to the risk of climate change and the populations most exposed will be in West and North Africa (Migali and Natale, 2021). According to SSP3, which corresponds to the “regional rivalry” model with a warming estimated to be between 3.9 and 4.6 in 2100, 162 million people, so about 15% of the population, would experience a drastic drop in productivity of more than 20% (Migali and Natale, 2021:27). In case of a crossing SSP3/RCP6.0, there would be an increase of about 15% in the share of the exposed population. In the cases of SSP3 and SSP4, the population experiencing the biggest percentage of exposure is the one with low education, because of a lower adaptive capacity to climate change (Feinstein and Mach, 2020; Striessnig and Lutz, 2016 in Migali and Natale, 2021) and the population living in rural areas. These populations are considered as more “likely to be remote, geographically and socio-economically (...) and will be highly vulnerable to radical changes in their environment” (Migali and Natale, 2021:30). In this scenario, it is also very likely that the high level of vulnerability will be accentuated by nationalist resurgences, causing increased border controls and thus a new difficulty for international mobility. The following graph gives an overview of the distribution of exposure and vulnerability of populations according to the different factors:



Hotspots of exposure and vulnerability according to the worst combination of SSPs and RCPs scenarios

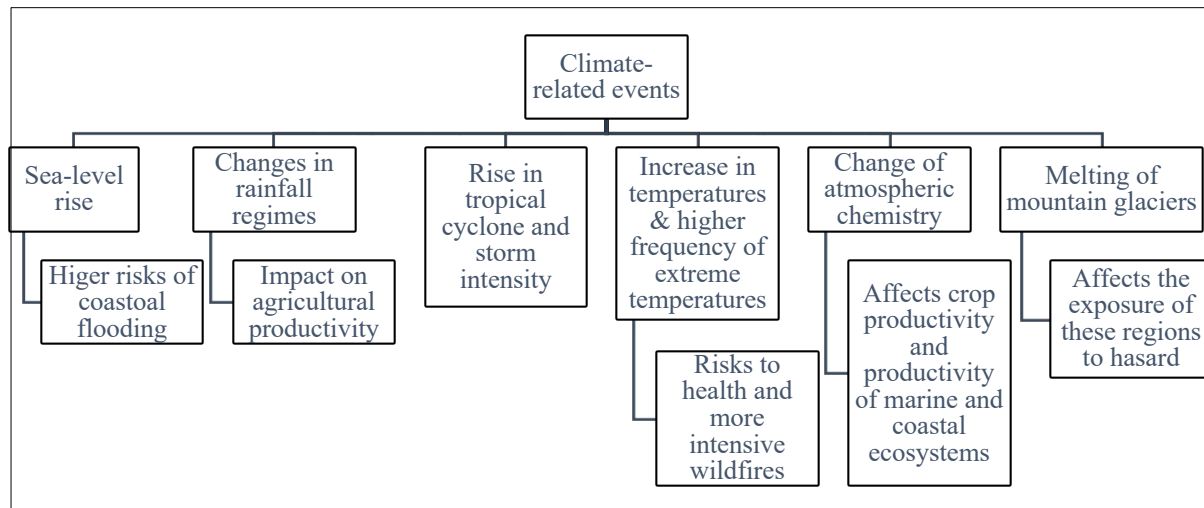
Source : Migali and Natale, 2021:31

By comparing all the different scenarios envisaged by the above-mentioned indicators, it is very likely that the vulnerability would be higher in the sub-Saharan Africa, and especially in Western Africa (Migali and Natale, 2021). It does not mean that more people will migrate (Migali and Natale, 2021) but show that there might be change in the demographic distribution of the countries, to adapt to the climate change, which could lead to new migration flows. The vulnerability of population tends to be higher in agricultural regions, where populations are dependent from weather hazards and farm yields. However, it is important to stay careful while asserting that any change in the agricultural production will force population to immigrate. The actual impact on the migration flows is still unknown, and uncertainties are still present regarding the mechanisms at stake or the actual consequences on some populations (Piguet et al., 2011:86). Climate change can be a factor, but mostly for middle-class population, who have the possibility to finance their emigration, while poor and rural populations are restricted by “liquidity constraints” (Cattaneo and Peri, 2016; Migali and Natale, 2021:41), which is illustrated by the concept of trapped populations (cf. 3.1.). In that context, the likelihood that climate change will increase the willingness to migrate is also linked to the policy decisions that will be taken and the willingness to mitigate the consequences of environmental change.

### 1.3. Forecast : what kind of expectations for the future ?

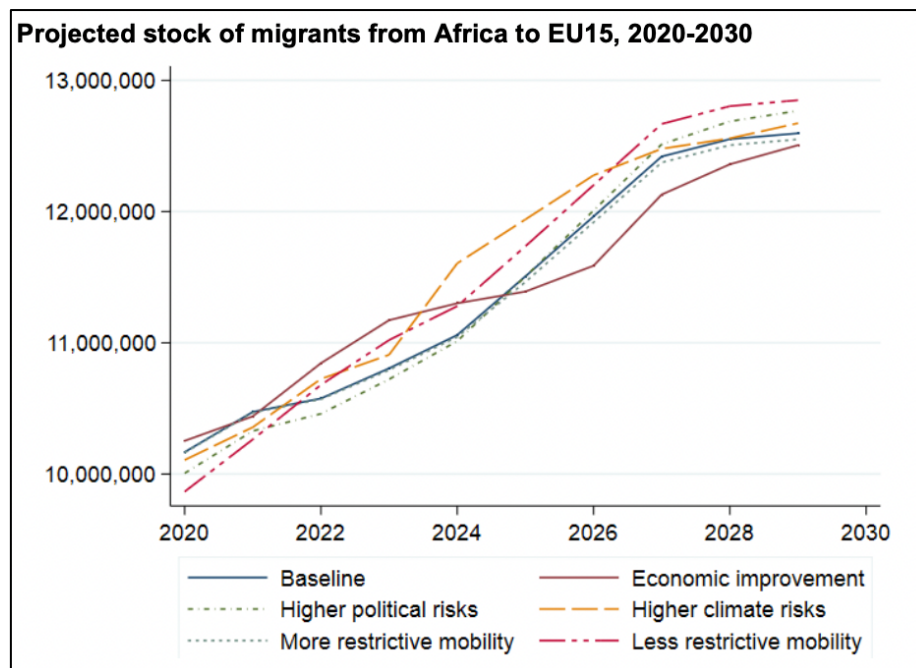
As the link between climate change and migration has been made, much research has focused on predictions, based on scientific studies of migration flows and meteorological research, of increased/changed migration patterns.

There is a growing demand from the European Commission for “foresight and anticipatory knowledge” around future migration patterns (Szczepanikova, Van Criekinge, 2018:10). In the context of a rapid increase of refugee in the past decades, the demographic forecasts became a key element of the planification of policy planning and comprehensive analysis (Szczepanikova, Van Criekinge, 2018). Understanding how the migration maths are going to evolve is necessary to an “anticipatory and proactive” response (Rigaud and al., 2021b:75). The main problem of this political request is that there is a lack of empirical and scientific evidence and analysis. Indeed, migration is such a complex phenomenon that forecasting models “are not able to capture the multitude of social, political, demographic, economic, environmental and technological drivers that underpin migration processes” (Szczepanikova, Van Criekinge, 2018:10). In addition, the definition of migration and pushing factors also diverges depending on the country, which makes it more difficult to determine the migration flows. As a result, different interpretations of different data might give completely different projections (Szczepanikova, Van Criekinge, 2018). Migration nexus is mitigated by a lot of migration drives, not only the climate change but the thing with climate change is that it impacts daily life conditions such as economic development, demographic dynamics and urbanization processes, the presence of conflicts or other forms of violence, agricultural productivity, food security and the scarcity of resources” (Migali and Natale, 2021:36). Environmental factors, climate variability and extremes shocks might increase the exposure of the populations to the consequences of drought, rainfalls, level sea rise or storms (Rigaud and al, 2021b:75). The Foresight study of the European Union, climate changes contribute to drastically modify the environmental conditions and influence individual environmental events (Kraler et al, 2021:28). The study identifies six types of climate related events that can influence “migrating drivers” leading to migration outcomes, which are (Kraler et al., 2021:28) :



Source : Kraler et al., 2021

It is very difficult to predict with certainty the exact impact of these environmental changes on migration flows and in which direction they will go. However, from the different analytical data that have been gathered on the topic, it is very likely that the percentage of displaced people will generally increase, especially when climate disasters are expected to also increase. One of the last reports of the UN estimates that the number of displacements already reached 281 million in 2020, which is almost 3.6% of the global population (Clement et al., 2021:38). The pandemic of the Covid-19, which has exacerbated the fragility of a certain fringes of the population, conflicts occurring in the region and climate change might be drivers for an increasing mobility and displacement in general (Clement et al. 2021; United Nations, 2020). In total, it is estimated that the number of environmental refugees could reach 25 million to 1 billion in 2050, either internally or across border (Bassetti, 2019). According to the Groundswell report, it is estimated that nearly 71 million people 'will have to migrate in the confines of the African sub-region due to slow-onset climate change', which corresponds to nearly 3.5% of the total population of sub-Saharan Africa (Zandt, 2021). Several countries are concerned about the increase in asylum applications in Europe. Here too, studies on the subject are very disparate and have difficulty in agreeing with each other. The Vienna Institute for International Economic Studies (WiiW) has predicted that migration flows to Europe will increase in all cases (Grievenson, Landesmann, Mara, 2021):



Source :

WIIW

projections. Grievenson, Landesmann and Mara, 2021

However, other projects have shown that migration flows to Europe will not necessarily increase exponentially, except in cases where there is already a pre-existing migration trajectory to Europe or if there is a trend towards family reunification (Entzinger, Jäger and Gemenne, 2008). While no study agrees on concrete figures, they all point to an increase in internal displacement that could have consequences for international migration (Alessandrini, 2020; Rigaud et al, 2021b; Grievenson, Landesmann and Mara, 2021; Kraler et al, 2021).

Thus, while tools are set up to measure the vulnerability, exposure and displacement of populations affected by climate change and who would be able to move as a result, care must be taken in their interpretation. This is precisely what is problematic at the political level, as the results of these models and the interpretations made of them differ greatly depending on the ambitions of those in power. This point will be at the core of the argumentation in the next section. In other words, the institutional discourse on migration generally takes up these models for the purpose of instrumentalization of the political scene and transforms it to benefit the security discourse.

#### 1.4. Institutional discourse around migration

Following the elements demonstrated above, there are three types of human mobility related to climate change that have been identified by the Advisory Group on Climate Change and Mobility (Wilkinson et al., 2016:2). First, the case of 'displacement' where people have no choice but to move due to climate-related disasters, either within the country or across borders. Secondly, the case of 'migration' where movement is the result of an individual decision, based on a calculation of the risks of exposure to climate change as well as considering socio-economic factors. Finally, 'planned relocation' which is 'instigated, supervised and carried out by the state' and which is often accompanied by resettlement (Wilksinson et al, 2016:2). Depending on the terminology, attitude and discourse adopted, the treatment of the migration issue will be completely different.

Policymakers are usually more inclined to respond to the concerns of the population, which revolve around these notions of security and limiting flows to Europe. This attitude can be explained by the fact that the policy-making decision process is nowadays based more on 'urgent events' or attempts to respond to crises (Rhinar, 2019). However, a crisis is a particularly subjective element since it is first and foremost an intersubjective concept that is perceived as a "threat to core values and essential societal structures" (Rhinar, 2019). This policy responds to contradictory data, but which generally point to migration in a negative way. While some studies have showed that EU citizens are feeling comfortable having social relations with immigrants (Grievesson, Landesmann and Mara, 2021). Some surveys have shown that even if a person may not like immigration, ones can consider other policy areas such as economy to be more important (Hatton, 2017; Grievenson, Landesmann and Mara, 2021). However, other studies have highlighted the fact that some countries are reluctant to welcome more immigration. To the question « in your opinion, should we allow more immigrants to move to our country, fewer immigrants, or about the same as we do now ? (%) », the results are around 50% of the population answered "fewer/none", 40% around the same and 10% more (Pew Research Center, 2018). Such data can be really confusing for policy makers, who must deal with opposite views on the problem. This can also be explained by what Vlassopoulou et al. call the 'bounded rationality of institutions' (Vlassopoulou et al., 2013:91). In other words, H. Simon explains that there is a category of individuals who call themselves the 'administrative man' (Simon, 1957 in Vlassopoulou et al., 2013) who acts in a partially rational way, since his reflexive process is necessarily influenced by less visible affective and cognitive aspects. Thus, the rationality of these administrative men who make up the institutions



is limited by fragmented and limited access to knowledge of the phenomenon under study, because they do not master all the consequences of their decisions, because they use tools from past experiences to deal with new situations and because they must adapt to external pressure (Vlassopoulou et al., 2013). Institutions act permanently with the social context and cannot detach themselves from its values and perceptions (Vlassopoulou et al., 2013).

Consequently, in the European Union, the political discourse around migration is often either ignoring the scientific conclusions, as they are perceived as too imprecise to be used or depicting migration as a security problem. The development of the European migration policy as indeed often be linked with threats to global peace, leading to three main elements : the externalization of the migration policy, the securitization and the “crisisification” of the migration issue. The externalization of the border is an element that is happening since a couple of decades. The EU's response has been to restrict access to its external borders and to externalize the management of migration flows. The concept of externalization generally refers to the economy and corresponds to an activity that is pushed out of its base establishment to a subcontractor in exchange for payment (Passarella, 2018). In the case of migration, it corresponds to the process whereby 'European actors and Member States complement policies to control migration across their territorial boundaries with initiatives that realize such control extra-territorially and through other countries and organs rather than their own' (Moreno-Lax and Lemberg-Pedersen, 2019).

In the academic and policy discourse, the approach that is prevailing is also the one of the “securitization” (Huysmans, 2000). Migration is often associated with destabilization of political regimes and then with a threat. This political approach is focused on reducing the push factors in the origin countries that make people want to move to Europe and on complicating the asylum request. The Dublin procedure has already made more difficult to get the refugee status, as the waiting time and the number of applications has been reduced but also the procedure is very complex (Huysmans, 2000). The conservative discourse that takes up the theories of the clash of civilizations such as Huntington's or of societal disintegration presents migrants as enemies who come to invade Western civilization (Huysmans, 2000). These statements and the actions that follow from them are themselves part of the creation of the figure she denounces. This is a real issue because promoting the securitization goes against the European model of solidarity and endangers it. In the same way, Rhinard is talking about the general “crisisification” of policymaking in the EU (Rhinard, 2019). In other words, this means

that policymakers are nowadays prioritizing the urgent events and are then led to prioritize speeches over long-term policies and actions. This is linked to the idea of securization as it is linked to the idea of “safety”. The legitimacy of the bureaucracy in Brussels relies on the ability to avoid the risk and provide a safe answer (Rhinard, 2019). More specifically, there are two different types of dynamics going on in the EU that have broad implications on the EU policy that must be noticed. The first dynamic is the fact that politicians are expected to give an answer within a few hours after an event arose – for example after the 9/11 or the terrorists’ attacks of Madrid in 2003 – and the EU is simultaneously asked to do more in such times (Rhinard, 2019). The second dynamic is that the Commission is implementing more and more advance policy goals through tools, momentum or programs with the specific objectives to drastically increase or reduce an issue (Rhinard, 2019). Therefore, the society and the action of the European political agenda are looking for the managing of surrounding risks, as it is the obsession of the new modernity (Beck, 1986 in Rhinard, 2019), following a logic of urgency. However, policymakers position themselves as ‘providers of security’ (Rhinard, 2019) to ensure their legitimacy at the political level, even if the actions taken are not always the most appropriate to the situation.

In brief, there is a certain form of « lack of climate justice consideration ». The political approach around climate migration is focusing on the idea to “‘avert’, ‘minimize’ and ‘address’ displacement” instead of tackling the issue of responsibility and liability (Liguori, 2021:27). The institutional response to migration is more one of reducing flows and is putting aside the moral responsibility to provide solutions to climate change related mobility (Liguori, 2021). This highlights the fact that, in general, the political response and the mode of governance employed does not necessarily correspond to the reality of the scientific facts presented but rather adapts to the feelings of the governed, creating a gap between the discourse and the reality of actions. The institutional response to a given situation is therefore highly dependent on factors that are not necessarily scientific or empirically based, but also depend on the economic and cultural reality of individuals.

This section aimed to situate current theoretical discourses on environmental migration, both scientific and political. This is a very complex subject to study, given the multi-causality of migration and the difficulty of predicting with certainty what the flows will be in the future. Another difficulty is also the interpretation made by politicians of these forecasts, which can sometimes result in a discourse that is totally at odds with reality. Based on these elements, it

is now important to return to the treatment of this issue at European level. How is the issue of environmental migration received? Does it correspond to the reality of the situation? How can this policy gap be remedied?

## **Chapter 2 : Dealing with environmental migration at the European level: what possibilities?**

This chapter is dedicated to the understand how migration is treated at a political level within the European Union. It is about understanding the gap between political strategy and scientific reality and determining/seeing how the actions of certain actors could influence a different political treatment than the current one. In other words, from what angle is migration policy understood in Europe? What about environmental migration? How does this illustrate the gaps in the political framework? What are the responses to this phenomenon? This question is addressed at this stage of the assignment because understanding the gaps in the EU's legal and political framework is an essential step in understanding the case study and the analysis that will follow in Chapter 3.

### **2.1. A 'differentiated and insufficient' solidarity in Europe (Cournil, 2022)**

The nature of the European Migration policy has always been ambiguous because trying to compromise between the interest of the different parties (De Haas et al., 2021). The European Union's political strategy in terms of migration has thus long been unclear but has become clearer since the issue has become a central policy issue. In general, as explained in section 3.4, the general discourse tends towards an atmosphere of 'social and political securitarianism' (Vianna, 2008) and migration policy is subordinated to flow control (Vialla, 2008).

Nowadays, the issues of migration protection are carried out in very different ways in Europe. Vlassopoulou, in one of her articles, even speaks of an "agenda denial" in that advocate of a primary reading of the Geneva Convention argue that including environmental migrants will diminish the level of protection offered by the right to asylum. She also points out that the multitude of DGs dealing with migration issues undermines the effectiveness of migration management (Vlassopoulou, 2008; Cournil, 2022). Mobility is one of the blind spots in the EU's climate and humanitarian policy. There is also a real problem with a policy effectiveness because there is a gap between the public discourse, the actual policies as they are thought by technocrats, the policy implementation and the outcomes (De Haas et al., 2021). It is in this last remark that the main problem lies, since the discursive gap between politicians' rhetoric and actual policies contribute to the increase perception of failure of the European Union (De Haas

et al., 2021). This lack of confidence and legitimacy will lead politicians to use security or restrictive policy and an overcontrol of the situation, as following the model of the “riskification dynamic”. This has led the European Commission to address the issue primarily from a security perspective. This is, in any case, the main thrust of the Solana report, published in 2008, which links climate change and the security implications (Cournil, 2022). However, what the European Union has often referred to as a migration crisis is more akin to a 'crisis of governance' (Sahin-Mencutek et al., 2022).

Even at the level of Member States, there is a difference in discourse between countries. In the latest summary of the *French Contact Point of the ad-hoc query on climate change and migrations*, the level of discussions on this issue is really disparate :

Level of discussion	International	Within the civil society	Political level	Media	Scientific Level
Member States	Greece Ireland	Belgium Germany France Italy Luxemburg Netherlands	Austria, Belgium, Germany Italy Sweden	Finland Germany United Kingdom Norway	Belgium Germany Italy Poland United Kingdom

Source : European Migration Network, 2018

There is a real gap between countries that are advanced on the issue and recognize temporary statuses and those that do not yet consider opening their legislation to debate. Only Sweden and Italy have tried to introduce 'environmental disasters' as a possible justification for applying for humanitarian protection in their legislation (European Migration Network, 2018; Cournil, 2022b). In other countries, this issue remains a dead letter for the time being. At the level of Brussels, there are also institutional obstacles that do not facilitate the task. Geddes and Scholten (2014) observe a new form of transgovernmentalism in which national governments increasingly seek support at EU level, leading to a certain form of 'loss of control' on the part of national governments. Conflicts arise as the struggle and lack of cooperation between institutions is real (Scholten and Penninx, 2016). Where there is an effective level of governance, however, it is noted that the Commission's proposals for a more comprehensive and proactive migration policy have failed and that vertical cooperation, where it does occur, tends towards better control of flows (Scholten and Penninx, 2016).

While efforts are being made or have been announced in terms of support for the adaptation of populations, these are only marginally visible. The New Pact on Asylum and Migration does not make any concrete proposals regarding environmental migration but simply identifies it as a societal problem. This plan has also been criticized for several reasons, such as the "solidarity à la carte", a particular emphasis on security but not on securing legal and labor migration pathways (EESC, 2021). Christel Cournil also notes that in the Green Deal strategy, the flagship plan of Ursula Van Der Leyen's presidency, none of the twelve measures dealing with ecological transition addresses the issue of "managing climate-related disasters and displacement in member countries" (Cournil, 2022). There have been initiatives taken with different research programmes implemented at the European level, but with unfortunately limited results, such as the EACH-FOR and CLIMIC initiatives. The EACH-FOR project was funded by the Commission between 2007 and 2009. Two objectives were set for this project. Firstly, to explore the causes of migration and secondly to develop scenarios on the likely evolution of migration networks (Entzinger, Jäger and Gemenne, 2010). It is one of the first to attempt to bring empirical results to bear on the issue and to make a comparison between different case studies. Already in 2008, it recommended the creation of an international status for people forced to move due to environmental degradation. The second proposal was to consider a sustainable development policy that reduces the effects of climate development at source, emphasizing the need to link development and migration policies. However, this proposal seems to have fallen on deaf ears and few of the recommendations have been taken on board. The CLICIM project, used for "Climate change induced migration", is providing reports and expertise on the "nexus between climate change and population dynamics in Africa" (European Commission, 2021) and was launched in 2020. This project is one of the first one which seeks to quantify and anticipate the future response of the population confronted to climate change. It also provides evidence and expertise on the vulnerability of this population, through quantitative and qualitative reports (European Commission, 2021). So far, this initiative has not had any repercussions at the political level.

Nothing concrete has been done in this respect. A gradual change is emerging at the level of external policy. As is often the case, the European Union's primary approach to ensuring the resilience of countries facing natural disasters is through funding policies (Cournil, 2022). The Cotonou Agreement, adopted in 2000 between the EU and 79 African, Caribbean and Pacific (ACP) countries, makes clear reference to 'climate change' and 'migration and mobility' (European Council, 2022). However, here again, the focus is on development policies and the

need to "support the economic and social development" but also to "reduce poverty" (Cotonou Agreement, 2000). On the other hand, at the Valletta summit in 2015, it was agreed that an "EU emergency trust fund for stability and addressing the root causes of irregular migration and displacement in Africa" would be launched, but without a clear focus on environmental migration (European Commission, 2022). Thus, we should look to the EU's external policy and more specifically to development aid. In the latest report submitted in 2020 by the Policy Department for Citizens' Rights and Constitutional Affairs for the Directorate-General for Internal Policies, the following three recommendations were made (Cournil, 2022) :

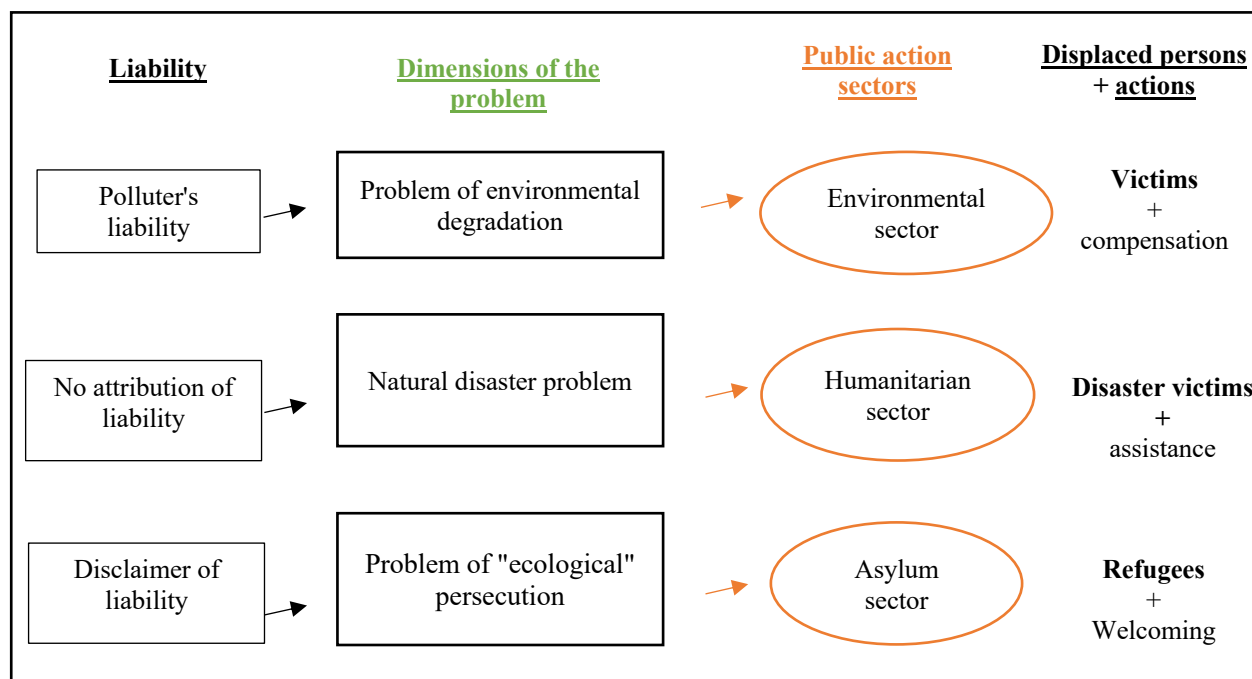
- (i) Clarify concepts related to environmental migration
- (ii) Develop a coherent policy between climate, natural disasters and mobility in the EU's external policy
- (iii) Develop a solution for asylum applications.

This part aimed above all to take stock of the lack of solidarity and coherence of the European Union on this issue. There is a willingness to address the issue in some countries and at times at the level of Brussels, but the gap between discourse and action remains. So, based on the different elements explained above, how can we change the norm? How can we ensure that the institutions work in a coherent and effective manner? How to influence the agenda of environmental migration? How can we shift the treatment of environmental migration from a security discourse to one that supports adaptation and resilience?

## 2.2. Changing the norm: recognizing new tools specific to climate migration in the EU external and internal dimension

There is a dimension of moral responsibility of the EU towards those countries that suffer most from the effects of global warming. Lambert and Schmedding have shown that compared to the responsibility played by rich countries for the share of climate change caused by human activities, the actual efforts undertaken by the European Union are insufficient (Lambert, 2002 in Schmedding, 2011:41). As Schmedding stated in her report, « the EU should provide more assistance to parts of the world that are most affected by climate change and its consequences” (Schmedding, 2011:41). While examining the EU migration policy, one striking element is the lack of adequate policy tools (Panebianco, 2022). Chloé Vlassopoulou notes that action has never been taken and that the debate has remained on a definitional issue (Vlassopoulou, 2008). The elaboration of a concrete action seems to be disrupted and slowed down by the multitude

of actors who are unable to reach an agreement because of their divergent perspectives and interests on the issue (Vlassopoulou, 2008). Faced with this situation, effective treatment of the issue can only be achieved through better sectionalization of public action. Breaking down the problem into several specific issues that fall under specific negotiation frameworks could facilitate a more progressive placing of the problem on the agenda according to the actors identified. This is at least the solution proposed by Vlassopoulou in the following breakdown:



Source : Vlassopoulou, 2008

This division is of course just one example of what could be done to provide a concrete solution to the issue of environmental degradation leading to displacement. Depending on the problem encountered, different actors are involved and the repercussions on individuals are not the same, whether they are described as disaster victims or refugees. Nevertheless, this division has the merit of providing food for thought on the organization and distribution of responsibilities and competences in this area. What is clear today is that we need to rethink the norm and the way in which the issue of environmental migration is addressed in Europe. The political and institutional framework lacks precision, and on these I propose to return in this section. There is a need to recreate appropriate categories and tools for thinking about the issue of migration at the European level.



In their study, Geddes & Sommerville show that policy responses to environmental migration are generally divided into three different categories, which are the "potential new legal protections" that could apply to people affected by climate change (i), "crisis co-ordination measures" and rapid-onset instances of environmental change" (ii) and finally "adaptation response" to reduce the vulnerability of the concerned countries (Geddes & Sommerville, 2013). These three categories will be used in the following analysis, to show how they could be relevant elements of analysis within a new political framework and what concrete tools could be developed within them. There are two dimensions to European policy in the context of migration and displacement, and it is in these that the analytical tools cited below fall. Everything related to laws or programmes adopted in the context of development policies or humanitarian aid, whether laws, policies or programmes, falls into the category of EU external action (Kraler et al., 2020). Anything related to law enforcement or the protection of people on European territory can be considered to fall under the internal dimension of the EU (Kraler et al., 2020).

#### 2.2.1. Exterior action of the EU and crisis coordination response

The report by Pierre-Alain Fridez underlined the need to strengthen "development cooperation and emergency aid in migrants' countries of origin, in order to address problems of food and water security, or personal and political security" (PACE, 2021)<sup>1</sup>. For the moment, there are not enough adequate and precise tools capable of responding to natural disasters, as there are very few tools that can respond to slow or sudden onset (Panebianco, 2022). However, climate change is precisely the "perfect collective problem" (Attinà, 2021; Panebianco, 2022) because it requires a coordinated and multilateral response. Improving the crisis response will then improve the stability of governments and their ability to respond to short-term events and their consequences, such as migration (Geddes and Somerville, 2013:4). Indeed, managing climate change risk is 'essential to Europe's security and prosperity' (Stand and Dimsdale, 2017).

Improved crisis response will clearly be achieved through humanitarian initiatives or agencies that have the capacity to act on a large scale, such as the Inter-Agency Standing

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<sup>1</sup> Original text: «renforcer la coopération pour le développement et les aides d'urgence dans les pays d'origine des migrants, afin de répondre aux problèmes de sécurité alimentaire et celle de l'eau, ou de sécurité personnelle et politique » in APCE, Rapport 15348 (2021), *Climat et migrations*.

Committee and the Office for the Coordination of Humanitarian Affairs (OCHA) (Geddes and Somerville, 2013). With specific regard to the European Union, Geddes and Somerville recommend the establishment of a detailed emergency response framework that considers real elements of disaster preparedness such as crisis-alert schemes, coordination plans, and disaster management plans (Geddes and Somerville, 2013). In this sense, elements that already exist within the EU should be strengthened, such as the Emergency Response Coordination Centre (ERCC). This civil protection mechanism offers a response to natural disasters, but mainly at European level. It would benefit from being extended and developed to partnerships with Africa to try to reduce the impact of climate change at source. In the same idea, part of some EU funding could be dedicated to this issue. For example, the Humanitarian Aid Instrument, which is supposed to focus on "life-saving relief in emergencies as well as in longer-lasting crisis, and rehabilitation and construction", or the European Development Fund and its part dedicated to Africa Peace Facility (Deneckere, Hauck and Barrios, 2016) could be redirected to solutions that make it easier for local populations to recover from disasters. Extending the scope of EU funding, such as the Emergency Aid reserve, the European Union Solidarity Fund or the EU Civil Protection mechanism could be a first response to the immediate management of natural disasters, to avoid chain reactions and catastrophic consequences. An adequate crisis response requires a general understanding of the problem and appropriate policies, hence the emphasis on adaptation policies.

### 2.2.2. Exterior action and adaptation response

The adaptation response refers to :

“a wide range of interventions (policies, tools, and projects) that reduce the vulnerability of people (especially those in developing countries who have less resources to adapt) to environmental change writ large.” (Geddes and Somerville, 2013)

In contrast, mitigation policies refer to actions aiming to :

”Making the impacts of climate change less severe by preventing or reducing the emission of greenhouse (GHG) into the atmosphere. Mitigation is achieved either by reducing the sources of these gases (...) or by enhancing the storage of these gases.” (EEA, 2022).

As it is, it seems more realistic to adopt the point of view of adaptation, which not only leaves additional room for maneuver but above all is easier to put in place from the point of view of coordination between different actors.

In general, there is no specified programs for environmental migration as such, so measures or actions are included in poverty reduction programs and strategies. These policies aim primarily to reduce the pressure on populations from deteriorating environmental conditions to reduce intra-regional migration flows, which could turn into international migration. Within the European Union, one mechanism that has been used extensively is the Global Approach to Migration and Mobility, although again there is little mention of how intra-state - and mainly rural-urban - migration flows can impact on the governance of regions (Gedess and Sommerville, 2013). This desire to 'greening' of human rights has not been followed up and that there have been few concrete programmes along these lines. There is a real gap between scientific discourse, political will and civil society.

Now that climate migration is recognized as a multi-causal and complex phenomenon and the deterministic approach has been partially abandoned (Bettini, 2014), it is important that the debate is refocused around adaptation possibilities. This strategy must be built around resilience, which must be mobilized both 'as means and goal' (Bettini, 2014: 188). This is the necessary condition to pursue an adaptation policy that can 'cope with environmental stress' (Bettini, 2014:188). The decision makers should act on the front of adaptation to environmental change, to help the reduce the impact of its consequences. To this end, since adaptation is a relatively new branch of the cooperation between countries, research should be encouraged to fill the knowledge gap on the effects of climate change and thus ensure a 'community-based adaptation' (BCA) to meet the needs of the communities (Harmeling, Burck and Bals, 2007). There are already initiatives in place that aim to link expert advice with policy decisions, but they have little to do with environmental migration. For example, the BETTER initiative is a joint initiative between the EU and the IMPDC to increase the dialogue and contribute to a better mitigation of migrations. The World Africa Day report of 25 May 2022 states that of the 15 requests for the creation of working groups since 2020, few results have been noted. However, this initiative aims to strengthen adaptation and resilience strategies to external shocks. This type of initiative should be taken further to ensure that this outcome is included in national adaptation plans. Adaptation policies therefore require a generalized understanding of the problem at several scales, since they are intended to help vulnerable populations on the ground, but their management is done from the EU, which requires extensive coordination.

Building a relevant policy framework around adaptation should be based on the three following elements listed by Chiara Liguori, which are (i) work on the push factors at the origin to reduce the need of people to move, (ii) facilitate the management of migration as scoping mechanisms and help planning relocation in advance to avoid forced relocations and (iii) provide solution to help displaced people (Liguori, 2021:12).

### 2.2.3. Internal dimension of the EU action : legal measures or how repoliticizing the issue of human rights ?

In our modern society, it is difficult to have one's rights recognized if they are not enshrined in legislation that not only exists but is meaningful. In the context of migration, there is a plethora of legislation forming a dense and varied legal framework. However, in the specific context of climate migration, no international or national text recognizes this category as offering any right to protection. Indeed, the existing texts recognize other valid reasons for full or partial protection. There is a clear lack of a legal and policy framework for the management of this specific part of migration. This issue requires a coherent response from policymakers, since it is necessary to create a legal protection tool that suits most actors, that does not render the existing categories meaningless and that ensures a real level of protection.

The question of whether to create a specific category for environmental migration is relatively complex and divides many experts on the issue. The relatively complex link between migration and the environment is an unspeakable puzzle for lawyers. For example, in the interview given, Christel Cournil asks what would be the most adequate solution: "a specific legal status or a specific form of protection within an already existing status? There is a real difficulty in creating a new legal status, both in terms of the definition itself of what falls into the category of environmental migration. While the term 'climate refugee' is sometimes used, it is mostly the result of analogical reasoning that is picked up by journalists or activists to make a point (Mayer, 2011). However, it must be acknowledged that this qualification has the merit of raising the point that climate refugees deserve protection like the one of political refugees, in the sense that they also aspire to the 'right to life' and flee from living conditions that have become, if not impossible, much more complex (Mayer, 2011:381).

At the international level, there have been initiatives and proposals for a global status, but the question of its real efficiency remains. The principle 1 of the *Declaration of the United*

*Nations Conference on the Human Environment* stated that there is “a fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being” (Stockholm Declaration, 1972; Apap, 2021). This first statement already recognized a linkage between human rights and environment. After this, the 1989 Convention on the Rights of the Child recognized the dangers of having a polluted environment (Apap, 2021). However, as these texts are international Convention, so it is hard to implement them. In 2012, the Nansen Initiative, proposed by Norway and Switzerland is the “first milestone” towards recognition of externally displaced people because of environmental issues (Apap, 2021). The launch of the Nansen Initiative-Agenda for the protection of cross-border displaced persons in the context of disasters and climate change put the issue of environmental migration on the international agenda. However, most of these draft conventions failed at the diplomatic level. After the Paris agreements, a task force was set up, but its effect was to propose good practices and non-binding texts and recommendations rather than actual measures in international law (Gebre, 2022; Cournil, 2022).

In recent years, however, nothing seems to have changed at European level. Indeed, the European Union, despite the various discussions on the subject, is not at the forefront of the process. In one of her articles, she even refers to "Brussels' denial" of the issue. The issue of adaptation to climate change, as well as the pure issue of environmental migration, is relatively unmentioned and remains the poor relation of EU policy. Similarly, the new Pact on Asylum and Migration and the promise to reform the Dublin system makes no mention of these issues. It only addresses the possibility of a new form of subsidiary protection but does not address « climate change as recognized reason for migration (...) as a legitimate motive to seek asylum » (Apap et al., 2021). Based on the actual EU instruments, it is very unlikely that a legal status will be found.

However, at the institutional level, the Council of Europe is at the forefront. Indeed, its Parliamentary Assembly is very active. As early as 2009, a report was submitted on environmental migration and urged politicians to take up this issue. Two resolutions were then passed on the subject. Resolution 1655 was one of the first to recognize the link between migration and the environment and explicitly states that "natural disasters and environmental degradation will increasingly determine the nature of human mobility as well as its humanitarian and security dimensions" (Council of Europe, 2009). The complexity of the problem was also highlighted in this text, as the cause-consequence relationship is "complex

and multifactorial". All the elements for understanding the phenomenon at the policy level are present in this resolution. Indeed, environmental migration is presented as a "global process" and not a local crisis. The Assembly also warns against internal and cross-border movements that may be driven by environmental degradation and that may in turn lead to destabilization in other areas (Council of Europe, 2009). In Resolution 1862, the Parliamentary Assembly clearly calls on the Council of Europe to promote human rights 'for all vulnerable groups and, where necessary, to legislate to this end' (Parliamentary Assembly, 2009b). In concrete terms, it was proposed that a working group be set up at the level of the European institutions to carry out a "legal study on the gaps" in the existing regulations, with the aim of "elaborating a European framework convention for the recognition of the status of environmental migrants". It was also proposed to add an additional protocol (ETS No. 5) to the European Convention on Human Rights. This protocol concerns the right to a healthy and safe environment. The idea was therefore to establish a protocol on the "precautionary principle". This proposal was rejected by the Council of Ministers on 8 July 2009 in an official Response to Resolution 1862 (Council of Europe, 2009c) on the grounds that the judgements of the European Court of Human Rights already offered a certain degree of protection in environmental matters. What is most striking is the insistence on the need for a long-term perspective and effective preventive action (6.9.) to avoid spillovers in the event of natural disasters.

These proposals have not been taken up at EU level yet with a specific aim to create binding legal instruments. The concept of « responsibility to protect » has been mentioned by the Commission (Kramer et al., 2011:65) but it is still difficult to associate environmental change and degradation to it, unless migration can be assimilated to the prevention of “genocide, ethnic cleansing, war crimes and crimes against humanity” (Ammer, 2009 in Kramer et al., 2011:65). The Steering Committee for Human Rights (CDDH) has considered the possibility of developing a draft non-binding instrument in the course of 2022 to try to convince the Committee of Ministers (Cournil, 2022). It seems that it is the local courts that are most active in this area. The Australian court had granted protective status based on the Geneva Convention because of the "general and indiscriminate nature of the impacts resulting from climate change" (Cournil, 2022:17). Similarly, the Italian Court of Cassation reversed a judgment of the *Tribunale di Ancona* which had sought to overturn humanitarian protection granted to a Nigerian national who had argued that the mismanagement of natural resources by foreign oil companies had worsened his living conditions (Cournil, 2022). The Court of Cassation recognized that the minimum right to life was not respected because the degraded social

conditions did not allow for a dignified existence. This judgment opens the door to a possible extension of the principle of '*non-refoulement*' to the EU level and will therefore surely be reheard on appeal to the ECHR (Cournil, 2022). It does, however, highlight the need to rethink environmental protection in terms of human rights and the right to lead a decent life.

In the case of a legal framework, it is notable that the political and institutional obstacles to the development of a new legal category opening the door to new rights are great (Geddes and Sommerville, 2013). It seems, therefore, that a definitive and unanimous response is not likely to come tomorrow. However, the initiatives that already exist and the willingness of non-state actors to circulate the norm may be a first step towards policy change. Indeed, the various proposals made by the Council of Europe, external actors, national courts of cassation and non-state actors have the merit of setting up this issue at the forefront of the political agenda and encouraging reflection.

### 2.3. Reconnecting policy discourse with expertise : which effective policy-making tools for adaptation and mitigation ?

As has been pointed out several times, there is a gap in the legal and policy framework that needs to be closed to respond to the challenges posed by environmental migration. This requires a real change not only in the discourse of policymakers but also in the actions.

There are two main achievements to remember. The first is that the scientific consensus plays a role on how the legislation is produced (Panebianco, 2022) and that it must be considered while adapting it to the constraints of reality. The second is that only coordinated action by public actors in terms of both adaptation and mitigation of the effects of the climate could make it possible to limit travel by almost 80% (Rigaud, 2021; Cournil, 2022).

Policy is sometimes disconnected from reality, as it tends to respond to unfounded concerns rather than adapting to both the expectations and recommendations of researchers. The risk is to have policies that try to control actions too much and to move towards a 'biopoliticization of humanitarian, developmental and environmental interventions' (Reid, 2010, 2012; Bettini, 2014:191) which does not contribute to the democratization of migratory policies. The risk is therefore to have policies that are globally "climatized" but remain inadequate if clear governance principles are not followed (Bettini, 2014:191). In this sense, Jane McAdam has

proposed five actions to improve the governance of migration in Europe and have a globally constructed approach, which are the following (Renaud in McAdam, 2011):

- (i) *A stronger following of science-related evidence*. In other words, this means create more research programmes and tools that provide empirical evidence of the situation and offer a clear and accessible overview.
- (ii) *“Increasing awareness”* by reinforcing the dialogue between institutions on the environmental, social and economic aspect of this issue
- (iii) *“Improve the current legislation”*. It could be by following the proposals of the Council of Europe or by finally acting on the creation of a special status/adding
- (iv) *“Giving the means for an adequate humanitarian aid”*. For specific assistance to be recognized, McAdam insists that if not a legal status in international law, at least a special category must be recognized to ensure that appropriate mandates are given to the UN or other intervening agencies (McAdam, 2011:26).
- (v) *“Strengthening institutions and policies”* by creating or strengthening specified and adequate tools.

The Green Parties at the European Parliament had proposed a two-pronged strategy to create specific legislation to this issue. The first was to 'Build on local, national, and regional legislation' and then to 'support debates and seek broader solutions on an international level' (The Greens and EFA, 2013:8). To do so, it must ensure that EU policy is first and foremost streamlined, i.e., that it considers scientific discourse and the real needs of the populations concerned. To do so, it needs to adapt governance at the regional level that first recognizes global warming management as a global problem that requires action at the regional level and recognizes migration as an object that can be modulated according to the political discourse adopted (Vlassopoulou & Mancebo, 2011). In addition to the above recommendations, Vlassopoulou lists six criteria for the governance of global warming, namely : strengthening the quality of life of vulnerable populations; strengthening economic vitality; strengthening social and intergenerational equity; strengthening environmental quality; mitigating natural and social vulnerability; and integrating the needs of different population groups (Vlassopoulou, Mancebo, 2011:100).

The question that now arises is whether a change in the theoretical policy framework could lead to an actual policy change (Panebianco, 2022). This is what we will try to determine in the following by trying to see what tools can be put in place in a concrete case, by studying



climate-induced migration to Europe in Senegal and Nigeria and by trying to understand what the EU's room for maneuver might be.

## **Chapter 3 : The lack of legal and political framework around climate-induced migration : the case study of Senegal and Nigeria**

The previous sections illustrated what the theoretical framework is regarding migration and what could be improved at the European level in terms of policymaking regarding the understanding of migration. However, what was missing was a more concrete approach to the issue and especially an illustration of how environmental migration flows between the EU and specific countries are managed. A comparative study of environmental migration from Nigeria and Senegal to the EU was chosen. The study of environmental migration in these two countries will make it possible to determine, beyond the rhetoric, what the reality of migration flows due to climate change is. This analysis will specifically illustrate the consequences of environmental change on the populations and why the policy action may sometimes be inadequate.

### **3.1. Climate-induced migration in Western Africa**

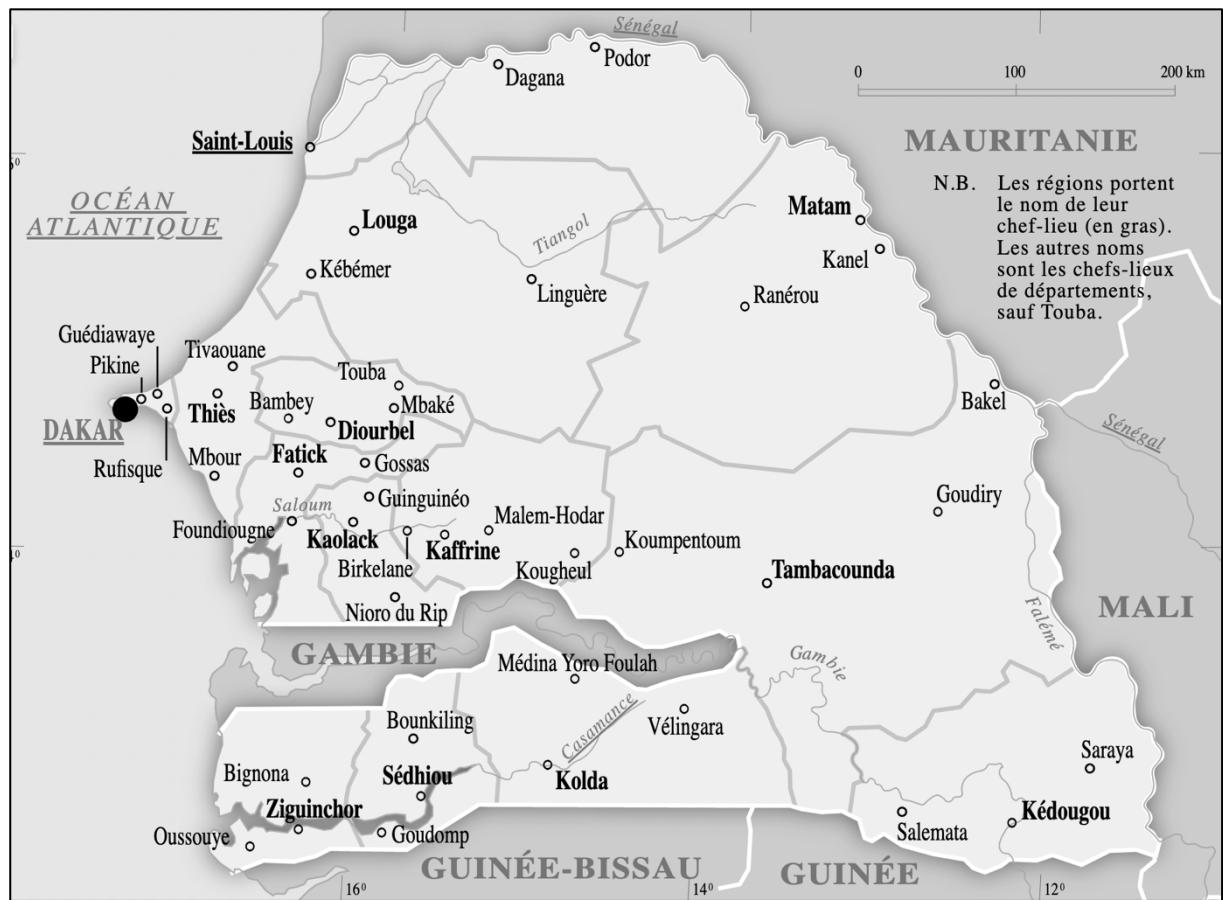
West Africa is a particularly interesting region for climate studies. Indeed, it is a historically region marked by the global context since the 16th century. West Africa is composed of 17 countries, within which the climate varies between semi-arid and arid near the areas along the Sahara Desert. It is an area that is particularly sensitive to climate variations because of its geographical layout. Indeed, the absence of mountains or significant water bodies makes the populations dependent on rain cycles and precipitation rates. Water availability and distribution are the most important factors in weather variations (Rigaud et al, 2021b).

This region has been identified as a “hot-spot” because of its high degree of exposition to climate change. A hot spot is an area within which regions "will be severely affected by climate change while experiencing high population density and high poverty rates" (Müller et al., 2014; Brüning and Piguet, 2018). Since 1970s, climate observations have shown that surface temperatures have increased, cold days and nights have decreased and the number of warm days and nights has increased (Migali and Natale, 2021). Overall, it is difficult to directly associate the link between migration and increasingly extreme climate variations. However, some reports have suggested that the continent's dependence on agriculture is one of the causes of its susceptibility to climate variability (IOM, 2021). As already explained above, in the particular case of West Africa, it has been shown that in the event of water stress or severe drought, long-

distance migration tends to decrease due to a lack of capital (Vigil, 2017; IOM and UNCCD, 2019; IOM, 2021). More generally, Zigraf explains that 'poor(er) groups, the low-skilled, women, the elderly and children are less likely to migrate, and in the event of displacement, they are more likely to become trapped in transit' (2018; IOM, 2021:4). However, where climate change can become a source of direct migration, as discussed above (see 3.1.), is where the disproportionate impact of natural disasters leads to 'local competition for natural resources' (IOM, 2021:5), as both agricultural and pastoralist populations tend to retreat to areas with less rainfall and less drought. Competition for natural resources has drastic consequences on populations, as it destabilizes 'social cohesion and leadership structures (...), traditional meditation and coping mechanisms' (IOM, 2021:5). In addition, national adaptation strategies are considered insufficient in the face of the magnitude of the problem (Diallo and Renou, 2015).

There is an established correlation between the climate, 'food, water, financial resources and health conditions' of the region's populations (Diallo, 2019:70). The means of adaptation are relatively inaccessible, and governments have little presence, thus favoring local adaptation strategies in the face of environmental change (Diallo, 2019:71). In his thesis on the subject, Diallo pointed out that the disruption of social practices in the West African region is not the subject of relevant policy in the region (Diallo, 2019:71). There is therefore a case for analyzing what is happening in the region in terms of the political and institutional treatment of the outcome of environmental migration. Thus, it is even more useful to select two countries to try to identify concretely what is happening at the local level and whether there is a link between the two in some areas of sub-Saharan West Africa.

### 3.2. Empirical analysis of the Senegal



Administrative division of the Senegal

Source : Universalis, 2022

#### 3.2.1. General background of the country

Senegal is a country located in Western Africa. With a population of 16.7 million, it is classified as a lower middle-income country (Rigaud et al., 2021a). To understand why this country is an interesting case study in the case of climate migration, it is necessary to go back to its climatic, economic and political situation of the country.

Senegal is one of the most stable countries in Africa. The government has been relatively stable since the 1960s and the region has been spared armed conflict, although this is increasing at the country's borders (World Bank, 2022). However, since 2014, the country has experienced steady economic growth and more importantly a reduction in both rural and urban poverty (Rigaud et al., 2021a). This steady growth has been interpreted as the result of the development of efficiency in rural agriculture through the modernization of practices as well as the emergence of the tertiary sector and the fossil fuel sector (Van den Broeck and Maertens, 2017;

Rigaud et al., 2021a). However, two trends currently observed are likely to pose problems in the future. The country's population is young and could double by 2050 (UN DESA, 2019; Rigaud et al., 2021a). Yet agriculture continues to be the country's primary source of income and employment, even though it is threatened by climate shocks, particularly those related to changing rain patterns. Concerning the socio-economic conditions of the country, inequalities are generally increasing. Senegal remains one of the countries with the lowest level of development, with almost half of its population living below the poverty line. Rural areas in the south and east of the country are more affected by poverty and will be more sensitive to climate change affecting crops (Rigaud et al, 2021a:10). The latest World Bank report on *Poverty and Shared Prosperity* (2020) showed that populations living below the poverty line, or at least close to it, are more vulnerable to natural disasters, for several reasons. The vulnerability is accentuated by at least five factors: lower-quality assets that are more vulnerable to disasters such as droughts or floods, a marked use of infrastructure that is more exposed to the risk of failure, a greater dependence on agricultural income, a greater vulnerability to the volatility of commodity prices and finally a greater vulnerability to climate-related diseases as a consequence of low health and education capital (World Bank, 2020:138). Although the relationship between poverty and climate exposure needs to be taken and analyzed with caution, it is still significant in that it highlights the need to strengthen the resilience of the most deprived populations.

The general background helps to understand migration patterns. Migration in the region is not a new concept. Due to the pastoral tradition of most communities, inter-regional flows have always been a fact of The migration process has always been ongoing, depending on the socio-historical context of the communities, the development of rural or urban areas, the diversity of vegetable crops or the services offered (Brüning and Piguet, 2018). As Rigaud stated, Senegal has been 'simultaneously a country of origin, destination, and transit' (Rigaud and al., 2021a). In this country, migration is linked to utilitarian mobility. Indeed, to cope with unfavorable weather conditions for crops, a recurrent coping strategy is to relocate assets, be they 'family, labor, or herds' (Ibid.). Moreover, the perception of migration has changed in recent decades. Indeed, for a long time, it was assumed that migration was the result of a failure of people to adapt to local living conditions (Diallo, 2019; Myers, 1993 and 2002). Today, it is seen more as an effective adaptation response.

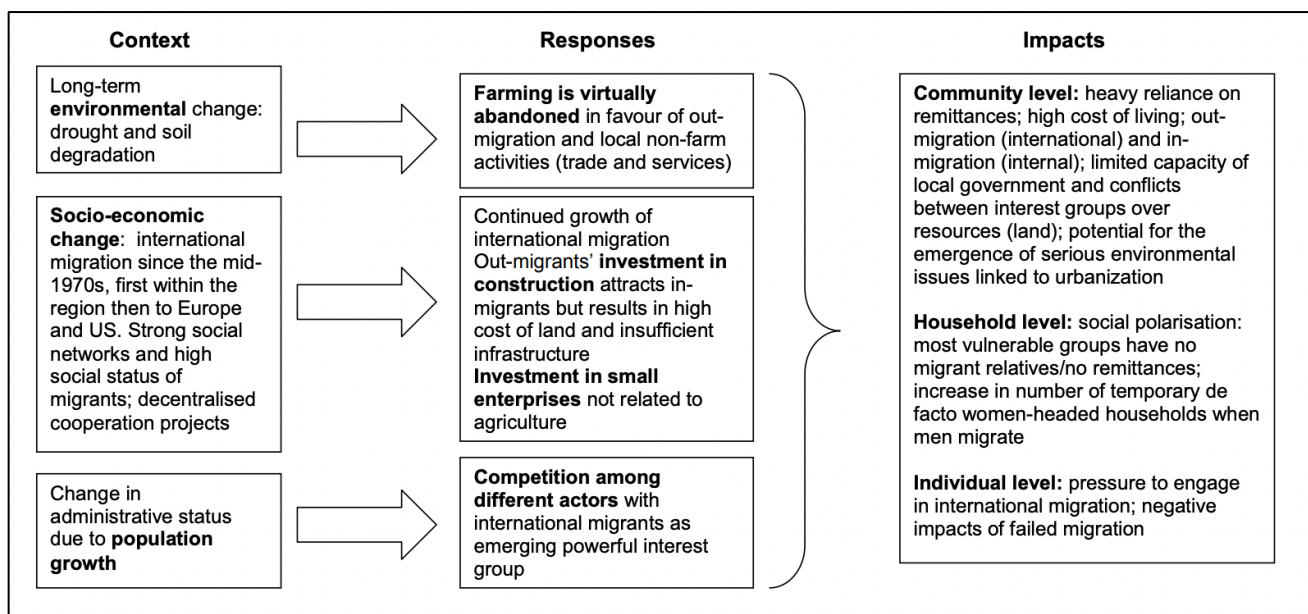
### 3.2.2. Climate-driven migration in Senegal

This country is an interesting object of study, as it can be affected by climate change in two ways, as it is a coastal and desert country. The country's climate is semi-arid and therefore particularly vulnerable to variations in rainfall that cause droughts or floods. It is ranked 77th out of 234 as the least vulnerable country (Diallo, 2019:207). Although this indicator should be taken with caution, it is based on the definition proposed by the IPCC and remains relevant to some extent. It shows that Senegal is particularly vulnerable to certain climatic events, especially as Dakar is located just above sea level and other coastal cities, such as Saint-Louis, are victims of coastal erosion (Rigaud et al., 2021b:119). The country is also ranked eighth in terms of most at-risk country about rising sea levels (Amara et al., 2019; Bendandi, 2019). The amount of rainfall influences agricultural productivity, which also has an impact on crop-dependent groups such as pastoralists and nomadic farmers, but also on coastal groups that are dependent on income from the sea and fishing (Rigaud et al., 2021a). Indeed, the scarcity of water resources pushes farmers to extend their cultivation on land occupied by nomadic populations, whose dependence on livestock becomes a de facto problem. Thus, drought exacerbates the tensions between the communities that carry out transhumance earlier in the year and those that extend their crops onto land previously reserved for transhumance. These tensions between herders and sedentary farmers can lead to conflicts. The *Environmental Vulnerability Index* (EVI) places Senegal as a vulnerable country.

In this context, the two factors that make Senegal particularly vulnerable to climate migration are the preponderance of the agricultural sector and the relative poverty of areas where agriculture predominates (Hummel, 2016, Rigaud et al., 2021a). Families who stay behind do not necessarily have the capacity to adapt, as they are not always willing to adapt to 'too risky' agricultural practices (Lietar, 2018). There are also risks of maladaptation in many areas as less privileged populations tend to have less resilient traditional dwellings (Lietar, 2018). In the empirical investigation that was conducted in Ndémène and Tok Ngol by Marema Thouré Thiam and John Crowley, it was a combination of events that led to migration, including 'land degradation, irregular rainfall, deforestation, desertification, population increase, decrease in cultivable land' but also 'drought, crop failure, job search, poverty' (Thouré Thiam and Crowley, 2014:116). These weather conditions have led to a decline in commercial activities, just as new agricultural policies or political decisions such as the devaluation of the CFA have worsened living conditions (Thouré Thiam and Crowley, 2014:116). Environmental pressure has related

socio-economic consequences. Renou and Diallo have shown (Renou and Diallo, 2015; Wade et al., 2017). These climate changes also have an 'accelerating effect on and exacerbate poverty' and become a factor of vulnerability (Thouré Thiam and Crowley, 2014:120). Indeed, one of the consequences of environmental pressure is, for example, the strengthening of the brain drain which leads to a weakening of the economy, which in turn leads to a weakening of capital of all kinds, whether natural, human, physical or social, which slows down growth and development (Wade et al., 2017). Thus, one hypothesis is that migration as an environmental pressure reduces development opportunities by leading to the abandonment and decline of agricultural production in rural territories, also thinking about infrastructure and access to natural resources (Wade et al., 2017).

Projections for 2050 estimate that there will be many displaced people in the Dakar-Diourbel-Touba corridor, which corresponds to the coastal region north of Dakar, as well as in the Saloum delta region as early as 2030 (Rigaud et al., 2021a:35). The declining water availability in the center of the country will also push a certain number of people away from dense area situated in dry zones (Rigaud et al., 2021:35). The regions that are estimated to have the highest number of internal migrations are also the ones with the highest poverty level, such as Kolda or Ziguinchor. If internal migration is in the majority in Senegal, inter-regional mobility is also a real fact. Emigration from Senegal increased slightly between 1990 and 2015, mainly to Europe (Rigaud et al., 2021a). There is little work that uses the environmental factor to explain migration. However, some studies, such as those by Adam (1977 and Tandian (2003) have shown the link between drought, the impact on agricultural yields, rural exodus and international migration to Europe (Thouré Thiam and Crowley, 2014:53). The 2013 census identified France, Italy and Spain as the preferred destination countries. France is the leading destination country with nearly 17.6% of migration from Senegal, followed by 13.8% for Italy and 9.6% for Spain (ANSD, RGPHAE, 2013). Many young people from the Ndiébène Gandiole region left for Spain by pirogue, in response to the crisis in the fishing sector (Thouré Tiam and Crowley, 2014:111). International migration is often part of a strategy of last resort when it no longer seems possible to adapt locally. This is illustrated in the following diagram:



Source : Tacoli, 2011

Internal and international migration overlap (Thouré Tiam and Crowley, 2014:112). In other words, the latter are often a continuation of the former (IOM, 2019; Thouré Tiam and Crowley, 2014:112). International migration is often a long-term consequence of natural events that destroy the direct environment. Logically, if the situation in the country of origin becomes increasingly unstable, people who can afford to migrate outside the country will choose this route.



### 3.3. Empirical analysis of the Nigeria



Source : Universalis, 2022

#### 3.3.1. General background of the country

Nigeria is a coastal country located in Western Africa. The major city, included Lagos, the capital and one the most important economic center of the continent, are situated on the coast (Abdulmalik Mohammed, 2019:129). About 25% of the country's population is situated on the coastal zone , as such as industrial and economic activities (Abdulmalik Mohammed, 2019).

Nigeria is the Africa's largest economy. It is considered as a lower middle-income country (Rigaud et al., 2021c:9). The country is experiencing a rapid demographic growth and host around 20% of the whole population of Sub-Saharan Africa. It is predicted that Nigeria will become the third most populous country in the world in 2050 (Rigaud et al., 2021c:39). Almost 43% of the population lives under the poverty line and another 25% are considered as vulnerable (World Bank, 2020; Rigaud et., 2021c:10). The economic growth was quite stable, and the recovering of the GDP is not as slow as expected (Rigaud et al., 2021c). However, the

economy is mostly based on oil and gas exports, which make the system quite vulnerable to the volatility of oil prices, as oil is accounted as 90% of the exports “a third of the banking sector, and half of the governments revenues” (Rigaud et al., 2021c:9).

The political situation is not the most stable of the area, as the armed group Boko Haram moving around the country is destabilizing the government and exacerbating ethnic and clashes between communities. There are growing tensions between different herders’ ethnicities, as some of them are considered as terrorists or labelled as dangerous (Rigaud et al., 2021c:10). The insurgency have also contribute to the destabilization of the Lake Chad region in general (Rigaud et al., 2021c). This political instability has led to an increase of violence and to the increase of internal and cross-border displacement. The population is continuously growing in Nigeria, which is also putting pressure on the employment sector and the available natural resources (Ezemenaka, 2019:71). The impossibility for the government to provide general good living conditions is is nurturing the frustration of a young population.

As in Senegal, migration is not a new phenomenon. Nigeria is country of high mobility because of the multitude of push and pull factors. Between 1990 and 2015, migration out of the country has been an increasing trend (Rigaud at al., 2021c) . It has become a country of high-internal mobility and cross-border displacements, mainly because of the conflict and climate change-related factors (Rigaud and al., 2021c:12).

However, the situation regarding the green policy is also different because Nigeria was one of the first countries who successfully issued Green Bonds in Africa in 2017 (Rigaud et al., 2021c:43). The objective is to build a climate resilient economy and finance local climate programs. The Green Bonds aim to finance climate-friendly infrastructure and efficient projects in the field of energy or in the forestry sector. The idea is to create a virtuous circle by creating new jobs, which means new opportunities for the young generation (Rigaud et al., 2021c) while reducing polluting activity such as deforestation. The EU is showing support to this through project funding on energy (Ezemenaka, 2019:82).

### 3.3.2. Climate-driven migration in Nigeria

Nigeria is also an interesting object of study, as it is situated in the same area as Senegal but is encountering different socio-economic issues. There is a little capacity to collect data on

displacements at a local and national level (Métivier, 2015). At the Nigerian level, there is a lack of institutions coordinating the various studies and the results generally vary greatly from one area to another. The fact that migration is also highly variable by age, gender and area also complicates the census (Métivier, 2015). In addition, there is a lack of studies at the international level and NGOs are of little use in this context. The figures that are given are generally calculated based on damage visible during natural events. It is this lack of data, or at least the dubious methods used, that partly explains the inadequacy of public policies (Métivier, 2015). Nevertheless, some data seem to be closer to reality than others and it is based on a cross-referencing of these different analyses that we shall consider.

Regarding the meteorological conditions, the entire ecosystem of Nigeria is becoming increasingly threatened by climate change (Abdulmalik Mohammed, 2019:129). The main environmental issues to which Nigeria is confronted are desertification, deforestation and decreasing yields, degrading weather conditions and exposure to floods (Métivier, 2015). Most of the agriculture of the country is “rain-fed”, which makes it particularly sensible to the variation of the rainfalls (Rigaud et al., 2015:16). The country's location in a coastal zone makes it highly susceptible to erosion, soil salinization and agricultural land degradation (Bendandi, 2019). Similarly, a study published in 2011 showed that up to 9.7 million people could be affected by rising sea levels by 2050 (Wheeler, 2011; Bendandi, 2019). Rapid-onset events are quite frequent in that region of the Africa and Nigeria is easily exposed to floods and rainfalls variations. As an example, it is estimated that up to 7 million people have been internally displaced by floods (Rigaud et al, 2021c:43). In 2018 alone, an estimated 500,000 people were displaced by weather-related events. Some populations have thus seen their situation worsen, as they had already been displaced by conflict (Rigaud et al, 2021c:44). In addition, the increasingly severe drought has caused many people to move to the coastal areas where economic activities are concentrated. These are also at risk due to rising sea levels (Abdulmalik Mohammed, 2019). If predictions are correct, there will be even more internal migration in future years, as coastal populations seek to move closer to large cities and places protected from coastal erosion (Stephenson, Newman, & Mayhew, 2010; Abdulmalik Mohammed, 2019). If the sea level increases by the 2 meters, then it is about 10 million people that would be displaced (Awosika et al., 1992 and Amadi & Ogonor, 2015 in Abdulmalik Mohammed, 2019). In total, considering the different calculation, it is 1.100 communities and a total of 7.120.028 people that are facing the risk of displacement because of coastal erosion and sea level rise in the Niger Delta States (Amangabara and Obenade, 2015 in Abdulmalik Mohammed, 2019).

Some researchers have shown that the exacerbation of conflict in northern Nigeria is 'both a product of climate change and drought leading to competition between farmers and pastoralists' (Abbass, 2012; Bendandi, 2019:322). Indeed, as in Senegal, resource scarcity has made it more difficult for pastoralist groups to move in search of greener pastures and farmers, who also have difficulty maintaining their crops (Bendandi, 2019:322). Furthermore, Bendandi's 2019 study shows that, similarly to Senegal, the most important consequence of climate migration in Nigeria is 'decreased economic opportunities' (Bendandi, 2019:322). In doing so, young people who do not find opportunities in the country - as almost 60% of the population is under 30 years of age - are more likely to turn to paramilitary groups (Bendandi, 2019). In this case, climate change is both a behavioral trigger and an aggravating factor, as it is a causal trigger for the violence caused by these paramilitary groups, but it also makes the living conditions of groups that must move because of the violence even more complex. The Nigerian border is also not a strong one in terms of protection and filtration of population. Indeed, the 'borders are porous and can easily be crossed' (Ezemenaka, 2019:72). Borders are not seen as a particular blocking element, which fuels migration routes to Europe and elsewhere (Ezemenaka, 2019). Containing the population is therefore a particular challenge that is proving particularly difficult in the area. As in Senegal, environmental migration is the result of a multitude of socio-political factors.

### 3.4. Common trends and issues in both countries

These two case studies provide an overview of the different factors that can lead to migration. Climate is generally one of them, although it appears that the acceleration of environmental degradation in recent decades has had a domino effect on the socio-economic conditions of the populations, precipitating a departure to other areas for some and encouraging departure abroad for those who can afford it. Their comparison is interesting because, although they are two coastal countries in the same area, their economic situation is very different. They are both located in the sub-Saharan zone, which is particularly sensitive to climatic variations, but have two different political situations, with some ethnic tensions between pastoral and sedentary groups on the one hand and organized armed groups on the other.

From the aforementioned elements, climatic migrations are often the result of a combination of factors and that climate change can be both a trigger for the worsening of living conditions,

but also a trigger. The Pastoral Early Warning System developed by *Action contre la Faim* and the results of the World Bank report (Rigaud et al., 2021a) show that most population movements are due to the deterioration of environmental conditions, which makes it more difficult to have an agricultural yield that ensures decent living conditions, thus pushing people to look elsewhere. However, it is not yet possible to speak of a wave of climate migration, as it is almost impossible to predict individual reactions to an X or Y event. Nevertheless, the various analyses mentioned above tend to bet on an increase in migratory flows within countries, with the indirect consequence of an increase in migratory flows towards Europe. These flows are not problematic as such, but what can be seen as problematic is the capacity of the European states to handle them properly, without harming anyone. Displaced people due to environmental degradation or natural disasters will add to the flows of refugees or economic migration, leading, as noted above, to stricter policies at European borders (Ezemenaka, 2019:72). If no concrete control or management policies are manifested, tensions will only increase, as the return of nearly 30,000 Nigerians seeking asylum in Germany has already shown (Ezemenaka, 2019). It should also be taken into consideration that migration flows will certainly decrease in some regions, as some populations do not have the ability to afford to move, complicating their situation.

The interactions between vulnerability and climate change are complex to identify, which has implications at the policy level. The negative effects of climate change, if not properly anticipated, can lead to 'undermining poverty reduction efforts by exacerbating people's socio-economic vulnerabilities' and thus force people to migrate (Diallo, 2019:284). In both Senegal and Nigeria, it appears that the instruments for combating climate change are inadequate, preventing the reduction, or at least the proper management, of mobility within the country and across Europe. There is no coordination of policy tools (Wade et al., 2017), as there are multiple tools at different levels but the lack of interrelationships between them risks creating 'duplication and even redundancy between interventions' (Wade et al., 2017:30). There is no synergy that is currently established, which may slow down efforts to put in place effective adaptation strategies. There is therefore a need to improve the institutional framework and develop appropriate tools for managing migration flows within sustainable development policies aimed at mitigating people's vulnerability (Wade et al., 2017:31).

Moreover, when strategies are set up to counter this phenomenon, they are often not the result of a decision taken at a state level. Thus, the analysis of Tidiane Wade, Dime, Tandian

and Soumelong Ehode (2017) showed that there was an absence of a migration policy corresponding to the realities of the country, making it impossible to ensure the coherence and coordination of actions and interventions related to migration. The Senegalese have developed associative networks, some of which have been active since the 1960s, which create investment projects aimed at 'empowering communities' (Wade et al., 2017:31). Yet the conditions for effective government policy implementation are absent. The general lack of coordination between actors in the management of actions as well as the absence of a formal framework for collaboration "between the government, civil society (including migrant associations), local communities and the diaspora does not favor synergies". As explained above (cf. part 2.1.), the problem is the same as for the management of migration flows in Europe. In other words, the lack of an institutional framework does not facilitate the implementation of effective sustainable development strategies. The situation in Nigeria is similar. There are institutions in charge of identifying and responding to the needs of displaced groups, such as the National Emergency Agency of Nigeria (NEMA), the National Commission for Refugees (NCFR) or the State Emergency Management Agency (SEMA). The NCFR had conducted a relatively promising action plan in 2014, but it has not yet been implemented in a concrete manner with relevant tools (Métivier, 2015). The response is therefore often inadequate, and these policies may even 'reinforce the vulnerability of migrants and aggravate tensions' (Métivier, 2015:42).

Hence, in these two areas of sub-Saharan Africa, public policies are faced with the same difficulty of anticipating and managing human mobility, due to a lack of overall knowledge of the problem and coordination between the actors.

### 3.5. Addressing the issue of climate-induced migration at the European level

This brings to light that the issue is not the lack of initiatives aiming to tackle climate change but more their content and how they are set up. In that matter, there is a room for the EU to act for a better policy management and a better regulation of the effects of climate change. It is "time to translate research findings into real policies" (Brugger and Le Naour, 2015). The question is then: How to use the tools suggested in the above framework of the improvement of the political framework to concrete situations such as the one affecting Senegal or Nigeria?

In the same way as the division explained in chapter 2, the European Union can act at both external and internal policy levels to help reduce the negative impacts and spillovers of climate

change in these countries. At the external policy level, the EU should support local governments by supporting tools to adapt to the effects of climate change, such as the adoption of a new green economy model to avoid catastrophic SSP/RCP scenarios, a better knowledge of the terrain or the improvement of the policy cycle. The Groundswell report (Rigaud et al, 2021a) recommends concretely that, in this region and considering its specificities financial support and knowledge sharing should be directed mainly to adopt farsighted landscape and territorial approaches, to assist the ecological transition by supporting a reorientation and a restructuration of the economy by promoting smart and green jobs and by promoting humanitarian-development-peace partnerships (Rigaud et al., 2021a:25). For example, the Gender Brief of the Center for International Forestry Research has shown that financially supporting women's groups in villages to regain food independence by growing endemic species that are more resistant to weather fluctuations is a way to ensure resilience (CIFR, 2020). As much of the agricultural economy of Senegal and Nigeria is contained in vulnerable rural areas, helping to build resilience directly at the source is a way to regulate mobility.

At the level of internal EU policy, it is necessary to look at the tools already available to try to give the most humane status possible to people already on the migration path. While the recognition of migration as an adaptation technique is discussed, it is far from being a done deal. However, as the TFEU directly mentions the possibility of a "common immigration policy", the EU could take step-by-step modalities in certain areas. For example, the Heinrich-Böll Stiftung proposes that a reflection be launched on the EU labor migration policy (Ammer et al., 2014). It could be envisaged that the Blue Card Directive adopted in 2009, which allows the regular entry and residence of highly skilled workers, could be extended to individuals threatened by environmental degradation in the areas mentioned above. Similarly, a combination with the 2014 Seasonal Migrant Workers Directive could extend this temporary entry and residence status to less skilled workers (Ammer et al., 2014:32).

According to Diallo's analysis of Senegal, public policies should in general work towards 'reducing socio-economic vulnerabilities by strengthening the *in situ* adaptive capacities of populations but also the resilience of the environment to climate change' (Diallo, 2019:284) <sup>2</sup>. In view of the information given above, some recommendations can be made for EU

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<sup>2</sup> Original quote : « Une réduction des vulnérabilités socio-économiques en renforçant les capacités adaptatives *in situ* des populations mais, également, des résiliences du milieu face au changement climatique » (Diallo, 2019:284).

policymakers to improve the institutional and political approach to environmental migration in that specific context of western sub-Saharan countries :

- (i) Consider granting relief to mitigate the effects of rapid-onset natural disasters (Geddes and Sommerville, 2013).
- (ii) Consolidate the joint European response by strengthening the “crisis-coordination policy frameworks at regional and international levels.
- (iii) Incorporate migration and its effects in development strategies such as NAPAs, to ensure that “resilience” (Geddes and Sommerville, 2013) is being built for affecting communities.

These elements are only examples of what can be concretely undertaken at the level of political reflection as well as at the level of concrete actions in direct partnership with the countries concerned by the outcome of climate-induced migration. Reasoned, coordinated and adapted action is the key to tangible results.



## **Concluding remarks**

Environmental migration is a complex subject to study. Climate change and migration are already two complex areas of study, requiring great care and intellectual honesty when analyzing them. The link between the two is therefore at the crossroads of a multitude of factors and makes any hypothesis formulated complex to verify. However, it is no longer disputed that there is a link between the two, but that the multi-causality of the factors leading to migration makes any qualification and implementation of protection tools complex. To remedy this situation, the "repoliticisation" of this type of migration is central, to be able to formulate public policies adapted to the most vulnerable" (World Space Atlas, 2018).

The prevailing discourse, fostered by the security discourse, tends to assert that 'as migration from Africa into Europe is identified as one of the many security threats associated with climate change' (Goff, Zarin and Goodman, 2012:195). Thus, this issue has become a public policy concern in recent years. However, the empirical analyses that have been carried out in the West African region and numerous studies (Migali and Natale, 2021; Borderon et al., 2019) have shown that the hypothesis of a migratory wave towards Europe is not necessarily true, thus demonstrating the futility of certain political positions that attempt to simplify a particularly complex phenomenon. Butros, Borden Gyberg and Kaijser have summarized this challenge perfectly:

The relationship between climate change and human migration is to a large extent about power and defining migration as irregular increases risks for repressive political measures (Baldwin & Bettini, 2017; Hartmann, 2014; Trombetta, 2014), hence it is important to continue critically analyzing how political actors on different levels define CIM and propose to deal with it. (Butros, Birden Gyberg and Kaijser, 2019)

The increase in international flows to Europe is thus a possibility but not a certainty. However, what is certain is that the vulnerability of populations in the West African region will increase as the effects of climate change already observed will continue to worsen, as shown by the various projections of the SSP and RCP models. Some populations will no longer necessarily have the capacity to use migration as an adaptation strategy to get out of areas at risk. And it is precisely for this double consequence, vis-à-vis the displaced and trapped populations, that the EU has a moral responsibility to take adequate measures.

However, there is a clear mismatch between reality and the tools proposed by the EU since, as demonstrated in Chapter 2, the discourse adopted by policymakers is sometimes completely out

of step with reality. What the two case studies clearly illustrate is that the solution to better management and understanding of environmental migration is to create a coherent legal and policy framework. This requires action at two levels. At the level of EU external policy, reconnecting political action with scientific and local expertise is a prerequisite for effective humanitarian and development policies. Consideration should be given to redirecting aid funds towards concrete actions and adapting crisis tools to the specificities of each region in partnership with those primarily concerned. Promoting climate-resilient infrastructures, a restructuration of the economy, support the agriculture and promote the education around climate related-risks are some examples of concrete actions. At the level of internal EU policy, rethink the legal protection status granted to them. There is a legal vacuum due to the lack of protection in international conventions but also to the reluctance of public decision-makers to engage in this process (Parfait Poumo Leumbe, 2015). However, solutions have been put forward by parallel institutions such as the Council of Europe or national courts of appeal, which deserve to be examined in depth to finally approve, if not a precise legal qualification, a legal status that would allow effective protection.

Migration is inevitable. They already exist and will continue to exist, as they have since the beginning of human history. The risk is that by misunderstanding the causes of climate migration, national identities take over and refuse to confront this issue. A real place must be given to reflection on migration, free from overly strong identity-based, neo-colonialist or paternalistic considerations. Viewing migration from a climate change adaptation and resilience perspective must become the new generalized approach in the policy discourse. As migration is generally a coping mechanism, it must be seen as such, and an adequate policy would be a better management of the existing migratory corridor and a financial coordinated support to other coping strategies that are prevailing to migration.

In this field, the leadership of the European Union is possible. However, it must be able to move beyond its own shortcomings. Success in coordinating a major action in this field would open the door to progress in other areas, restoring the EU's reputation among its citizens and on the international scene.

## **Bibliography**

### **Institutional reports**

- Adhikary, S., Clemens, M., Dempster, H., & Linda Ekeator, N. (2021). *Expanding Legal Migration Pathways from Nigeria to Europe: From Brain Drain to Brain Gain*. The World Bank.
- Ahmad, A. N. & Heinrich-Böll-Stiftung (Eds.). (2020). *Climate justice and migration: Mobility, development, and displacement in the Global South*. Heinrich-Böll-Stiftung.
- Ammer, M., Mayrhofer, M., Randall, A., & Salsbury, J. (2014). *How the EU can lead on climate change and migration* (D/2012/11850/3; Time to Act, p. 50). Heinrich-Böll Stiftung .
- Apap, J., & du Perron de Revel, C. (2021). *The concept of “climate refugee” Towards a possible definition* (PE 698.753; p. 12). EPRS | European Parliamentary Research Service.  
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698753/EPRS\\_BRI\(2021\)698753\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698753/EPRS_BRI(2021)698753_EN.pdf)
- Apap, J., Radjenovic, A., & Dobрева, A. (2019). *The Migration issue* (Briefing PE 635.542). European Parliament. European Parliamentary Research Service.  
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635542/EPRS\\_BRI\(2019\)635542\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635542/EPRS_BRI(2019)635542_EN.pdf)
- Bendandi, B. (2020). 26. Migration induced by climate change and environmental degradation in the Central Mediterranean Route. In *Migration and Development*. IOM.
- Brugger, S., & Le Naour, D. (2015, July 15). *How the EU can lead on climate change and migration – Time to translate research findings into policies* | Heinrich Böll Stiftung | Brussels office—European Union. Heinrich-Böll-Stiftung.  
<https://eu.boell.org/en/2015/07/15/how-eu-can-lead-climate-change-and-migration-time-translate-research-findings-policies>
- CEAR, & EUKSADI. (2020). *The externalization of borders: Migration control and the right to asylum. A framework for advocacy.*. CEAR-EUKSADI.
- Conseil Européen. (2022). *Changement climatique: Ce que fait l'UE*. Consilium.europa.eu.  
<https://www.consilium.europa.eu/fr/policies/climate-change/>

- Emiliani, T. (2019). *The Impact of Global Warming on Migration Flows Towards Europe and the Role of the EU as a Global Actor Against Climate Change* (p. 32). European Parliament.
- European Commission. (n.d.). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions. A European Agenda on Migration*. (COM(2015) 240 final). Commission Européenne.
- European Migration Network. (2018). *Ad-hoc Query Summary on climate change and migration* [Policy Brief]. European Migration Network.  
[file:///Users/jeannelavallard/Downloads/EN\\_Resume-climate-change-and-migrations.pdf](file:///Users/jeannelavallard/Downloads/EN_Resume-climate-change-and-migrations.pdf)
- European Parliament. Directorate General for Internal Policies of the Union. (2020). *Changement climatique et migration: Défis et réponses juridiques et politiques à la migration environnementale : synthèse*. Publications Office.  
<https://data.europa.eu/doi/10.2861/89736>
- Global Knowledge Partnerships on Migration and Development. (2020). *Measuring policy coherence for migration and development. A new set of tested tools*. The World Bank Group, OECD and UNDP.
- Harmeling, S., Burck, J., & Bals, C. (2007). *Adaptation to climate change in africa and the european union's development cooperation* (Prospects for Africa – Europe's Policies). Germanwatch.  
<https://germanwatch.org/sites/default/files/Adaptation%20to%20Climate%20Change%20in%20Africa%20and%20the%20European%20Union%E2%80%99s%20Development%20Cooperation-short.pdf>
- International Organization for Migration. (2021). *Environmental migration, disaster displacement and planned relocation in West Africa*.  
[https://publications.iom.int/system/files/pdf/Environmental-Migration-Disaster-Displacement-in-West-Africa\\_0.pdf](https://publications.iom.int/system/files/pdf/Environmental-Migration-Disaster-Displacement-in-West-Africa_0.pdf)
- Kraler, A., Katsiaficas, C., & Wagner, M. (2020). *Changement climatique et migration. Défis et réponses juridiques et politiques à la migration environnementale* (PE 655.591). Département thématique des droits des citoyens et des affaires constitutionnelles. Direction générale des politiques internes.
- Kraler, A., Cernei, T., & Noack, M. (2011). (Study PE 462.422). European Parliament's Committee on Civil Liberties, Justice and Home Affairs.  
[https://www.europarl.europa.eu/RegData/etudes/etudes/join/2011/462422/IPOL-LIBE\\_ET\(2011\)462422\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/etudes/join/2011/462422/IPOL-LIBE_ET(2011)462422_EN.pdf)

- IOM. (2009) *Migration, Climate Change and the Environment* (No. 55; p. 320). (2009). International Organization for Migration. [https://www.iom.int/sites/g/files/tmzbd1486/files/jahia/webdav/shared/shared/mainsite/activities/env\\_degradation/compendium\\_climate\\_change.pdf](https://www.iom.int/sites/g/files/tmzbd1486/files/jahia/webdav/shared/shared/mainsite/activities/env_degradation/compendium_climate_change.pdf)
- Migali, S., & Natale, F. (2021). *Population exposure and migrations linked to climate change in Africa: Evidence from the recent past and scenarios for the future*. (No. JRC126594; Publications Office). European Commission. Joint Research Centre. . <https://data.europa.eu/doi/10.2760/77546>
- Moreno-Lax, V. (2020). *EU external migration policy and the protection of human rights: In depth analysis*. (PE 603.12). European Parliament. Directorate General for External Policies of the Union. <https://data.europa.eu/doi/10.2861/07288>
- Petroliagkis, T., & Alessandrini, A. (2021). *Screening and selecting climate change impact parameters as potential drivers of migration: Focusing over the time period : 1975 to 2015*. (No. JRC123303; Publications Office of the European Union). European Commission. Joint Research Centre. <https://data.europa.eu/doi/10.2760/455010>
- Ravenna Sohst, R., Tjaden, J. D., Valk, H. de, & Melde, S. (2020). *The future of migration to Europe a systematic review of the literature on migration scenarios and forecasts* (p. 84). IOM. <https://publications.iom.int/system/files/pdf/the-future-of-migration-to-europe.pdf>
- Szczepanikova, A., & Van Criekinge, T. (2018). *The future of migration in the European Union. Future scenarios and tools to stimulate forward looking discussions*. (JRC111774.EUR 29060 EN; EU Policy Lab). European Commission. Joint Research Centre. Publications Office. <https://data.europa.eu/doi/10.2760/567937>
- Thiam, M. T., Crowley, J., & Unesco (Eds.). (2014). *Impact des changements environnementaux sur les migrations humaines: Étude de cas: Sénégal et Côte d'Ivoire*. UNESCO, Secteur des sciences humaines et sociales (SHS)
- Vag, A. (2009). *Specific Targeted Project Scientific support to policies – SSP* (p. 30) [Final Activity Report ]. EACH-FOR. [https://cordis.europa.eu/docs/results/44/44468/126792421-6\\_en.pdf](https://cordis.europa.eu/docs/results/44/44468/126792421-6_en.pdf)
- World Bank. (2020). *Poverty and shared prosperity 2020: Reversals of fortune*. Washington, DC: World Bank. <https://doi.org/10.1596/978-1-4648-1602-4>

## **Reports & Briefing**

- Boano, C., Zetter, R., & Morris, T. (2008). *Environmentally displaced people. Understanding the linkages between environmental change, livelihoods and forced migration* (No. 1;

- FORCED MIGRATION POLICY BRIEFING, p. 44). University of Oxford .  
<https://www.rsc.ox.ac.uk/files/files-1/pb1-environmentally-displaced-people-2008.pdf>
- Désaunay, C., & Jouvenel, F. de. (2021). *Scénarios de rupture à l'horizon 2040-2050: Rapport vigie 2020*. Futuribles international.
- Geddes, A., & Somerville, W. (2013). *Migration and environmental change: Assessing the developing European approach* (p. 8) [Policy Brief]. Migration Policy Institute Europe.  
<https://www.migrationpolicy.org/sites/default/files/publications/MPIEurope-EnvironmentalMigration.pdf>
- Gemenne, F. (2010). *Migration, a possible adaptation strategy?* (No. 3; p. 4). IDDRI/Sciences Po.
- Grievesson, R., Landesmann, M., & Mara, I. (2021). *Future Migration Flows to the EU: Adapting Policy to the New Reality in a Managed and Sustainable Way* (Policy Notes and Reports 49 No. 49; p. 26). The Vienna Institute for International Economic Studies.
- Hochrainer-Stiegler, S., Zhu, Q., Ciullo, A., & Reiter, K. (2022). *EU tools to respond to natural disasters* (Study PE 699.637). Policy Department for Structural and Cohesion Policies and Directorate-General for Internal Policies.
- Hochrainer-Stigler, S., Zhu, Q., Ciullo, A., & Reiter, K. (2022). *EU tools to respond to natural disasters* (Study PE 699.637; p. 67). European Parliament. Directorate-General for Internal Policies.  
[https://www.europarl.europa.eu/RegData/etudes/STUD/2022/699637/IPOL\\_STU\(2022\)699637\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2022/699637/IPOL_STU(2022)699637_EN.pdf)
- Korkut, U. (Ed.). (2013). *The discourses and politics of migration in Europe*. Palgrave Macmillan.
- Lietaer, S. (2018, 23/10). *Which influence of international migration on resilience to social and environmental changes? The question of risk inequalities in Northern Senegal* [Presentation at Ined International Conference in Paris ].
- Liguori, C. (2021). *The response of the European Union to human mobility in the context of climate change. Working Paper n°54*, 28.
- Matz Wennerhed, F. (2019). *The Discursive Construction of Climate Migration in the EU. A Critical Discourse Analysis of Climate Migration in EU Legislative Institutions*. Wageningen University and Research.

- McAdam, J. (2011). *Environmental migration governance* (SSRN Scholarly Paper ID 1412002). Social Science Research Network. <https://papers.ssrn.com/abstract=1412002>
- Milan, A., Batra, P., Mayhew, L., Kirbyshire, A., & Wilkison, E. (2016). *Climate-induced migration and displacement: Closing the policy gap* (Shaping Policy for Development, p. 12) [Briefing]. Overseas Development Institute.
- Mobjörk, M., Krampe, F., & Tarif, K. (2020). *Pathways of climate security: Guidance for Policymakers* [Policy Brief]. SIPRI. [https://www.sipri.org/sites/default/files/2020-11/pb\\_2011\\_pathways\\_2.pdf](https://www.sipri.org/sites/default/files/2020-11/pb_2011_pathways_2.pdf)
- Rigaud, K. K., de Sherbinin, A., Jones, B., Abu-Ata, N. E., & Adamo, S. (2021a). *Groundswell Africa: Deep Dive into Internal Climate Migration in Senegal*. The World Bank Group.
- Rigaud, K. K., de Sherbinin, A., Jones, B., Abu-Ata, N. E., & Adamo, S. (2021b). *Groundswell Africa: Deep Dive into Internal Climate Migration in West African Countries*. The World Bank Group.
- Rigaud, K. K., de Sherbinin, A., Jones, B., Abu-Ata, N. E., & Adamo, S. (2021c). *Groundswell Africa: Deep Dive into Internal Climate Migration in Nigeria*. The World Bank Group.
- Sall, M., International Institute for Environment and Development, International Institute for Environment and Development, & Human Settlements Programme. (2011). *Climate change, adaptation strategies and mobility: Evidence from four settlements in Senegal*. IIED.
- Tacoli, C. (2011). *How environmental change affects migration patterns: Evidence from Bolivia, Senegal and Tanzania* (Not Only Climate Change:, pp. 5–23). International Institute for Environment and Development. <https://www.jstor.org/stable/resrep01277.6>
- Tidiane Wade, C., Dime, M., Tandian, A., & Soumelong Ehode, L. (2017). *État des lieux des liens entre migration, transferts et résilience au changement climatique au Sénégal* (Research for Climate-Resilient Futures, p. 40) [Rapport d'étude]. Pathways to resilience in semi-arid economies.
- Vlassopoulou, C., & Mancebo, F. (2013). *EXCLIM / Exil climatique. Gérer les déplacements des populations dus aux phénomènes climatiques extrêmes* (GESTION ET IMPACTS DU CHANGEMENT CLIMATIQUE (GICC), p. 191) [Rapport scientifique]. Ministère de l'écologie et de la transition solidaire. [http://www.gip-ecofor.org/doc/drupal/gicc/rapport%20final\\_exclim.pdf](http://www.gip-ecofor.org/doc/drupal/gicc/rapport%20final_exclim.pdf)

Wilkinson, E., Kirbyshire, A., Mayhew, L., Batra, P., & Milan, A. (2016). *Climate-induced migration and displacement: Closing the policy gap*. (ODI Briefing) [Briefing ]. Overseas Development Institute. <https://euagenda.eu/upload/publications/untitled-67466-ea.pdf>

Youngs, R. (2014). *Climate change and EU Security Policy. An Unmet Challenge* (p. 32). Carnegie Europe. [https://carnegieendowment.org/files/climate\\_change\\_eu\\_security.pdf](https://carnegieendowment.org/files/climate_change_eu_security.pdf)

### **Thesis**

Diallo, A. (2018). *Changement climatique et migrations humaines au Sénégal: Une approche en termes de vulnérabilité du système socio-écologique* [Phdthesis, Université Grenoble Alpes ; Université Cheikh Anta Diop (Dakar)]. <https://tel.archives-ouvertes.fr/tel-02006424>

Döpker, R. (n.d.). *The debate on climate change-induced migration in the EU: Is Resilience Showing through? A Critical Discourse Analysis of Resilience manifesting itself in the debate of EU institutions on climate change-induced migration*. [Bachelor Thesis]. Westfälische Wilhelms-Universität Münster (DE).

Parfait Poumou Leumbe, J.-J. (2015). *Les déplacés environnementaux: Problématique de la recherche d'un statut juridique en droit international* [Thèse en droit public, Université de Limoges]. <https://tel.archives-ouvertes.fr/tel-01293830/document>

Sgro, A. (2013). *Les déplacés de l'environnement à l'épreuve de la catégorisation en droit de l'Union européenne* [Doctorate in Public Law]. Université de Nice Sophia Antipolis UFR institut du droit de la paix et du développement (IDPD).

Schmedding, T. (2011). *Environmental Migration: A Global Issue under European Union Leadership?* [Master Thesis, Centre international de Formation Européenne. Institut européen des hautes études internationales.]. <https://www.ie-ei.eu/IE-EI/Ressources/file/memoires/2011/TSCHMEDDING.pdf>

Söderberg Olofsson, E. (2021). *Climate-induced migration in the proposed Joint Africa-EU Strategy – what's the problem represented to be?* [Bachelor's thesis SGED10, Lund University]. <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=9057485&fileId=9057487>

### **Book chapters & Scientific Reviews**



- Abdulmalik Mohammed, Y. (2019, June). Climate-induced migration in coastal areas of Nigeria and its economic effects on coastal ecosystem livelihoods. *Lafia Journal of Economics and Management Sciences (LAJEMS)*, 4(1), 16.
- Baizán, P., & González-Ferrer, A. (2016). What drives Senegalese migration to Europe? The role of economic restructuring, labor demand, and the multiplier effect of networks. *Demographic Research*, 35, 339–380. <https://doi.org/10.4054/DemRes.2016.35.13>
- Baldwin, A., Methmann, C., & Rothe, D. (2014). Securitizing ‘climate refugees’: The futurology of climate-induced migration. *Critical Studies on Security*, 2(2), 121–130. <https://doi.org/10.1080/21624887.2014.943570>
- Benveniste, A. (1998). Le récit migratoire ou l’identité instable. *Journal Des Anthropologues*, 75, 85–94. <https://doi.org/10.4000/jda.2639>
- Berchin, I. I., Valduga, I. B., Garcia, J., & de Andrade Guerra, J. B. S. O. (2017). Climate change and forced migrations: An effort towards recognizing climate refugees. *Geoforum*, 84, 147–150. <https://doi.org/10.1016/j.geoforum.2017.06.022>
- Bettini, G. (2014). Climate migration as an adaption strategy: De-securitizing climate-induced migration or making the unruly governable? *Critical Studies on Security*, 2(2), 180–195. <https://doi.org/10.1080/21624887.2014.909225>
- Biesbroek, G. R., Swart, R. J., Carter, T. R., Cowan, C., Henrichs, T., Mela, H., Morecroft, M. D., & Rey, D. (2010). Europe adapts to climate change: Comparing national adaptation strategies. *Global Environmental Change*, 20(3), 440–450. <https://doi.org/10.1016/j.gloenvcha.2010.03.005>
- Boas, I. (2015). *Climate migration and security* (0 ed.). Routledge. <https://doi.org/10.4324/9781315749228>
- Bøås, M. (2021). EU migration management in the Sahel: Unintended consequences on the ground in Niger? *Third World Quarterly*, 42(1), 52–67. <https://doi.org/10.1080/01436597.2020.1784002>
- Borderon, M., Sakdapolrak, P., Muttarak, R., Kebede, E., Pagogna, R., & Sporer, E. (2019). Migration influenced by environmental change in Africa: A systematic review of empirical evidence. *Demographic Research*, 41, 491–544. <https://doi.org/10.4054/DemRes.2019.41.18>
- Brüning, L., & Piguet, E. (2018). Changements environnementaux et migration en Afrique de l’Ouest. Une revue des études de cas. *Belgeo*, 1. <https://doi.org/10.4000/belgeo.28836>

- Butros, D., Gyberg, V. B., & Kaijser, A. (2021). Solidarity versus security: Exploring perspectives on climate induced migration in un and eu policy. *Environmental Communication*, 15(6), 842–856. <https://doi.org/10.1080/17524032.2021.1920446>
- Carling, J., & Collins, F. (2018). Aspiration, desire and drivers of migration. *Journal of Ethnic and Migration Studies*, 44(6), 909–926. <https://doi.org/10.1080/1369183X.2017.1384134>
- Cournil, C., & Mayer, B. (2014). Chapitre 2. Les lacunes juridiques. *La Bibliothèque du citoyen*, 53–84.
- Cournil, C. (2022). *Les « déplacés climatiques », les oubliés de la solidarité internationale et européenne. De la gouvernance au contentieux*. Agence Nationale de la Recherche (ANR).
- de Haas, H. (2021). A theory of migration: The aspirations-capabilities framework. *Comparative Migration Studies*, 9(1), 8. <https://doi.org/10.1186/s40878-020-00210-4>
- Diallo, A. (2019). Changement climatique et migrations humaines au Sénégal: Une approche en termes de vulnérabilité du système socio-écologique. *Revue de La Régulation*, 26. <https://doi.org/10.4000/regulation.15800>
- Diallo, A., & Renou, Y. (2015). Changement climatique et migrations: Qualification d'un problème, structuration d'un champ scientifique et activation de politiques publiques: *Mondes En Développement*, n° 172(4), 87–107. <https://doi.org/10.3917/med.172.0087>
- Dünnwald, S. (2011). On Migration and Security: Europe managing migration from Sub-Saharan Africa. *Cadernos de Estudos Africanos*, 103–128. <https://doi.org/10.4000/cea.430>
- Entzinger, H., Jäger, J., & Gemenne, F. (2010). Le projet each-for. *Hommes & Migrations*, 1284, 10–15. <https://doi.org/10.4000/hommesmigrations.1232>
- Ezemenaka, K. E. (2019). Unregulated Migration and Nigeria-EU Relations. *Central European Journal of International and Security Studies*, 3(13), 64–87. [https://www.cejiss.org/images/04\\_Ezemenaka.pdf](https://www.cejiss.org/images/04_Ezemenaka.pdf)
- Failler, P., & Binet, T. (2010). Sénégal. Les pêcheurs migrants: Réfugiés climatiques et écologiques. *Hommes & Migrations*, 1284, 98–111. <https://doi.org/10.4000/hommesmigrations.1250>
- Fray, A.-M., & Picouleau, S. (2010). Le diagnostic de l'identité professionnelle: Une dimension essentielle pour la qualité au travail: *Management & Avenir*, n° 38(8), 72–88. <https://doi.org/10.3917/mav.038.0072>

- Geddes, A. (2018). The politics of european union migration governance: Eu migration governance. *JCMS: Journal of Common Market Studies*, 56, 120–130.  
<https://doi.org/10.1111/jcms.12763>
- Gemenne, F. (2009). *L'environnement, nouveau facteur de migration ?* Presses de Sciences Po. <https://www.cairn.info/l-enjeu-mondial-2-2009--9782724611311-page-137.htm?ref=doi>
- Gemenne, F. (2020). 2. *En 2050, la gestion des migrations de masse est devenue le problème mondial numéro un*. Futuribles. <https://www.cairn.info/rapport-vigie-2020-2020--9782902940349-page-37.htm?ref=doi>
- Gemenne, F., & Cavicchioli, A. (2010). Migrations et environnement: Prévisions, enjeux, gouvernance. *Regards croisés sur l'économie*, 8(2), 84.  
<https://doi.org/10.3917/rce.008.0084>
- Goff, L., Zarin, H., & Goodman, S. (2012). Climate-Induced Migration from Northern Africa to Europe: Security Challenges and Opportunities. *The Brown Journal of World Affairs*, 18(2), 195–213.
- Graham, C. (2020). Climate-induced population displacement in sub-Saharan Africa: A review of resilience-building strategies. *Geoforum*, 117, 300–303.  
<https://doi.org/10.1016/j.geoforum.2020.07.004>
- Grievesson, R., Landesmann, M., & Mara, I. (2021). *Future migration flows to the eu: Adapting policy to the new reality in a managed and sustainable way*(Publication) (No. 49). Vienna Institute for International Economic Studies. <https://wiiw.ac.at/p-5808.html>
- Héran, F. (2018). L'Europe et le spectre des migrations subsahariennes. *Population Societes*, 558(8), 1–4. <https://www.cairn.info/revue-population-et-societes-2018-8-page-1.htm?ref=doi>
- Hunter, L. M. (1998). The association between environmental risk and internal migration flows. *Population and Environment*, 19(3), 247–277.  
<https://doi.org/10.1023/A:1024644003699>
- Huysmans, J. (2000). 'The European Union and the securitization of migration', in *Journal of Common Market Studies*, 38 (5): 751–777.
- Lalou, R., & Delaunay, V. (2017). Chapter 14. Seasonal migration and climate change in rural Senegal. In B. Sultan, R. Lalou, M. A. Sanni, A. Oumarou, & M. Arame Soumaré (Eds.), *Rural societies in the face of climatic and environmental changes in West Africa* (pp. 269–293). IRD Éditions. <https://doi.org/10.4000/books.irdeditions.12370>
- Marshall, N. (2016). Forced environmental migration: Ethical considerations for emerging migration policy. *Ethics, Policy & Environment*, 19(1), 1–18.  
<https://doi.org/10.1080/21550085.2016.1173284>
- Martin, S. (2010). Climate change, migration, and governance. *Global Governance*, 16(3), 397–414. <https://www.jstor.org/stable/29764954>

- McAdam, J. (2011). Chapter 7. Environmental Migration Governance. In *Global Migration Governance*. Oxford University Press. (Original work published 2009)
- McNabb, D. E. (2010). *Research methods for political science: Quantitative and qualitative approaches* (2nd ed). M.E. Sharpe.
- Métivier, C. (2015). Violence and Displacement in Northern Nigeria. *SEM, Africa*, 31–48. <http://labos.ulg.ac.be/hugo/wp-content/uploads/sites/38/2017/11/The-State-of-Environmental-Migration-2015-31-48.pdf>
- Morello, G., & Rizk, J. (2022, May). Conflits, changements climatiques et rétrécissement de l'espace de mobilité au Sahel central. *Revue Des Migrations Forcées*, 69(Crise climatique et déplacement : de l'engagement à l'action). <https://www.fmreview.org/sites/fmr/files/FMRdownloads/fr/crise-climatique/numero.pdf>
- Nawrotzki, R. J. (2014). Climate migration and moral responsibility. *Ethics, Policy & Environment*, 17(1), 69–87. <https://doi.org/10.1080/21550085.2014.885173>
- Rhinard, M. (2019), 'The Crisisification of Policy-making in the European Union', in *Journal of Common Market Studies*, 57 (3): 616–633
- Rosenow-Williams, K., & Gemenne, F. (Eds.). (2015). *Organizational perspectives on environmental migration* (0 ed.). Routledge. <https://doi.org/10.4324/9781315674803>
- Sahin-Mencutek, Z., Barthoma, S., Gökalp-Aras, N. E., & Triandafyllidou, A. (2022). A crisis mode in migration governance: Comparative and analytical insights. *Comparative Migration Studies*, 10(1), 12. <https://doi.org/10.1186/s40878-022-00284-2>
- Scholten, P., & Penninx, R. (2016). The multilevel governance of migration and integration. In B. Garcés-Mascreñas & R. Penninx (Eds.), *Integration Processes and Policies in Europe* (pp. 91–108). Springer International Publishing. [https://doi.org/10.1007/978-3-319-21674-4\\_6](https://doi.org/10.1007/978-3-319-21674-4_6)
- Stang, G., & Dimsdale, T. (2017). *The eu and climate security*. E3G. <https://www.jstor.org/stable/resrep17900>
- Piguet, É., Pécoud, A., & de Guchteneire, P. (2011). Changements climatiques et migrations: Quels risques, quelles politiques ? : *L'Information Géographique*, Vol. 75(4), 86–109. <https://doi.org/10.3917/lig.754.0086>

- Templon, A. R., Kirsch, D. R., & Towner, M. C. (2021). Contributions of evolutionary anthropology to understanding climate-induced human migration. *American Journal of Human Biology*, 33(4). <https://doi.org/10.1002/ajhb.23635>
- Toma, S., Castagnone, E., & Richou, C. (2015). Quels sont les facteurs de migration multiple en Europe ? Les migrations sénégalaises entre la France, l'Italie et l'Espagne: *Population*, Vol. 70(1), 69–101. <https://doi.org/10.3917/popu.1501.0069>
- Van Praag, L., Lietaer, S., & Michellier, C. (2022). A qualitative study on how perceptions of environmental changes are linked to migration in morocco, senegal, and dr congo. *Human Ecology*, 50(2), 347–361. <https://doi.org/10.1007/s10745-021-00278-1>
- Vianna, P. (2008). La question migratoire: Un enjeu politique pour l'Europe. *Migrations Société*, N° 116(2), 43. <https://doi.org/10.3917/migra.116.0043>
- Vigil, S. (2016). Migrations environnementales ? Ramener le politique au cœur du débat. *Cités*, 68(4), 61. <https://doi.org/10.3917/cite.068.0061>
- Vigil, S. (2022). *Land grabbing and migration in a changing climate: Comparative perspectives from senegal and cambodia* (1st ed.). Routledge. <https://doi.org/10.4324/9781003193142>
- Vlassopoulou, C. (2008, November). Les migrations environnementales entre secteurs d'action public. *REVUE Asylon(s)*, 6(Exodes écologiques). <http://reseau-terra.eu/article848.html>

## **Webpages**

- Bassetti, F. (2019, May 22). Environmental migrants: Up to 1 billion by 2050. *Foresight*. <https://www.climateforesight.eu/articles/environmental-migrants-up-to-1-billion-by-2050/>
- EESC. (2021, May 26). *The New Migration Pact: Fraught with flaws and stuck in limbo*. European Economic and Social Committee. <https://www.eesc.europa.eu/en/news-media/news/new-migration-pact-fraught-flaws-and-stuck-limbo>
- Espace Mondial l'Atlas. (2018). *Migrations environnementales*. <https://espace-mondial-atlas.sciencespo.fr/fr/rubrique-mobilites/article-2A05-FR-migrations-environnementales.html>
- Hausfather, Z. (2018, April 19). *Explainer: How 'Shared Socioeconomic Pathways' explore future climate change*. Carbon Brief. <https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/>
- Hub, I. S. K. (2021). *Eu strategy seeks to step up global engagement on climate adaptation | news | sdg knowledge hub | iisd*. <https://sdg.iisd.org:443/news/eu-strategy-seeks-to-step-up-global-engagement-on-climate-adaptation/>

- ILO. (2014, November 13). *Senegal: Towards a green jobs strategy* [Project]. [http://www.ilo.org/global/topics/green-jobs/projects/africa/WCMS\\_250673/lang--en/index.htm](http://www.ilo.org/global/topics/green-jobs/projects/africa/WCMS_250673/lang--en/index.htm)
- ISS Europa. (2020, November 12). *Climate change, defence and crisis management: From reflection to action* | European Union Institute for Security Studies. Iss.Europa.Eu. <https://www.iss.europa.eu/content/climate-change-defence-and-crisis-management-reflection-action>
- Zandt, F. (2021, November). *Infographic: Climate change, the great displacer*. Statista Infographics. <https://www.statista.com/chart/26117/average-number-of-internal-climate-migrants-by-2050-per-region/>
- Migrants et réfugiés climatiques. Quels enjeux, quelles réponses ?* | Musée de l'histoire de l'immigration. (n.d.). Retrieved May 24, 2022, from <https://www.histoire-immigration.fr/agenda/2015-08/migrants-et-refugies-climatiques-quels-enjeux-queelles-reponses>
- ritimo. (2020, January 23). *Migrations environnementales: Un impératif de justice sociale, migratoire et climatique*. ritimo. <https://www.ritimo.org/Migrations-environnementales-un-imperatif-de-justice-sociale-migratoire-et>
- Sedova, B., & Thalheimer, L. (2021). *How climate change and migration can cascade in the eu*. EuropeNow. <https://www.europenowjournal.org/2022/01/30/how-climate-change-and-migration-can-cascade-in-the-eu/>